CONTROLLING FOR SUSTAINABILITY STRATEGIES

Evidence from the UK

BISWARAJ GHOSH
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ABSTRACT

Research examining organisational commitment to sustainability is not new and has been typically investigated through a focus on corporate reporting practices and understanding the corporate rationale that drives sustainable behaviour. However, studies with regard to how sustainability strategy is adopted and seamlessly integrated into corporate practices are yet to be fully explored. It is to this aspect that the study turns.

Current research exploring corporate controls for different sustainability strategies has looked at a narrow range of controls and has assumed that controls function in isolation from one another. Such narrow perspectives of controls have attracted criticisms from scholars. This study explores corporate controls for sustainability strategies through the control package perspective and subjects a broad range of controls typically found in practice to different empirical contexts. The aims of the study are, firstly, to understand how a broad range of controls explored through the control package perspective are designed and used in accordance with different sustainability strategies; secondly, to understand how different sustainability strategic pursuits impact the design and use of management controls.

The adopted holistic framework remains a key contribution for future research. It would be safe to say that this is the only study that has brought in the package perspective not only to explore controls, but also to understand how the strategic contexts might shape package constituents. The study further makes a theoretical contribution by focusing on the seldom used contingency perspective providing evidence of its illustrative powers in explaining the relevance of control-strategy relationship from the sustainability perspective. Furthermore, the role of sustainability professionals is highlighted.

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A. *List of Abbreviations*:

Abbreviated Form	Full Reference
BSC	Balanced Score Card
BSCS	Balanced Score Card for Sustainability
BoD	Board of Directors
CFC	Chlorofluorocarbon
CSR	Corporate Social Responsibility
DU	Diagnostic Use
DS	Diagnostic System
EMP	Environmental Management Programmes
EMS	Environmental Management System
IC	Interactive Control
ICS	Interactive Control System

IT	Information Technology
IS	Information Systems
KPI	Key Performance Indicator
LCA	Life Cycle Analysis
LOC	Levers of Control
MC	Management Control
MCS	Management Control System
P&G	Procter and Gamble
PCA	Principle Component Analysis
PIS	Participant Information Sheet
PMS	Performance Measurement System
R&D	Research and Development
SME	Small-Medium Enterprise
SR	Sustainability Reporting
SOP	Standard Operating Procedures
ST	Stakeholder
TM	Top Management
TMT	Top Management Team
TQM	Total Quality Management

B. List of Tables:

C. List of Charts:

D. List of Graphs:

E. List of Figures:

Published, Reused Materials/For Future Publication

CHAPTER	TOPIC	ISSUE
CHAPTER 2	Literature Review	Published as a conference paper at the British Academy of Management, 2017. Supervisors were co-authors, however, the written work remains entirely mine.
CHAPTER 4	The Control Package Concept	I will publish the adapted Malmi and Brown (2008) control package framework as a journal article/conference proceeding
CHAPTER 6	Methodology	Some sections of this chapter has been taken directly from my Masters Dissertation
CHAPTER 7	Phase 1: The Qualitative Phase	Some sections of this chapter has been taken directly from my Masters Dissertation
CHAPTER 7	Phase 1: The Qualitative Phase	I have already published the study findings as a discussion paper at the British Academy of Management, 2017. I will publish the study findings as a journal article/conference proceeding
CHAPTER 8	Phase 2: The Quantitative Phase	I will publish the survey as a discussion paper with some preliminary findings.

CHAPTER 1

INTRODUCTION

1.0 Background

"Sustainability" is no longer a word confined within the extant management literature or as a rhetoric/narrative limited to use by the academic community. It has increasingly found its relevance as a "practice" within the wider sphere of human and organisational/institutional interaction and has found its way within corporate goals, programme and plans. It is the buzzword of the 21st century, having found gradually growing significance in the 20th century, from the Brundtland Conference to Governmental Summits around the globe. As a "practice", sustainability has found relevance from the dedicated ethical consumer population's adopting a sustainable lifestyle, paving the way for an ethical, considerate and passionate consumer base globally; it seeks products and services that are sustainable – from raw material usage, to ethical standards in the workforce, to its delivery and, finally, through its end-of-use stage and disposal. The advent in human consciousness inclined towards an ethical, environmentally friendly and sustainable lifestyle has made its mark in the consumers' decision-making process such that they choose to purchase goods and services based on the "sustainable practices" of the producers. Companies have thus adopted ways to portray their sustainable nature, their ethical considerations, and their social and environmental responsibilities, marking a new beginning in corporate attitudes towards wider sections of society (Edie Insight, 2017). The following paragraphs provide a general view of corporate attitude towards a responsibility that lies beyond their shareholders; it veers towards creating "value for all", not merely for their investors and shareholders, but in the content of research oriented towards management control and sustainability.

In this research 'corporate sustainability' refers to business strategies and practices that not only enable financial growth; these go beyond the traditional corporate realm to create shared value by incorporating strategies to mitigate environmental and social issues so as to ensure long-term corporate growth and continuity (Porter and Kramer, 2011; Benn et al., 2014; Marrewijk, 2003). A recent survey conducted by the United Nations Global Compact reveals the growing trend globally for businesses to assume greater responsibility and act in line with the broader goals and issues of the United Nations. In addition, they adhere to the Ten

Principles of good sustainable business practices (Global Corporate Sustainability Report, 2013). The following statement by H.E. Ban Ki-moon (2013) emphasises how corporate actions contribute towards these broader goals to include provision for education and energy conservation, as well as poverty eradication. "A look at the actions taken by the nearly 8,000 companies from 140 countries participating in the United Nations Global Compact tells a promising story", he comments. (Global Corporate Sustainability Report, 2013, p. 2). A PwC survey published in 2017 reveals that around 80% of CEOs surveyed believe in positive actions to mitigate environmental impact, whereas almost 76% attach great significance to considering the needs of the future generation within the decision-making process. The survey showed that climate change and resource availability are amongst the top three priority areas for the CEOs (PwC, 2017). Furthermore, McKinsey demonstrated that increasingly the motivations for engaging in sustainability have moved beyond purely reputational management orientation and more towards both short- and long-term value creation. Value is created through the adoption of responsible strategies through the efficient use of resources, by investing in making products with sustainable attributes; strategists search for opportunities in responsible business actions that create shared value (McKinsey, 2011). The corporate inclination towards adopting global voluntary principles within responsible business practice and the changing CEO attitude acknowledges their role in social and environmental wellbeing, as is exemplified by the emerging significance attached to sustainability not only by voluntary organisations or governments but also by the businesses worldwide.

In the UK, the reality is no different. The 'Fortune Favours the Brave' report indicates that sustainable goods and services are worth almost £200 billion (BITC, 2013). Having invested in sustainable innovations, including clean production technologies, UK businesses have gained through adopting sustainable practices, while the adoption of clean technologies reflects a growth of over 24% since the peak of the financial crisis in 2008 (Balch, 2013). Increasingly, UK businesses are considering innovative ways of achieving resource efficiency with a focus on long-term business continuity by investing in cleaner production technologies including renewable energy sources (Balch, 2013). Civil society activism (for instance, by Oxfam and Greenpeace) is on the rise, targeting grave environmental and social issues such as climate change, water depletion, poverty, and supply chain ills such as child labour and human rights abuses. Such challenges are common to businesses everywhere. Corporate sustainability has thus gained much recognition from businesses around the globe to ensure continuity and profit through responsible business practices (Gunther, 2015; Gemill and Abimbola, 2002). The

growing importance attached to sustainable business practices places the focus on sustainability as a topical area for research. The paragraphs below explore the current state of the sustainability debate within the academia and locate the rationale for the current study, which attempts to seek an answer as to how companies manage sustainability through management control systems. First, the core streams of research within the extant field are discussed before the rationale for the current study is established.

1.1 The Current State of the Sustainability Debate

The extant sustainability strategy literature so far covers the 'why' and the 'what' of sustainability initiatives. It is yet to cover 'how' it is implemented and practised in organizations. It addresses corporate reporting practices, sustainability and CSR coverage, also exploring the various ways in which the concept of sustainability is interpreted and understood by scholars. Some of the motivations for corporations to promote sustainability are: value creation for the company, society and the environment at large; the attraction and retention of talent; maintenance of legitimacy; an enhanced corporate reputation, and for sustaining competitive advantage. The potential gap is in how these extra financial strategies are conrolled, managed and embedded in decision-making processes then how these strategies are translated into practice and managed. Management control literature has provided evidence of improved organizational performance as a result of their forming a linkage between an entity's structure, system, strategy and its environment.

Sustainability research has predominantly focused on examining why companies participate in sustainability initiatives, thus unearthing certain underlying motives for doing so. To elaborate, research exploring corporate motivations to undertake sustainable business practices has deliberated on specific business case reasons. Porter and Linde (1995) refer to a "win-win" situation to argue that sustainable practice enables value creation for the company, society and the environment at large. Porter and Kramer (2011) develop this further by explaining that "good" and responsible businesses create "*economic value in a way* that also creates value for society by addressing its needs and challenges", resulting in the creation of shared values (p. 64). In other words, actions that benefit the business may also benefit the extant society and environment at large (Burke and Logsdon, 1996). Other business case reasons have also been put forward. Marsden (1996) argues that responsible businesses can attract and retain employees, receive preferred supplier status and maintain legitimacy during unfavourable situations. Other researchers have pointed out that responsible businesses may benefit from

enhanced corporate reputation (Fombrun et al., 2000), improved financial performance (Orlitzky et al., 2003), and leverage sustainability as a means of generating sustained competitive advantage (McWilliams et al., 2006). A significant stream of literature focusing on business benefits has examined whether sustainable practices contribute towards enhanced financial performance through improved relationships with a range of external stakeholder groups as well as with employees, and cost reductions (Epstein et al., 2015; Ameer and Othman, 2012; Miroshnychenko et al., 2017). The corporate recognition of the potential for short- and long-term value creation through sustainable practice bears testimony to this body of literature that explores sustainability and its implications for the financial bottom line.

While the above literature discusses corporate motivations or "why" companies engage in responsible business, and the benefits thereof, another prominent body of literature explores corporate disclosure practices. Within this field, the emphasis has been to identify trends in reporting in various sectors (Farneti and Guthrie, 2009), how companies report on specific resource use (e.g. water accounting), others have taken a critical approach to examining corporate reporting. The latter has focused on areas such as shadow reporting and performance portrayal gap (Tregidga, 2017), as well as on the more recent integrated reporting framework (Conradie and Jongh, 2017). Critical studies have also examined corporate disclosure through the lens of corporate accountability to a broader group of stakeholders (Kolk, 2008). More recent developments within the field include the modes of reporting that extend from the print media to the use of the digital platform (Herzig and Godemann, 2010). Another focus within this field has been on exploring the determinants of reporting (Fifka, 2013).

A large body of the literature is still debating what 'sustainability' and 'CSR' mean in the context of business. For instance, Benn et al. (2014) argue that sustainability may promote different meanings and understandings. On the one hand, 'sustainability' may refer to the longevity of a business or its ability to sustain itself over an extended period, while the term has also been used to refer to the extra-financial responsibilities undertaken by the business. In other words, the term captures the corporate actions and performance with regard to the environment and society. Others are still debating whether 'sustainability' and 'CSR' converge on the same meaning. For instance, Marrewijk (2003) notes proponents for and against the notion that sustainability and CSR refer to the same underlying concept. It has been suggested that sustainability refers to a higher order goal pursued by companies in meeting their responsibilities towards the shareholders, the society and the environment (Marrewijk, 2003). On the contrary, Keijzers (2002) opines that the two concepts are similar. In this study,

however, CSR and sustainability have been used interchangeably with the notion referring to the corporate practices that transcend a mere financial focus to include both environmental and social aspects.

To summarise: the current debate has primarily looked at the "why" and "what" aspects of sustainable business practice. In so doing, research has offered an informative picture of the corporate rationale in engaging with sustainable practice, of corporate disclosure of responsible practice and the underlying debate on the meanings associated with sustainability/CSR, which have been viewed as contested (Okoye, 2009). With the advent of increased public scrutiny of corporate practice beyond its financial performance, the emergence of ethical consumerism and a growing concern for the availability of raw materials, amidst other global issues including climate change, companies have increasingly adopted strategies to deal with challenges pertaining to society and the environment at large (Journeault et al., 2016; McKinsey, 2011). Through these strategies, companies seek to manage the expectations of many stakeholder groups, simultaneously accruing benefits from responsible practice. However, what is strangely missing from the established debate is the focus on how these extra-financial strategies are translated into practice and managed by companies. In other words, research considering "how" sustainability strategies are controlled, managed and embedded in decision-making processes is largely missing and has been an emergent topic within the extant sustainability literature.

1.2   The Emerging Focus

Several prominent scholars within the field of sustainability (and corporate social responsibility) have pointed out the dearth of research exploring how organisations manage and control sustainability (Maas et al., 2016; Gond et al., 2012; Günther et al., 2016). Calls for research investigating management controls for sustainability have nevertheless existed for a long time. Wood (1991) suggested further research to understand "what managerial processes apply to the development and implementation of responsive programs and policies" and, in particular, to examine "the role of organizational culture in mediating the transmission of ideas, support, information and resources relevant to social responsiveness" (p. 707). Ackerman and Bauer (1976) opined that an institutionalised approach to social responsiveness requires the design of controls that will promote social responsibility holistically within the organisations, thereby highlighting the significance attached to the design and use of control systems in ways that institutionalise socially responsible behaviour and decision-making (Crutzen and Herzig,

2013). More recently, Bebbington (2007, p. 6) has pointed out that "if organisations are seeking to report on their contribution to sustainable development, one may expect that there are some internal mechanisms which guide activities towards this goal." Morsing and Oswald (2009) observe that there exists an inherent assumption in sustainability literature that a "seamless and supportive integration of the corporate sustainability strategy into organisational behaviour" is in fact present (p. 83). From the previous sections, it is evident that increasingly companies are adopting explicit strategies to engage in sustainable business practices (Journeault et al., 2016; McKinsey, 2011). Hence, there should be some internal mechanisms that support the formation and implementation of such strategies. This study adopts the view that corporate sustainability can be explored through the lens of how embedded sustainability strategies lie within the corporate management controls. Sinclair-Desgagné's and Gabel's statement validate this line of argument. The authors state that "[an] increased environmental awareness on the part of shareholders and corporate board members will not change the firm's environmental record in a significant and durable way unless it is translated into concrete amendments of the existing managerial control system" (Sinclair-Desgagné and Gabel, 1997, p. 337).

1.3 Research Context, Aims and Objectives

A large body of literature that has evolved since the times of Anthony (1965) has placed emphasis on how management controls, as means of ensuring business strategies, are implemented efficiently and have also credited management controls for shaping and informing strategies (Kober et al., 2003). These studies view management controls as the primary means of directing employee behaviour and managing expectations as well as ensuring that organisational objectives and goals are met. Management control literature has provided evidence of improved organisational performance as a result of a linkage between an entity's structure, systems, strategy and its environment (Dent, 1990; Simons, 1987, 1990). Porter (1985) has pointed out the need for formulating a set of strategic priorities shaping an intended course of strategic direction to be a part of active management. However, as Chenhall and Langsfield-Smith (1998) explain, setting out strategic priorities is insufficient by itself if not supported by appropriately designed control systems (Shank and Govindarajan, 1993; Auzair and Langfield-Smith, 2005; Chenhall, 2005; Govindarajan, 1988;Govindarajan and Gupta, 1985; Jermiasand Gani, 2004; Simons, 1987, 1990). In the same vein, this study argues that merely adopting sustainability goals and priorities is insufficient unless certain internal mechanisms are put in place to implement and realise the goals and priorities. Broadly, this

study posits that organisational commitment to sustainability may also be explored through the lens of management controls.

Numerous variations on the way the literature has defined management controls are in existence. While very narrow specifications of management controls have been promoted, e.g. those of Anthony (1965), who limited management controls as those pertaining exclusively to accounting-based controls. There are broader versions of the definition: Merchant and Otley (2007) observe that management controls may transcend pure accounting forms of controls to include strategic controls. Management controls take the shape and form of either formal or informal controls. Informal controls are those that are unwritten and not explicit yet tending to be present in the form of shared values, beliefs and traditions (Ouchi, 1979a). In contrast, formal controls are those that are explicit and take a tangible form (e.g. written codes and policies) and composed of "purposefully designed, information-based and explicit packages of structures, routines, procedures and processes" (Crutzen et al., 2017, p. 1292).This study adopts the definition of Malmi and Brown (2008, p. 290), which suggests that management controls include both formal and informal, accounting- and non-accounting-based, controls that are typically used to "ensure that the behaviours and decisions of employees are consistent with the organisation's objectives and strategies".

Tucker et al. (2009) are not alone in identifying the conceptual distinction between how controls are used and how these are designed as one of the salient developments in the extant literature focusing on management control and strategy relationship (Simons, 1987; Abernethy and Brownell, 1999; Nilsson and Rapp, 1999; Baines and Langfield-Smith, 2003; Marginson, 1999; Bisbe and Otley, 2004; Kober et al., 2003). Although a definition of control design and use is not offered, nonetheless, the conceptual differences could be easily recognised.

Abernethy and Brownell (1999), among others, conceptualise controls in the context of how these are utilised in an organisational setting. Specifically, budgetary controls are studied with a focus on the interactive use of budgets, thereby moderating the effect of the budget as a form of control on strategic change and firm performance. In sharp contrast, studies conceptualising control from a design perspective, for instance, those of van der Stede (2000), explore the nature of budgetary control, seeking to understand whether budgetary rigidity or flexibility is more relevant for a differentiation strategy; this is as opposed to seeking an understanding of the interactive and diagnostic uses of budgets (Simons, 1995).

Based on the literature, control design may be conceptualised in a number of ways, including through exploring the different types of controls upon which a firm relies (Bedford and Malmi, 2015), control nature (tight/flexible) (Chenhall and Morris, 1995; van der Stede, 2000), control type (organic/mechanistic; formal/informal; social, cultural or cybernetic; actions/results; strategic/financial) (Ouchi, 1979a; Abernethy and Stoelwinder, 1995; Marginson, 1999; Whitley, 1999; Chung et al., 2000; Nilsson, 2000; Goold and Quinn, 1990), control emphases (Auzair and Langfield-Smith, 2005), existence of controls (Crutzen et al., 2017) and control attributes (Perego and Hartmann, 2009).

There has been a growing trend within management control literature to discover the number of controls that have been subjected to exploration, investigation or theory testing within a study, irrespective of whether the focus is on content design or use. For instance, Bedford and Malmi (2015) and Bedford et al. (2016) subject to their examination a variety of management controls in empirical contexts and observe how firms are designing and using the controls by different business strategic foci. In the same vein, other management scholars including Auzair and Langfield-Smith (2005), Chung et al., (2000) and Nilsson (2000) have included a number of different controls as part of their studies. This follows criticisms by eminent scholars of the limitations of research that focuses solely on one form of control (Chenhall, 2003). Based on this growing trend, an additional categorisation of control focus is possible such that studies employing more than one control could be classified as having a broad focus and those involving just one control as having a narrow focus.

Strategy could otherwise be simply defined as "a pattern" that emerges from "a stream of decisions" (Mintzberg, 1978) providing a "long-term direction of an organisation" (Johnson et al., 2011, p. 3). Two lines of research drive scholars to studying strategy. While one focuses on the "content" of the strategy, the other perspective focuses on investigating the "processes" shaping strategy (Chenhall, 2005; Rajagopalan et al., 1993).

The content approach looks at the outcome of the strategy formation process that is an outcome of a deliberate decision made by managers to conform to a strategic position (Porter, 1980; Chenhall, 2005). In other words, content researchers tend to focus on the "content" of or "snapshots of ideal strategies, or optimal combinations of strategies for organisations facing different situations" (Chenhall, 2005, p. 12). Hence, content researchers view strategy formation as a deliberate outcome of a "formal and rational" choice of managers who consider the contextual factors including the organisation's external environment (the "outside in"

perspective) and internal environment or the resource based "inside-out" perspective, while prioritising strategic fit and positioning. This approach gives rise to strategy or a combination of strategies aligned with the business context for optimising performance thereby enabling competitive advantage or positioning for business continuity (Chenhall, 2005).

In contrast to the content approach of studying strategy in management control context, the process approach tends to deal with the processes that shape strategies. It investigates the role of the strategy makers and identification of persons involved in such a process. Furthermore, the process approach looks at the reasons for changes in strategy and the process of strategic change and their implementation. Similarly, process researchers look at how a deliberate strategy can be implemented. This approach is further concerned with studying how informal processes give shape to new strategies and how new ideas may emerge within the organisational system, ones that may lead to intentional strategies. In short, strategic process entails both strategy formulation and implementation (Chenhall, 2005).

The goal of this research is to contribute to the emerging debate on "how" sustainability is managed internally by exploring the relationship between sustainability strategy, on the one hand, and management control, on the other. A systematic review of the literature focusing on sustainability strategy and management controls reveals the following aspects (Ghosh et al., 2017; also presented in Chapter 2). Firstly, there is a dearth of research exploring this relationship from the strategic content perspective. In other words, we are yet to fully understand how differences in sustainability strategies inform the design and use of management controls for sustainability. For instance, there is an expectation that the ways management controls are designed and used in firms adopting a compliance-based approach to sustainability will differ from those within firms adopting an efficiency or proactive strategy towards sustainability (Benn et al., 2014). Secondly, the handful of studies that have examined the role played by sustainability strategies in shaping management controls have largely focused on a limited number of controls. For instance, Perego and Hartmann (2009) focused exclusively on Performance Measurement Systems (PMS) and demonstrated the differences in PMS design and use in accordance with proactive and reactive approaches towards sustainability. However, as stated earlier, studies with a narrow focus on controls have attracted criticisms from eminent scholars (Chenhall, 2003). Thirdly, there is a lack of a survey instrument facilitating the undertaking of a large-scale study of a broad range of management controls and how these are shaped by different sustainability strategies.

Considering the aforementioned gaps in the current body of literature, the core aims of this study are, firstly, to explore how different strategic approaches to sustainability inform the ways a broad range of management controls are designed and used; secondly, to develop a survey instrument that will facilitate exploring the sustainability strategy/control relationship by adopting a broader view of management controls informed from the control package perspective. The package perspective promotes the understanding that individual controls function as part of the overall control structure of the firm, consisting of both formal and informal controls, and that a narrow perspective will not provide a holistic picture of the control/strategy relationship (Otley, 1980). The research asks the question: How are a broad range of management controls typically found in practice shaped/designed and used on the basis of different strategic approaches to sustainability? The present study establishes the following objectives to fulfil its research aims.

Research Object 1 (RO1): Develop an integrated management control package framework to understand the corporate approach towards sustainability.

Research Object 2 (RO2): Explore and understand how different sustainability strategic pursuits have an impact on the design and use of the management control package framework.

1.4   Summary of Study Methodology

The study adopted the mixed methods approach following a pragmatist perspective to derive knowledge and fulfill the aforementioned aims. Specifically, a dominant sequential approach was undertaken, beginning with interviews informing the development of a survey instrument. The interviews undertaken by elite participants who are directly involved in strategy making and implementation provided in-depth insights into how management controls are designed and used to manage different sustainability strategies. Moreover, the interview findings alongside core aspects from the literature provided the basis of a survey instrument to fulfill one of the research objectives of the project.

1.5   Summary Findings and Key Contributions

The first research objective is to develop an integrated management control package framework so as to understand the corporate approach towards sustainability. The findings indicate the prominence of control interdependencies whereby certain controls tend to exist in certain combinations to be effective (e.g. Performance Measurement System (PMS) and Culture). The sustainability strategies literature covered studies which were based on a narrow range of control. The current study is specifically designed as a holistic, integrated management package

framework that enabled achieving the understanding and exploring of the corporate approach towards embedding and implementing sustainability in organizations. The adopted framework remains a key contribution for future research. To the best of present knowledge, this is the only study that has brought in the package perspective such that not only does it explore controls, but it leads to understanding how the strategic contexts might shape package constituents.

The second research objective is to explore and understand how different sustainability strategic pursuits have an impact upon the design and use of the management control package framework. The findings indicate that organisations at different phases of sustainability strategic progression tend to feature differences in the ways management controls are designed and used. Also, for firms adopting the same or a similar strategy, differences are noticeable in how specific controls are designed (e.g. strategic planning). Furthermore, the study finds that contingency theory by itself is inadequate to explain the relationship between sustainability strategy and management controls; this is because contingency theory's major limitation lies in its viewing management controls as playing a passive role, restricted to supporting strategy implementation (Kober et al., 2007). In contrast, this study observes that management controls play an active role in strategic progression by facilitating the development of certain internal capacities and capabilities required to advance to a higher phase of sustainability development (Benn et al., 2014). A brief discussion into a resource contingent view of sustainability management controls is presented and discussed. However, the empirical findings indicate support for the managerialist view of the contingency framework, where the former seems to possess sufficient know-how to design and implement controls to manage sustainability. It is suggested that certain controls received relatively low emphasis due to the assumption that such controls may promote "bad behaviour" (e.g. rewards). Additionally, the study makes a theoretical contribution by focusing on the seldom-applied contingency perspective thus providing evidence of its illustrative powers in explaining the relevance of the control/strategy relationship from the sustainability perspective.

1.6 Structure of Thesis

Given the innovation of this area of research and its emerging focus, Chapter 2 presents a systematic review of the literature, focusing on management controls for sustainability strategies. Chapter 3 explores past literature on sustainability strategies and justifies adopting Benn et al.'s (2014) sustainability phase model framework. Chapter 4 develops further the arguments presented in the literature review (Chapter 2) on the need to broaden our focus on

management controls. It discusses the limitations of failing to subject the wider range of management controls typically found in practice within the research and looks at examples from previous studies. By so doing, it provides the foundation for the adoption of the Malmi and Brown (2008) management control package framework by establishing its relevance over other management control package frameworks currently found in the literature. Chapter 4 also discusses the significance of studying management controls through the lens of the package perspective and summarises the key concepts that have emerged from prior studies. The chapter concludes by presenting a management control package framework designed exclusively to manage sustainability, thereby instituting the appropriateness and relevance of the Malmi and Brown (2008) package framework for sustainability research. Chapter 5 introduces the theoretical framework that explains the relationship between sustainability strategies and management controls. The relevance of the Configurational-Congruency theoretical framework that provides the theoretical justification for undertaking this research is discussed. The need to theorise the relationship between sustainability strategies and management controls is evident from the systematic literature review of this field, as current research remains descriptive and prescriptive and is not guided by relevant theoretical viewpoints. Chapter 6 begins with a discussion on the guiding paradigm directing this work of research. It explains the rationality behind the choice of the mixed methods approach strongly grounded in the Pragmatic School of Thought (Brannen, 2005). Data analytic procedure for the first phase is then discussed, along with the findings and the subsequent discussion in Chapter 7. Chapter 8 presents a survey instrument developed on the basis of the interview findings as well as on the literature. A brief analysis and findings arising out of empirical research from this phase are subsequently addressed. Chapter 9 concludes by presenting the key aspects of the research while acknowledging its selection of limitations. Managerial implications arising out of the study - and the potential avenues for further research - are additionally discussed. This chapter is followed by a bibliographic presentation of the references and other key information within the Appendices.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

The introductory chapter presented a broad overview of research within the field of corporate sustainability. In doing so, it identified a recent endeavour to understand how firms are managing and controlling their sustainability pursuits. Moreover, it was evident from the introductory chapter, that increasingly companies are adopting explicit strategies to position themselves in relation to their environmental and social responsibilities and have identified managing certain social and environmental issues as been critical for corporate success. In light of the emerging focus of research on corporate controls for sustainability, the purpose of this chapter is to present a systematic review of literature that focuses on management controls and sustainability strategy. The systematic review of the literature on sustainability strategy and management controls will provide a thorough understanding of how this relationship has been studied so far and provide evidence to substantiate the rationale behind the aims and objectives driving this research. Firstly, the review methodology is briefly presented followed by a descriptive account of the reviewed sample. Subsequently, the key themes arising out of the reviewed literature is identified and elaborated followed by a discussion substantiating the core aims of the current study.

2.1 Review Methodology

The study adopts a systematic review approach, a method that originated within the medical sciences, to analyse the literature on controls for sustainability strategies in a structured manner (Tranfield et al., 2003). The approach has not only found increasing prominence within the extant sustainability literature (Carter and Easton, 2011; Burritt et al., 2010) but specifically also within the sustainability control literature (Lueg and Radlach, 2016; Hansen and Schaltegger, 2016). The strength of this approach lies in the fact that it facilitates the gathering and presentation of evidence based, context specific and an unbiased overview of knowledge accumulated through prior research investigating strategy and control from a sustainability perspective. It adopts a transparent process that could be imitated and reproduced overcoming the limitations of "traditional narrative reviews" (Tranfield et al., 2003, p. 207). The process is summarised in table 1a.

Four databases including Science Direct, Proquest, Emerald and EBSCO were selected. Malmi and Brown (2008) management controls package framework was the basis for selecting controls to be included as key words during the search process in stage 3. Controls including culture, planning, rewards, budget, scorecard, performance measurement, structure and policies were included with different variations. Overall, twenty-six key words were used (see table 1b) in various combinations limited to their inclusion within the title or abstracts within the targeted publications during the period 1989-2016, inclusive of both years. The search concentrated on ABS recognised journals, however, due to the technical limitations of the databases, some non-ABS journals were returned and were included in the selection process. The initial search returned 18,371 articles in aggregate, with 2,258 remaining as unique articles following the identification and removal of duplicates. Subsequently, following a two-phase article selection process, 43 articles were selected in the final sample along with 14 additional articles based on bibliography search for further analysis. The first phase involved excluding articles based on analysis of titles followed by a comprehensive analysis of abstracts of the remaining 186 articles. Primarily four conditions had to be fulfilled including that the article focuses on an element or a combination of controls; includes sustainability/CSR/extra-financial responsibility strategy; concentrates on the micro level i.e. for profit entities, and written by academics. A descriptive and thematic analysis of the main findings is presented in the latter sections.

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Research Strategy Development	Article Source Identification	Article Search	Exclusion Analysis	Key Areas of Focus	Thematic Findings
Systematic Review	Databases (4)	Key Words Used (26)	Limiter 1 Relevance/Title Analysis (186 Articles Remain) Limiter 2 Sustainability Strategy and Controls included? (113 Articles Remain)	Control Design and Strategic Process Control Design and Strategic Content Control Use	Multiplicity of Controls and Emphasis on Formal and Informal Controls Tensions in Decision-making Management Practice Frameworks Supplementary Roles of Controls Control Multiplicity for Environmental Strategies Balanced Score Approach to Controlling for Sustainability Employee Perception of Controlling for Sustainability
	Journals (50+) ABS Journals	Search Criteria (Abstract/Title)	Relevant Articles includingBibliographyanalysis (57)	Narrow Control Focus	Individual Controls for Sustainability Strategies

				Broad Control Focus	Control Use of Sustainability Strategies
	(Management, Accounting, Responsible Business, Corporate Governance)				
		Time 1989-2016 (October)	Relevant Journals (32)		
		Total Articles Returned (18,371) Unique Articles after Duplicates Removed (2258)			

Table 1a: Systematic Literature Review Process

Key Words used for Controls	Key Words used for Strategy	Key Words used for Sustainability
budget*; governance*; structur*; cultur*; design; polic*; control; account*; measure*; reward; compensation; plan*; scorecard; manage*; cost*;BSC; performance	Strateg*; decision	sustainab*; CSR; environment*; social*; respons*

Table 1b:Key Words Used

2.2 Sample Characteristic

2.2.1 Publication Frequency

Although the earliest research within this field was undertaken as early as 1994 with McCloskey and Maddock emphasising the necessity of strong internal values supported by codes of practice to implement an environmental management system, yet over two-thirds of

the studies (41) included in the sample has been conductedonlyover the last ten year period (2007-2016).This is consistent with Lueg and Radlach (2016) review of the literature on management control systems for sustainable development who find asimilar pattern in the growth of research on controls for sustainable development.In the least, the frequency of exploration within this area has been sporadic and yet to attract sustained attention. Some of the earlier studies remained mainly conceptual in nature (McCloskey and Maddock; Azzone and Nocci, 1999; Epstein and Wisner, 2001; Figge et al., 2002; Lothe and Myrtveit, 2003), and only a few provided any empirical evidence (Maxwell et al., 1997; James et al., 1999).The slow pace of research within this field could be attributed to the fact that majority of studies within the extant sustainability arena have focussed on the rationale for engaging in sustainable business practices (Salzmann et al., 2005), external reporting practices (Kolk, 2004) as well as the debate on what constitutes social responsibility or sustainability from the business perspective (Dahlsrud, 2008) as observed in the introductory section.
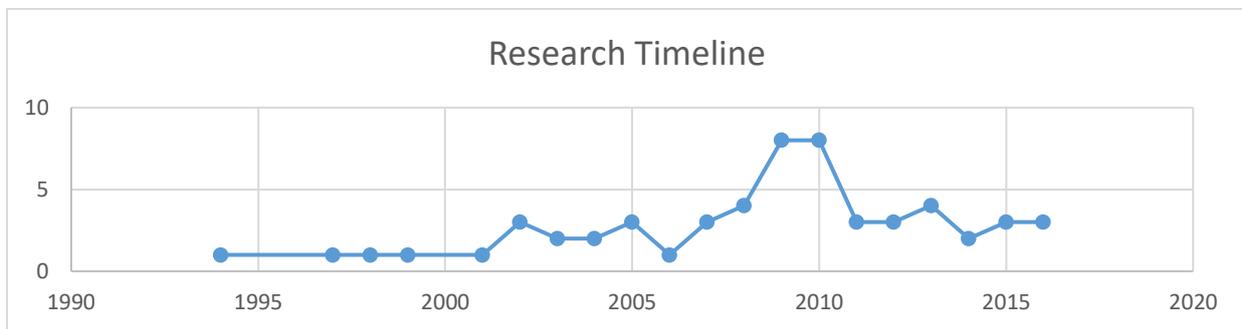
Table 2: Research over time

The agenda during the pre-growth period remained diverse with empirical papers providing an overview of how notable companies were managing sustainability (for instance, Maxwell et al., 1997). There was also a growing interest in the conceptual advancements of how a Balanced Scorecard (BSC) (Kaplan and Norton,1996) could be adoptedwithin a sustainability context (Figge et al., 2002; Epstein and Wisner, 2001;der Woerd and den Brink, 2004). Others have provided the conceptual basis for including sustainability within rewards and compensation systems (Lothe and Myrtveit, 2003). However, the past decade saw an influx of empirical studies with various focus (Journeault et al., 2016; Perego and Hartmann, 2009; Durden, 2008). As will be evident from the following passages, aunifiedresearch context is yet to be established as the sample exhibits different research agendas. This practice, however, indicates the exploratory nature of research looking at sustainability strategy and control which is yet to develop into a key theme within either sustainability or management control literature (Chenhall, 2003).

2.2.2 Methodological Aspect

*2.2.2.1 Conceptual/Empirical*The sample is represented by nine studies that make conceptual advancements (for example, Lothe and Myrtveit, 2003; Epstein and Wisner, 2001), a further nine that remain mostly conceptual in nature but support the arguments or conceptual models with brief empirical data (includes Maas and Reniers, 2014; Petrini and Pozzebon, 2009) and thirty-nine studies that provide empirical evidence of the control-sustainability/strategy relationship (Journeault et al., 2016; James et al., 1999; Sundin et al., 2010). Hence, our understanding of the control-strategy relationship is informed by both conceptual and empirical advancements. Half of the studies that were mostly conceptual in nature focused on single control mechanisms concentrating mostly on PMS and more specifically on BSC for sustainability (Chung and Parker, 2008; Figge et al., 2002; van der Woerd and van der Brink, 2004; Epstein and Wisner, 2001). For instance, van der Woerd and van der Brink (2004) develop sector specific BSC specifically for a community driven mode of sustainability/CSR strategy and test the model with four organisations of different sizes operating in the food and tourism sectors. The other half included a focus on several different control mechanisms providing a holistic understanding of controls for sustainability. For instance, Leon-Soriano et al. (2010) provide a model for implementing a BSC by also referring to information systems and strategic planning mechanisms and validate it by applying the model in a single case context.

Empirical Studies Tucker et al. (2009) recommend analysing empirical studies according to their methodological prevalence. The review of the literature shows the dominance of the qualitative approach (n= 25, 64% overall) informed mostly by case studies (n=18, 72% of qualitative studies and 46% overall, inclusive of action research). Although case studies do provide rich contextual insights, however, the findings cannot be generalised (Yin, 2003). Moreover, Ferreira and Merchant (1992) point out to a further limitation of case study research specifically within the extant accounting literature that clarity regarding theoretical contributions is often not provided.

Methods/Approach	Frequency
Case Studies incl. Action Research	18
Interviews	4
Other Qualitative	3
Survey	11
Database/Other Quants	3

Table 3: Methods

Keating (1995) provides a framework to analyse case studies according to their theoretical contributions. Specifically, the interest lies in whether the case study provides evidence to refute an existing theory, develops and advances a new theoretical underpinning relevant to the study of control-strategy relationship or provides evidence to refine existing theories. Theory refinement case studies are further categorised broadly as those providing evidence to illustrate an existing theory and those that refine existing theories further to make them suitable for statistical tests. Based on this framework, only seven case studies could be identified making a theoretical contribution. For instance, Epstein et al. (2015) through a multiple embedded case study approach seeking to enhance our understanding of how organisations balance both financial and non-financial aspects during decision-making, identify paradox theory as a suitable framework to explain the findings and in doing so, provide evidence of the illustrative power of the theory. Norris and O'Dwyer (2004) and Durden (2008) case studies illustrate the relevance of stakeholder theory to explain the control-strategy relationship. Additionally, Schneider and Vieira (2010) as well as Sundin et al. (2010) both apply stakeholder theories to explore different aspects related to the BSC approach for sustainability. Slack et al. (2015) case study demonstrates the appropriateness of social exchange theory to explore the significance of cultural control and CSR as a concept at an individual level of analysis (Luft and Shields, 2003).The literature is yet to reach the stage where new theories are developed to explain the relationship between controls for sustainability strategy and to refine existing theories suitable for large scale statistical tests.However, themajority of the case studies are not guided by any underlying theoretical underpinnings but remain largely exploratory in nature. For example, Riccaboni and Leone (2010) explore P&G through a case based approach identifying the controls that are put in place to implement sustainability. The exploratory nature of the case studies which also form a major approach within empirical research, signifies the novel and emergent nature of the literature. It is also interesting to note that majority of the broad control based studies were informed through the qualitative paradigm and the case based approach. In other words, large scale statistical studies focusing on control multiplicity for sustainability is yet to gain attention.

Nearly three-quarters of the quantitative studies pertain to an isolated focus on control with varying emphasis. For instance, Epstein and Roy (2007) concentrate on surveying large companies on organisational design and structural arrangements to support strategy implementation. Ballou et al. (2012) survey USA based companies to understand the role of accountants in strategic integration and implementation. Perego and Hartmann (2009) survey

Dutch companies to study the PMS attributes of different environmental strategies. However, survey based quantitative approach is yet to pick momentum as only eleven studies have resorted to this practice to obtain data. The handful of studies that rely on the quantitative approach to exploring a wider range of controls, also havedifferent research agenda. For instance, Journeault et al. (2016) survey Canadian companies to explorehowcontrol use supports intended environmental strategies. Epstein and Wisner (2005) survey Mexican plants operating in the sensitive industry to study multiple control design for compliance based environmental strategies.

Overall, the focus of the empirical studies remains at the level of strategic implementation with similar emphases on an isolated and a holistic focus on controls and remain mostly informed by the qualitative approach.

Empirical Sample Characteristics

The sample size for the qualitative studies ranged between one to thirty-five organisations. Specifically,most of the case based studies, concentrated between one and two firms while a very small number (only four studies) ranged between three to sixteen organisations (Dias-Sardinha et al., 2007; Epstein et al., 2015; Chalmeta and Palomero, 2011). For the survey based studies, the sample range showed a greater variation ranging from as low as 47 to as high as 469 organisations.

The majority of the empirical studies (n=15) clustered around representing cross – sectional organisations from multiple industries while a limited number were selective in the population industry. The variety includes a focus on manufacturing (n=12), automobile (n=1), healthcare (n=1), FMGC (n=1), energy (n=3) as well as retail (n=1) industries/sectors. The large concentration on cross-sectional representation indicates that the current knowledge provides relatively little insights about controlling for sector specific sustainability strategies (notable exception includes Berrone and Gomez-Mejia, 2009).
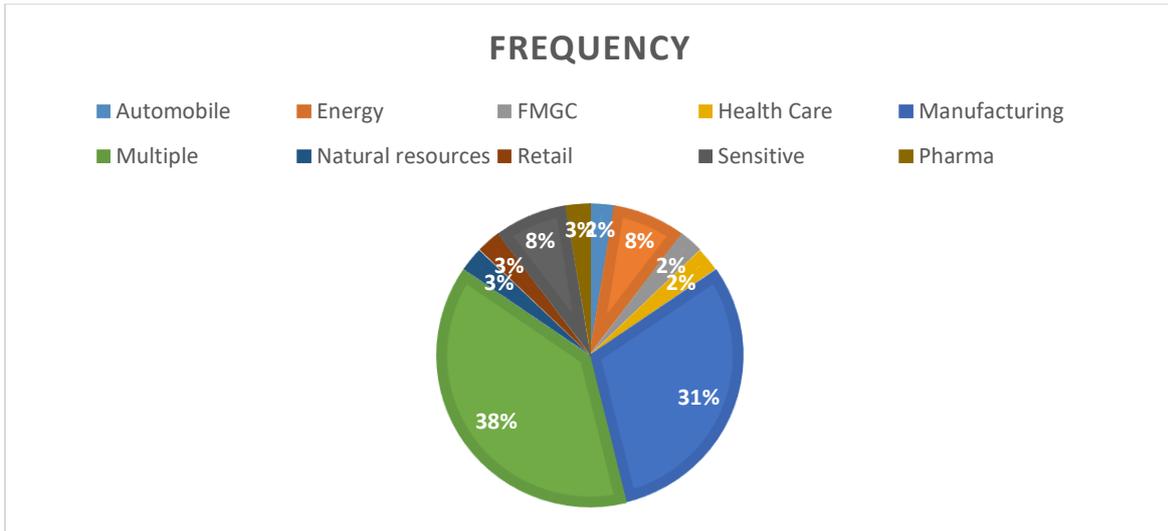
Chart 1: Sectoral Focus

Regarding organisational size, some variability exists. Nearly, 62% of the empirical studies were conducted on large to very large companies possibly due to the underlying assumptions that large companies possess the resources necessary for pursuing sustainability (Perego and Hartmann, 2009). However, considering the fact that due to isomorphic pressures emanating from large companies over their supply chain, it could be assumed that small sized firms will have certain control mechanisms to manage sustainability. Only two case studies solely concentrated on small sized companies (Lee, 2009; Durden, 2008). Lee (2009) case study provides evidence of isomorphic pressures influencing visible and deliberate modifications in control mechanisms in two Korean firms to implement sustainability.
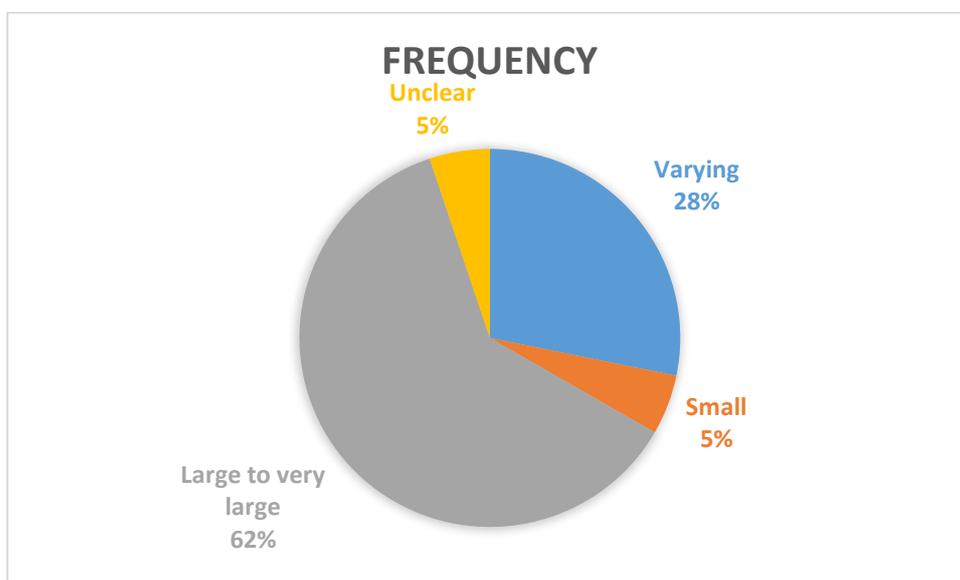
Chart 2: Organisational Size

Consistent with Lueg and Radlach (2016) sample characteristics, emerging countries are yet to receive much attention with the majority focus paid to developed countries and specifically to the EU (UK inclusive) countries.
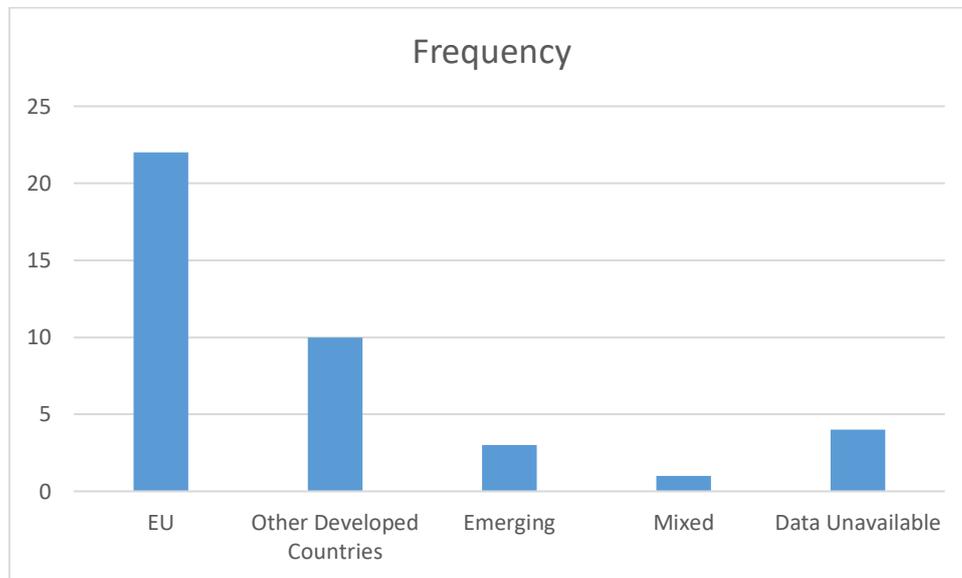
Chart 3: Country Context

Additionally, Luft and Shields (2003) recommend paying careful attention to the level of analysis as the overall meaning and interpretation from findings are impacted by the unit of analysis. An overwhelming majority of studies within the empirical sample amounting to 82% explored controls for sustainability at the organisational level. Only one study (Slack et al., 2015) concentrated at the individual or employee level while three studies at the unit or site level.
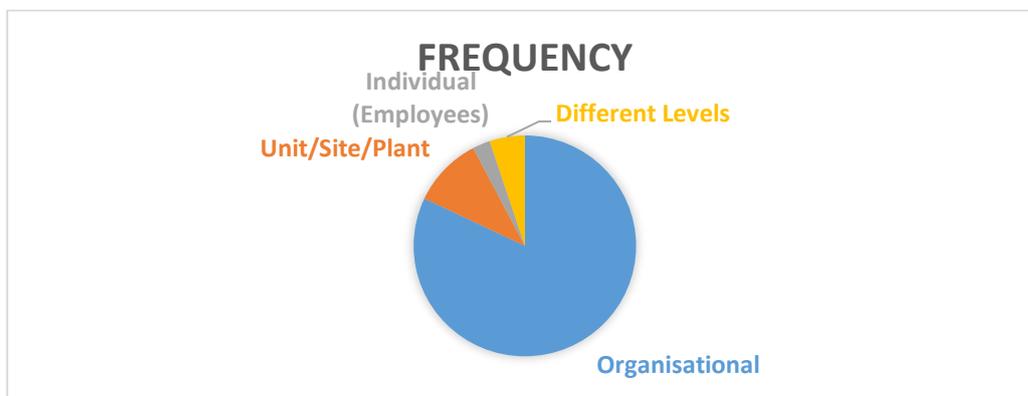
Chart 4: Level of Analysis

2.2.3 Theoretical Aspect

Only a handful of studies is guided explicitly by an established theoretical underpinning and the need for controlling sustainability has been explained by considering different theoretical perspectives. While most of the identified studies with an explicit theoretical rationale remained grounded on thesingletheoretical framework, only a handful of publications considered multiple theoretical premises (Perego and Hartmann, 2009;Berrone and Gomez-mejia, 2009). Remarkably, as a departure from the theories that have been used extensively in the extant management control literature namely the contingency framework (Langfield-Smith, 1997), the analysis indicates that sustainability researchers within this field are keen to experiment with more non-traditional theoretical basis and as such only five studies were guided by traditional theoretical frameworks (for example, contingency and resource based perspectives) (Shaukat et al., 2016; Epstein and Wisner, 2005; Pondevilleet al., 2013). Others relied on cross-disciplinary theories bringing to light the explanatory power of these seldom used theories within the sustainability fore (Slack et al., 2015; Epstein et al., 2015; Journeault et al., 2016). The application of these theories was fragmented and remained isolated occurrences. Overall only 14 empirical studies were backed up by theoretical explanations.

2.2.4 Strategic Aspect

*2.2.4.1 Strategy Process/Content*Based on the categorisation ofthe approach adopted to study strategy as discussed in the introductory chapter (chapter 1.0) the sample consists of a large proportion of research (*as many as 38 studies*) focusing on the strategic process while only a significantly smaller number looks at the strategic content (*19 studies*). Within the strategic process perspective, majority of studies have considered exploring controls for strategy implementation rather than formulation (except James et al., 1999 and Arjaliès and Mundy, 2013 who touch upon strategic formulation), although only a handful of scholars have explicitly stated implementation as a goal of study (notable exceptions include Riccaboni and Leone, 2010; Figge et al., 2002; Maon et al., 2009; Teh and Corbitt, 2015; Gond et al., 2012).

Moreover, the sample echoes Neugebauer et al., (2016) concerns that researchers have largely ignored the diverse viewpoints of the strategic process governed by different schools of thought as discussed previously, and have assumed strategy to be an outcome of a rational and planned process (Ansoff, 1987; Riccaboni and Leone, 2010). The inherent flaw in dismissing the debate as argued by Neugebauer et al. (2016) is that sustainability is a complex and wicked issue (Frame, 2008) and a planned process may not necessarily reflect a genuine attempt to solve

those issues, specifically those wicked issues that are not easily controllable. *Only one article* (Arjaliès and Mundy, 2013) concentrated on controls supporting strategic opportunities to emerge bottom-up. The lack of focus on the strategy as practice school of thought may be explained by the tendency of sustainability strategists to focus on top management commitment (Harris, 2007) and integration within the strategic planning process (Banerjee, 2002; Roome, 1994).

Additionally, *only two studies* could be identified where the purpose was to explore controls for intended strategies (Journeault et al., 2016; Arjaliès and Mundy, 2013) whereas others have focused on the implementation or the content of deliberate, realised strategies although not explicit in many cases (Langfield-Smith, 2007).

*2.2.4.2 Operationalising Extra-Financial Strategy*Regarding conceptualising strategy, there is a significant variation (see table 4). Twenty-four studies consider environmental strategy and responsibility (Perego and Hartmann, 2009;Masanet-llodra, 2006; Berrone and Gomez-mejia, 2009)while only four studies focus exclusively on social aspects with a focus on how controls cater for stakeholder concerns (for instance, Durden, 2008; Norris and O'Dwyer, 2004). Some studies have explored controls by focusing on CSR as a concept without elaborating and/or specifying the strategic direction or content (Maon et al., 2009;Filatotchev and Nakajima, 2014; Slack et al., 2015). The remaining studies have attempted to include both environmental and social aspects as foci in their studies, with varying emphases, acknowledging the growing importance of social issues with firms extending beyond their environmental responsibilities (Morsing and Oswald, 2009). A large proportion of these studies that focus on both social and environmental aspects explore BSC for sustainability (Hubbard, 2009;Butler et al., 2011;Sundin et al., 2010). Chapter 3 summarises how sustainability/CSR strategy has been conceptualised within the extant literature.

A wide disparity also exists regarding how "extra-financial" responsibilities have been addressed (Herzig and Ghosh, 2014). A large proportion of studies address extra-financial responsibilities as part of the broader *sustainability* discourse (n=23) while a handful of studies refer to the CSR terminology (n=6). A further six studies refer to both concepts of Sustainability/CSR to conceptualise "extra-financial" strategies. Similar to Lueg and Radlach (2016) sample, a relatively large proportion defines the same through the environmental lens whiletwo studiesprefer the Corporate Social Performance (CSP) perspective. In this research, the terms sustainability and CSR are used interchangeably although it recognises that a debate

exists within the extant CSR/sustainability literature on the meaning of CSR and sustainability and the underlying similarities and differences (May et al., 2007; Montiel, 2008).

Terminology/concept	Frequency
CSR	6
Sustainability	23
csr/sustainability	8
CSP	2
Environmental responsibility	17
CSR/CSP	1

Table 4: Terminology

2.2.5 Control Aspect

*2.2.5.1 Control Design/Use*Control is predominantly conceptualised from a design perspective (Masanet-Llodra, 2006; Pondevilleet al., 2013; Durden, 2008; Panapanaan et al., 2003; Contrafatto and Burns, 2013) with only five studies paying attention to how controls are used within the reviewed literature (Adams and Frost, 2008; Journeault et al., 2016; Arjaliès and Mundy, 2013). The conceptual distinctions between control design and use was discussed in chapter 1.0.For instance, Riccaboni and Leone (2010) explore the controls that support strategy implementation in Procter and Gamble (P&G). Perego and Hartmann (2009) study the differences in performance measurement system attributes in different strategic settings regarding their scope, timeliness, sensitivity and congruity. Durden (2008) considers the type of controls and concludes that both formal and informal controls play a role in sustainability strategy implementation. Shaukat et al. (2016) find that the emphases given to control types, in this context, controls that are strategic and financial in nature will influence board attributes consequently affecting the CSR strategic orientation.

*2.2.5.2Broad/Narrow*An additional categorisation of control focus is possible such that studies employing more than one control could be classified as having a broad focus and those involving just one control as having a narrow focus. Based on this categorisation, the sample exhibits analmost equal distribution of studies employing a broad (n=28) and a narrow (n=29) control focus.For instance, Slack et al. (2015) enhances our understanding of the significance of cultural controls, specifically the need to create shared vision and the necessity of internal communications for sustainability whilst exploring employee perceptions of internal sustainability practice at a UK based energy firm, whereas, McCloskey and Maddock (1994) assert the significance of a strong values based approach facilitating the implementation of Environmental Management Systems.In a similar vein, the focus of Berrone and Gomez-Mejia

(2009) study is on reward systems and specifically the impact of environmental performance on CEO total pay.

Narrow Control Focus	Frequency
Performance Measurement Systems	*17*
Compensation	*2*
Culture	*2*
Governance	*1*
Structure	*2*
Information Technology	*2*
Policy	*1*
Other	*2*

Table 5: Narrow Control Focus Type

Contrastingly, studies with a broad control focus tend to cover a number of control areas and provide an understanding of the relevance of a multiplicity of controls to manage sustainability. Although a range of controls are exploredin aggregate within the sample, yet there is a visible tendency within the sample studies to focus exclusively on performance measurement systems (PMS), cultural controls and planning mechanisms. As many as 14 out of 28 broad based studies look at the aforementioned controls simultaneously (Epstein and Wisner, 2005; Durden, 2008; Albelda et al., 2007). Other studies consider leadership andgovernance, organisational design alongside a plethora of other controls and a minority also includes rewards based controls (Filatotchev and Nakajima, 2014; Riccaboni and Leone, 2010). For instance, Riccaboni and Leone (2010) pen a complete picture of how a variety controls including PMS, structure, planning and culture play a role in supporting strategy implementation in P&G. The objective remains exploratory, and a rich descriptive account of multiple controls is provided. Furthermore, the emphasis of focus on each control varies, with some controls receiving relatively more emphasis than others within the studies. For instance, in Riccaboni and Leone (2010) study, the focus is predominantly on PMS and planning whilestructure receives lesser attention.Table 6 maps how the broadly focused studies have concentrated on control multiplicity.

Table 6: Broad Control Focus Type

Broad Control Focus Distribution

Culture	Planning	PMS	Reward	Design	Policy	Governance and Leadership	SR	Budget	LOC	EMA	IS
Y				Y	Y						
Y	Y	Y		Y							
Y	Y	Y		Y							
Y		Y	Y					Y			
Y	Y		Y	Y	Y	Y				Y	
									Y		
Y	Y	Y		Y		Y	Y				
Y	Y	Y	Y	Y		Y	Y				
Y		Y	Y								
Y	Y	Y			Y						
	Y		Y			Y					
Y	Y	Y									
Y	Y	Y		Y		Y					
Y	Y	Y				Y					
Y	Y	Y				Y					
Y	Y	Y		Y							
Y	Y	Y	Y	Y		Y					
Y				Y						Y	
Y	Y	Y		Y				Y			
Y		Y		Y		Y					
									Y		
	Y	Y									Y
Y	Y										
Y	Y	Y	Y	Y							
Y	Y	Y	Y								
Y		Y		Y							
Y		Y									
	Y	Y	Y					Y	Y		
23	**19**	**21**	9	14	3	9	2	3	3	2	1

Interestingly, the focus on planning and leadership (for instance top management commitment Epstein and Wisner, 2005) further provides evidence of an implicit assumption within the reviewed literature that strategy is a planned and structured process enacted top-down (Ansoff, 1987). This is consistent with Ghosh and Herzig (2014) findings of top management commitment remaining a significant factor in driving sustainability in UK companies.

Overall, based on the strategic and control categorisations, the focus is on exploring controls design in facilitating strategy implementation as the table7 indicates with only five studies paying attention to how controls are used (Adams and Frost, 2008; Journeault et al., 2016; Arjaliès and Mundy, 2013). Only Arjaliès and Mundy (2013) explicitly considerhow control use could facilitate the emergence of new strategic directions. It should be however acknowledged that two studies also reflected slightly on the usability aspect but largely concentrated on control design aspect and as such has been subsumed broadly under the latter categorisation (Perego and Hartmann, 2009; Sundin et al., 2010).

Strategy/control	Design	Use
Process	36	2
Content	16	3

Table 7: Overall View

2.3 Thematic Analysis

Within this section, the key themes arising out of the analysis of the papers identified in the sample are presented. The section is segregated according to the strategy and control categories introduced earlier. Firstly, the key themes based on studies focusing on control design from a broad perspective of control and thestrategicprocessis presented. Thisis followed by a discussion on the key aspects of studies concentrating on control design from a narrow perspective and strategic process. The penultimate sections on control design illustrate the key points from studies undertaken through the lens of strategic content with broad and narrow perspectives on controls respectively. A discussion then ensues on the role of control use for sustainability strategy. Owing to the small number of studies focusing on control use (n=5), no additional categorisation was deemed necessary. The figure below shows the categorisations and the key themes discussed in this section.

Figure 1: Thematic Analysis
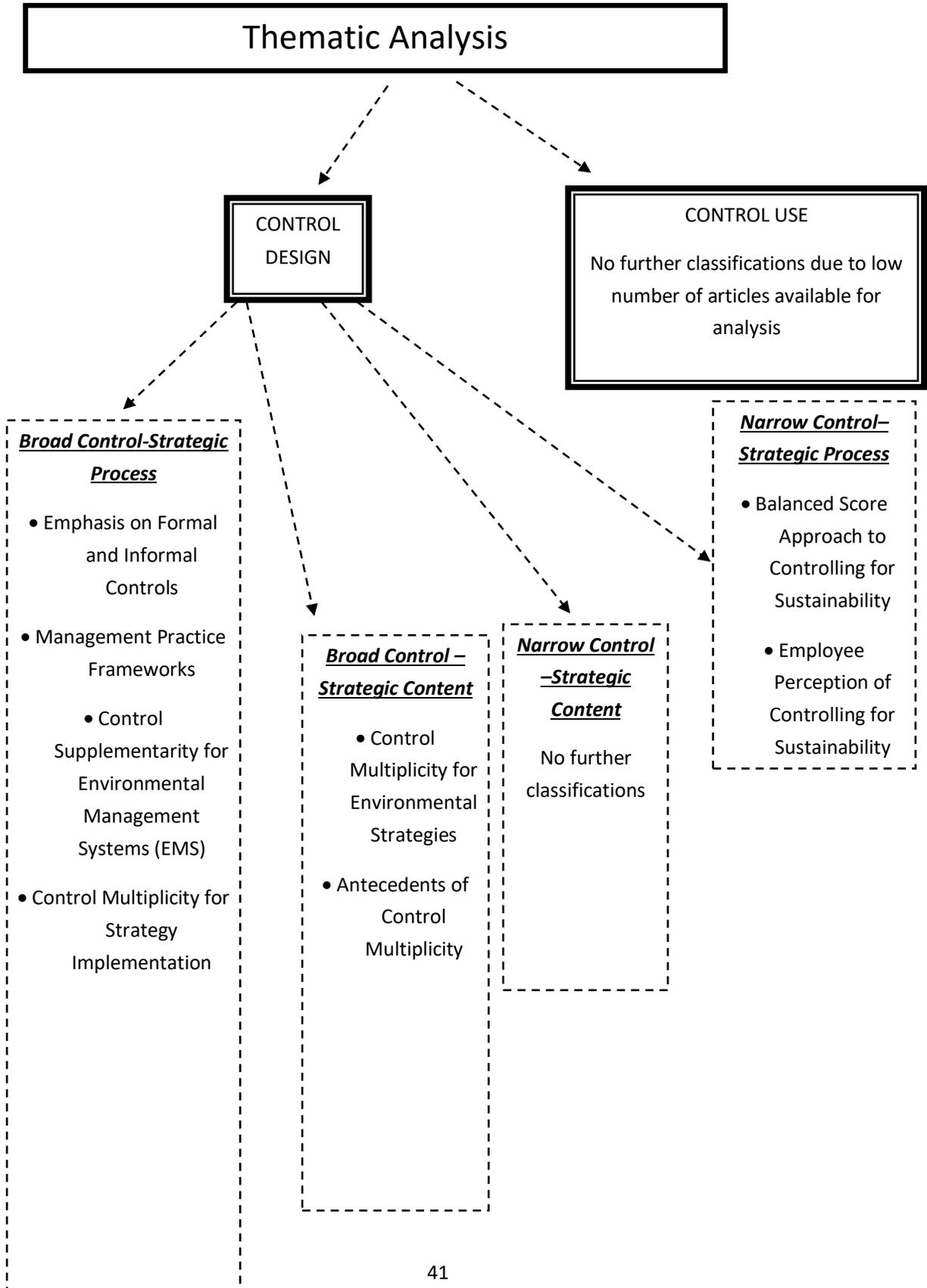
2.3.1 Control Design

2.3.1.1 Broad Control Design Implications for Strategic Process

Three key themes were identified within this category (n=19). An overview of these studies is presented in appendix 2A. There was a mix of conceptual and case based studies with the latter remaining largely undirected by any theoretical premise (exceptions include Durden, 2008; Norris and O'Dwyer, 2004; Epstein et al., 2015; Maon et al., 2009 who rely on theoretical bases including stakeholder theory to explore controls for sustainability). However, the case studies provide broad descriptive accounts of a range of controls that support the implementation of a sustainability strategy. The conceptual papers are prescriptive in nature and provide frameworks to guide management on control designs to support sustainability strategies. The debate focuses on the role of a multiplicity of controls as found in practice, nature of controls, if formal and informal and their relevance in controlling for sustainability, management practice frameworks advanced within this category of literature, and the supplementary roles controls play in firms implementing environmental management systems as part of the strategic underpinning.

Control Multiplicity for Strategy Implementation

The qualitative studies that were not guided by any theoretical underpinnings but remaining largely informed by a small number of case organisations, provided context laden and textually rich depiction of how controls were designed to support strategy implementation and remained descriptive in nature (Morsing and Oswald, 2009; Lee, 2009; Teh and Corbitt, 2015; Masanet-llodra, 2006; Riccaboni and Leone, 2010). Their purpose was to "discover" or unpack how sustainability strategies were supported in the organisations and as such were not guided by the possibility of tensions arising out of controls incongruity, problems associated with balancing multiple decisions or to investigate if controls were reflecting stakeholder concerns (Durden, 2008). However, the focus was on studying organisations known for their sustainability prerogatives (for instance, P&G; Novo Nordisk). However, these studies provide the empirical evidence to support the management frameworks discussed later on in this section, and particularly lend support to the role of multiple controls as has been conceptualised within these frameworks (Khoo and Tan, 2002; Panapanaan et al., 2003; Maon et al., 2009; Cramer, 2005).

For instance, Morsing and Oswald (2009), as well as Riccaboni and Leone (2009), provide evidence of the existence of both formal and informal controls to manage sustainability in two large organisations. These studies find the informal controls in the form of culture based controls as well as more formal controls including planning, structural, measurement systems

as well as policy focused tools providing the necessary means to manage sustainability in these organisations.To elaborate, the studies have identified the role of organisational culture in binding employees towards the common goal of working towards the sustainability agenda. Specifically, the studies identify the reliance on specific projects such as "Take Action" and events such as Earth Days endorsed by top management as a form of normative control (Kunda, 1992) to inculcate collective action and ideation within the workforce and also to signal the organisation's stance on sustainability. The same practice focusing on culture based controls was also observed by Teh and Corbitt (2015) in ASX 200 companies. Reliance on specific projects and events as part of informal controls to manage sustainability was found to have been reinforced by the value systems (e.g. value statements) that are also used to shape employee behaviour and collective actions. On the other hand, formal aspects of control such as the structural arrangements were found to provide the necessary means to ensure the organisational objectives are met, policies adhered to and different functional units contribute towards the sustainability objectives (Riccaboni and Leone, 2010; Morsing and Oswald, 2009; Teh and Corbitt, 2015). On similar lines, Contraffato and Burns (2013) observed the gradual structural changes with the establishment of Sustainability Department following the decision by top management championing sustainability and the introduction of responsibility value and codes implying that besides culture based controls, more formal structural arrangements are made to manage sustainability.Such structural arrangements were also observed by Morsing and Oswald (2009) where sustainability became integrated with the control arrangements with the enactment of a department that integrates both social and environmental aspects. The department was noted to facilitate the dissemination of sustainability principles throughout the organisation, engaging with stakeholders as well as facilitating the undertaking of institutional context analysis to inform the planning mechanism for sustainability. Besides specific structural adaptations for sustainability control, anadvanced form of performance measurement systems namely the use of integrated performance measurement instruments such as a cascading BSC was also observed by Morsing and Oswald (2009) to monitor strategic progress. The role of top management as part of the overall governance mechanism has also been highlighted in these studies (Morsing and Oswald, 2009; Riccaboni and Leone, 2010). Although the case studies highlight the importance of both formal and informal controls to support the strategic process indicating the deliberate changes been made to existing control systems, yet, some drawbacks remain. For instance, some controls pointed out as significant including rewards as a formal control mechanism remain outside the purview of these studies (Lothe and Myrtveit, 2003).

While studies have been inundated with a focus on large companies within this sample, as a departure from this standard practice, Lee (2009) sheds some light on how SMEs are designing controls for sustainability. The motivation for SMEs to act sustainably was noted before. Similar to large companies, SMEs included in Lee (2009) sample, provide evidence of multiple control design to support strategy implementation. Specifically, Lee (2009) observed structural changes to control for sustainability with one SME relying on cross-function teams with R&D, production and quality assurance working together with frequent meetings to solve environmental problems. The other SME opted for an environmental department with few employees in charge of managing different environmental issues. The adoption of an environmental department by a SME may come as a surprise as literature frequently suggests the lack of resources as one of the main reasons why SMEs may find it difficult to adopt green principles, a primary reason why research has predominantly focused on large companies (Perego and Hartmann, 2009; Galbreath, 2010). Both companies invested their resources in providing training to raise the awareness of environmental issues internally. Advanced techniques including environmental impact analysis were undertaken to measure theenvironmental performance of the production process.

Whereas the above case studies highlight the existence of a range of controls to manage sustainability, including formal and informal control types, the studies included below go a step further and advance a debate emphasising on the formal and informal aspects of controls.

Emphasis on formal and informal controls

Controls to Implement an Intended Strategy

Durden (2008) study highlights the fact that having a strong external image of a responsible business does not guarantee that controls will necessarily reflect such a stance internally and that the sustainability intent needs to be supported by necessary internal infrastructural provisions. The case study examined if the control mechanisms reflected stakeholder concerns and interests. Durden (2008) observed that the owner's vision of creating a socially responsible business was not reflected in either formal or informal controls. For instance, there was a lack of collective belief internally promoting the owner's intent. Durden (2008) does not elaborate on how this could be achieved. However, the mechanisms to promote a collective belief system has been discussed elsewhere (Morsing and Oswald, 2009; Khoo and Tan, 2002; Maon et al., 2009). For instance, how cultural controls were adapted to promote a collective belief through events and value systems was highlighted earlier (Morsing and Oswald, 2009). The owner's intent also did not transform into a firm commitment not reflected in formal controls including

strategic planning and reward systems. As an example, to clarify this occurrence, Durden (2008) noted that the stakeholders mentioned in the publicly available Triple Bottom Line report remained uncoupled from the strategic plan. The inclusion of stakeholders in the strategic plan also necessitates engaging in thedialogue process with stakeholder groups to recognise their concerns so that these can be internalised and incorporated within corporate goals (Donaldson and Preston, 1995; Hasnas, 1998). The plan only incorporated the vision of operating responsibly, but no goals or formal plans were established. Consequently, the PMS had a strong financial orientation and no mechanisms were put in place to monitor social performance. Based on Durden (2008) observations, it is apparent that sustainability needs to be embedded in a number of management controls traditionally found in practice including culture, PMS as well as rewards to facilitate a firm level progression towards sustainable practices, which were observed to promote only the financial imperative. Furthermore, it could be argued that a range of controls is needed to facilitate the implementation of an intended strategy and that as pointed out by Durden (2008) both formal and informal controls need to reinforce each other to promote an intended strategy.

Tensions in Decision-making

Controls promoting tension

Whereas Durden (2008) explored control design for supporting an intended strategy, Norris and O'Dwyer (2004) contribute to the debate on formal and informal controls, by focusing on system congruency to implement strategies. In other words, they contend that responsible behaviour is controlled effectively when both formal and informal controls support each other and work in harmony and collectively promote responsible actions (Falkenberg and Herremans, 1995). And as such the focus is on exploring how three different control groups operating at the organisational level defined as formal sets of controls, and at the social and individual levels or informal controls collectively are designed in a UK based organisation. The study findings indicate a strong adherence towards informal controls operating both at the social and individual levels (Dalton and Lawrence, 1971; Hopwood, 1974; Ouchi, 1979b). Informal controls promoted a strong identification with social issues internally thus reflecting a stance towards responsible decision-making. Staff selection also played a fundamental aspect of the informal system whereby recruitment was geared towards those individuals with a keen interest towards social responsibility to ensure self and organisational value congruence (Soutar et al., 1994). Norris and O'Dywer (2004) highlight that the informal controls were so rigorously maintained that challenging responsible decisions were deemed to be unacceptable. However,

formal systems were based on monitoring outcomes of financial objectives and financial performancelike Durden (2008) observations.Norris and O'Dywer (2004)observed a clash between the two control types with a dominating role played by informalcontrols i.e. the two control types were not working in harmony with one another. The findings from the studyilluminate the mixed messages received by employees as formal controls based on the traditional approach to achieving financial and competitive objectives championed financial considerations in decision-makingwhile the informal controls channelled behaviour towards responsible decision-making. Formal systems remained focused on the financial goals; social actions were not formally measured, evaluated or rewarded. Similar to Durden's conclusion (2008), Norris and O'Dwyer (2004) also assert the need for controls to reinforce one another, or in other words they need to be acting incongruence. While the informal controls ought to promote a collective belief internally; theformal controls would aid in formally internalising social responsibility.

Controls checking tension

Whilecontrol incongruence promotes tensions in decision-making, Epstein et el. (2015) explore how formal and informal controls facilitate the incorporation of social, environmental and financial aspects into decision-making simultaneously. The focus specifically is on whether the controls aid in checking tensions that are diffused through incongruent systems.

By referring to paradox theory, Epstein et al. (2015) used three cases to demonstrate how companies are checking tensions between social, environmental and financial goals by relying on both formal and informal controls to aid in decision-making. In these cases, the informal controls set the context and the understanding of the need to engage in sustainable practices. Internally, there is a collective awareness of the need to act in responsible ways as promoted by the internal controls that were strong in Norris and O'Dwyer study (2004) but found wanting in Durden (2008) study. Epstein et al. (2015) explain that the formal controls set the boundary within which to operate, for instance, the need to adhere to legislative requirements and internally established policies. Hence, the combination of formal and informal controls allows the decision makers not to feel challenged when it comes to triple bottom line decision-making. Furthermore, the informal controls promote a longer-term orientation with regards to sustainability driving employees to make decisions that reflect a sustainability dimension. Hence even if the formal reward mechanisms rely on financial objectives, yet the informal controls play the balancing act to ensure decisions are made based on the triple bottom line perspective. On the basis of the findings, Epstein et al. (2015) emphasise the role of

informalcontrols in implementing sustainability strategy while discounting the role of other formal controls. Contrary to Durden (2008) and Norris and O'Dwyer (2004), Epstein et al. (2015) assert that informal controls are sufficient to controlling for sustainability as they embed sustainability focus into decision-making rendering formal controls unnecessary, notwithstanding the limitations noted previously.It could be assumed that the above case organisations had reached a certain level of maturity with regards to sustainability, in sharp contrast to the case organisations that were studied by Norris and O'Dwyer (2004) and Durden (2008).

Riccaboni and Leone (2009) further provide evidence of control design providing the means to implement decisions based on both financial and sustainability objectives. The study also contributes to the discussion on formal and informal controls and explores their role in strategic implementation at P&G. At P&G, the goals are based on financial imperatives of increasing net sales, shareholder wealth and earnings per share. However, it could be argued that P&Gembeds sustainability into its financial objectives such that where the purpose and goal is to enhance sales, sustainability becomes a part of the target as the focus is also on increasing the net sales of sustainable product range. This practice of embedding sustainability within financial objectives also provides further evidence of Epstein et al. (2015) observations of "paradox" in practice. Sustainable products are defined as those with reduced environmental impact. In this way, although the goals are financially derived, yet it allows P&G to drive their sustainability agenda. Furthermore, the application of the indigenously developed PSAT tool facilitated the assessment of each of the three dimensions of sustainability, namely financial, environmental (life cycle analysis) and social (stakeholder assessment) of new products. This also provides further evidence of how firms overcome the issues highlighted by Epstein et al. (2015). Furthermore, the study points out that sustainability could be integrated into existing traditional management controlsspecifically in this context the planning controls not necessitating radical changes to occur (as also observed by Teh and Corbitt, 2015 who reached a similar conclusion). Informal systems paved the way for the gradual inclusion of sustainability within daily work routine reinforcing the vision and the goals espoused in the formal planning controls.

Continuous Cycle of Interactions
The emphasis on both formal and informal MCS and their significance for sustainability implementation could also be explained by the need to "embed" sustainability within the management routine and as part of a "continuous cycle of actions" (Mass and Reniers, 2014,

p. 108). Mass and Reniers (2014) advance a conceptual framework to facilitate the implementation of CSR in organisations seeking to be sustainable. Emphasis has been given to informal controls to promote "belief driven interactions" within organisations as well as formal controls including planning to promote "action driven interactions" recognising the role played by both types of controls (Mass and Reniers, 2014, p. 108).

To elaborate, informal mechanisms through the provisions of mission statements promoting sustainable values, employee selection mechanisms to recruit those with an inclination towards sustainability and internal communications raising an awareness of sustainable practices, the organisations caninstil "believe driven interactions" within the organisations. Simultaneously, through formal controls including structural arrangements as well as stakeholder informed strategic planning systems facilitate action driven interactions between management, stakeholders and employees. This initial cycle may subsequently promote division or unit led enactment of sustainable practices rather than remaining grossly dependent on central management for directions. The framework is based on the understanding that sustainability needs to be based on a continuous cycle of improvements and MCS need to be designed to facilitate the process.

Management Practice Frameworks

Several studies have extended frameworks to aid decision makers to manage CSR/sustainability (Khoo and Tan, 2002; Panapanaan et al., 2003; Maon et al., 2009; Cramer, 2005). The frameworks have common denominators in that these recommend the inclusion of controls that are common within these frameworks, thereby acknowledging the significance of these controls to support strategy implementation. For instance,similar to the preparation and transformation phases in Khoo and Tan's (2002) framework, Maon et al. (2009) model identify the need to transform the existing firm culture by developing the workforce through training, awareness raising and education so as to create a shared vision for sustainability and consequently empowering employees to take affirmative action. Emphasis is on the establishment of a learning organisation where empowerment, awareness, knowledge sharing and action learning are encouraged. Major emphasis is paid to internal communications as means of disseminating sustainable thinking (Panapanaan et al., 2003). Moreover, Maon et al. (2009) recommend stakeholder mapping so that the corporate vision and mission is updated (if the need be) to accommodate their concerns (see also Cramer, 2005). Hence the informal controls could be engaged in developing a shared vision internally that promotes a stakeholder driven attitude towards corporate practice. Formal controls are also included in these

frameworks. Once the vision and mission have been established to pave the way for sustainability, these are to be included in the strategic plans as means of translating CSR mission and vision, and values into practice (Maon et al., 2009). Additionally, Khoo and Tan (2002) and Cramer (2005) refer to the mobilisation of PMS to collect information about environmental performance for decision-making. Maon et al., (2009) emphasise reward mechanisms to incentivise employees to engage with the implementation process. The focus is also paid to structural reforms to facilitate the implementation of the adopted strategy (Panapanaan et al., 2003). The structural changes may involve establishing specific roles to manage CSR implementation process and to update HR policies as necessary (Cramer, 2005; Maon et al., 2009).

Control Supplementarity for Environmental Management Systems (EMS)

Environmental management systems have been widely studiedas means to manage the environmental performance of a firm and as an explicit part of an environmental strategy (Darnall and Edwards, 2006; Zutshi and Sohal, 2004; Hui et al., 2001). Masanet-Llodra (2006) and Albelda et al. (2007) provide empirical evidence of the role of a multiple of controls that facilitate the implementation of EMS (McCloskey and Maddock, 1994). Albelda et al. (2007) contended that the development of intangible assets derived from staff training and engagement programme ensured that EMS was kept "…alive and fresh, avoiding becoming bureaucratic" (Albelda et al., 2007, p. 410). Employees at the site level were thoroughly trained in all aspects of environmental management including material use and areas for continuous improvement, with a focus on transcending the technical aspects. The training and engagement projects ensured the development of employee skills, knowledge and environmental awareness. The presence of these intangible assets in the form of key internal capacity and capabilities as aform of internal resource within these sites ensured continuous improvements (as a fundamental aspect of EMS) took place, and that extra-financial considerationwere incorporated within strategic planning process regarding capital investments in environmental best practices and technologies. Thiswas supported by structural arrangements that supported cross-function collaboration. Additionally, some of the employees served as auditors for environmental practice after having received due training internally indicating the role of governance mechanisms to ensure compliance with internal and external policies. In addition to the role played by informal controls motivating employees to make continuous improvements, Masanet-Llodra (2006) also found the presence of non-financial rewards as additional means of motivating employees and engage them in the implementation process. The empirical

evidence points out that EMS in isolation may not be effective in implementing a strategy but need to be supplemented by other controls. Moreover, for firms interested in the EMS application to strengthen their non-financial performance, as a departure from mere symbolic reasons, would have supplementary controls to engage the workforce not limited to the environmental managers. Firm capabilities in the form of employee commitment and capacity have been found to play a major role in EMS implementation and business performance, clearly indicating the role ofinformal controls as means to engage and empower the workforce (Darnall et al., 2008). It should be acknowledged here that while the above studies pointed out the supplemental role both formal and informal controls play in the implementation of EMS, the same could be argued to be true for the implementation of advanced performance measurement mechanisms for sustainability. For instance, La¨nsiluotoand Ja¨rvenpa¨a¨ (2008, 2010) provide empirical evidence of cultural and structural controls facilitating the integration of sustainability indicators in hybrid performance measurement mechanisms, in this context, a BSC adopted for sustainability.

2.3.1.2 Narrow Control Design Implications for Strategic Process

An overwhelming number of the studies within this category (n=17) focus on PMS and specifically on the BSC approach (n=8). An overview of these studies is presented in appendix 2B. Besides this common focus, a fragmented approach is observable within the remaining studies concentrating on different individual controls including rewards at the conceptual level (Lothe and Myrtveit, 2003), role of accountants (Ballou et al., 2012), the role of IT (Petrini and Pozzbon, 2009), structural controls (Epstein and Roy, 2007) as well as policy and codes (James et al., 1999; McCloskey and Maddock, 1994). This section will focus on two key aspects. Firstly, a summary of research on BSC is presented followed by the key inferences drawn from the sole study that focuses at the individual level and presents employee perception of how sustainability is managed at a UK based energy company (Slack et al., 2015).

Balanced Score Approach to Controlling for Sustainability

The majority of research within the reviewed field pertains to the single control dimension of PMS and specifically the BSC approach. Hansen and Schaltegger (2016) in a recent review of research into BSC for sustainability identified as many as 69 articles focussing extensively on the strategy and performance management tool initially advanced to manage business strategies (Kaplan and Norton, 1996). A note on the possible reasons why a smaller proportion of BSC studies are included in this review could be explained by differences in scope of the studyregarding the inclusion of certain publication types and journals. For instance, 30% of the

total articles included in Hansen and Schaltegger review included sources such as conferences proceedings and working papers as well as PhD thesis that were excluded from the purview of this review. Additionally, certain journals were also excluded from the review including those that relate specifically to theenvironment (Journal of Integrative Environmental Sciences) or from a different discipline (Journal of Intellectual Capital, Water, Air, and Soil Pollution). Furthermore, Hansen and Schaltegger (2016) relied on a greater number of databaseswhile this review had a limited choice. Furthermore, Hansen and Schaltegger also included some articles using a language other than English in their review which was beyond the realm of this study.

The emergent focus of sustainability control researchers and more so those included in this review points back to the assumption that sustainability entails a structured and planned approach and as such it could be monitored using a structured tool. The publications in the sample content that BSC presents an opportunity to be honed by firms to implement sustainability strategies. Moreover, consistent with Hansen and Schaltegger (2016) findings, the reviewed papers while remaining primarily conceptual in nature with the occasional use of illustrative cases, advances different means of designing BSC. In other words, the publications prescribe the variouswaysfor firms to design BSC and integrate sustainability dimensions into it. The evolutionary design approach relates to the design architecture proposed by Hansen and Schaltegger (2016). Simplistically, the differences exist in how multiple goals are included as part of the scorecard. For instance, Figge et al. (2002) BSCS (Balanced Scorecard for Sustainability) design resonates with the strictly hierarchical structure (Hansen and Schaltegger, 2016) where sustainability goals are bound by a strict cause and effect relationship with the underlying emphasis on augmenting the financial bottom-line. Within this model, sustainability assumes a secondary goal, facilitating the realisation of financial goal as the primary objective. Contrastingly, other designs consider multiple goals as equally important resonating with the triple bottom line perspective such that the financial perspective is replaced by each of the elements of the triple bottom-line concept (Hsu et al., 2011). Hsu and Liu (2010) provide statistical evidence of the causal links amongst sustainability performance indicators within each of the four perspectives. They find customer perspective (external focus) is positively correlated with internal perspectives of learning and internal processes. For instance, for product quality improvement based on green design contributing to customer value added, a causal link exists with R&D capabilities. While also a positive correlation exists between the financial perspective and the non-financial perspectives. For instance, green product design received the highest canonical loading with the financial perspective indicating green products

drive sales. Additionally, these designs may also reject that strict cause and effect relationship need not exist and as such sustainability objectives "may exist in their own right" (Hansen and Schaltegger, 2016, p. 206). Examples included within the sample exhibiting the characteristics of a semi-hierarchical structure include van der Woerd and van der Brink (2004), Dias-Sardinha et al., (2007), Leo´n-Soriano et al. (2010). The BSC design of Dias-Sardinha et al., (2007) included four perspectives where the first perspective extended beyond financial value creation to include social and environmental value creation and customer perspective was extended to include other stakeholder groups reflecting the significance attached to relational capital in the value creation process. However, as will be discussed later, the level of sustainability strategy pursued may have an influence on the design process. For instance, van der Woerd and van der Brink (2004) model focuses on community-based strategies and bring stakeholders to the forefront. This stance may be argued to have its origin in social constructionist perspective, where relational capital forms the underlying basis of cause and effect chain as opposed to financial considerations (Sundin, 2010). The differences in design approach however also opens up the debate on the role of business in society as the deliberate broadening of the financial perspective to include society and environment or giving sustainability goals to exist in their own right reveals deliberate extra-financial responsibilities assumed by business, where sustainability transcends the business case or instrumental reasons and assumes a self-directed goal in itself.

Whilst the considerations of hierarchical nature of BSCS constitute anaspect of the study of BSC designs, the second point relates to how sustainability objectives are integrated within a BSC. There are various ways documented in the literature the addition of a dedicated perspective solely for sustainability (Chalmeta and Palomera, 2011), the inclusion of sustainability objectives in few perspectives of a traditional BSC, all the four traditional perspectives referring to sustainability or a combination of a dedicated perspective and the remaining two approaches (Figge et al., 2002; Epstein and Wisner, 2001). Hansen and Schaltegger (2016) differentiate between the approaches to classify designs as those pertaining to a full integration within a BSC, partial integration or a low integration (as an add-on) and total integration (additional perspective coupled with high integration). In addition to the debate on BSCS design, scholars also looked at developing methodological frameworks prescribing the process required to develop BSCS. For instance, Chalmeta and Palomera, (2011) developed a nine-phase model depicting the BSCS formation process while simultaneously highlighting the multifunctional dependency necessary to develop a BSCS.

Employee Perception of Controlling for Sustainability

The discussion so far alluded to the fact that a range of controls isrequired and the significance of informal controls was noted. However, it pertained to the organisational level with top management and senior management as the sources of knowledge. It lacked the perspective of those who ultimately implement the strategies translating them into practice. The only study that considers the perspectives of employees or individuals demonstrates the vitality of informalcontrols and the aspects that need to be considered within control design (Slack et al., 2015). Having employees or individuals as the unit of analysis as opposed to the organisation provides unique aspects about the effectiveness of controls for sustainability understood through the perspectives of employees. The employees can evaluate whether the control mix promotes sustainable thinking (Slack et al., 2015). Their views are also significant regarding whether the controls put in place for sustainability provide the flexibility to implement ideas originating at the individual level or if they promote tensions or inhibit the intrinsic motivations of employees to undertake a proactive stance towards sustainability (Grubnic et al., 2015).

The study explores the employee perspectives of CSR and notes the disparities in the views. Specifically, they find two extreme types of employees, one that is active and the other that chooses not to engage with CSR. Additionally, none of the employees interviewed was able to relate to each of the four strands of CSR that the case company focuses on. This shows that there is a lack of organisational awareness of CSR indicating a lack of shared vision for CSR commitment. Thiswas further fuelled by alack of internal communication, especially from the top management. Differences existed on the rationale for undertaking CSR ranging between altruistic to strategic. There were also divergent opinions about what could be classified as a CSR project with some dismissing a particular project as CSR. Some employees chose to engage because of personal benefit while some others understood the benefit to both organisation and the self. That is in this firm informal controls were inadequate and failed to promote an understanding of the significance of undertaking CSR, the organisation's stance towards CSR as well as what it meant for the firm throughout the organisation. Fingers were pointed towards alack of CSR visibility in thedaily functioning of the company regarding meetings, announcements and updates. Besides the inadequate nature of informal controls playing a substantial role in employee non-participation, the lack of strategic fit between CSR and organisational goals was also cited as a reason. The visibility of CSR was primarily undertaken through the more formalised CSR department. However, its very establishment and the firm's inability to develop shared vision proved fatal. Without employee commitment, the

CSR department became the sole representative of CSR and failed to make it a multi-functional prerogative thereby remaining an isolated initiative. This highlights the fact that without CSR becoming a part of theorganisational goal, employees may not personally identify with it in the course of their daily routine hampering its implementation. Hence employees wanted a strategic aspect in the context of the formalisation process such that CSR becomes an essential part of corporate strategy rather than remaining isolated. They preferred it to be integrated with organisational and personal objectives and development plans. Hence the focus is on the degree of embeddedness and visibility rather than CSR remaining the responsibility of a specific department reducing it to be a mere public relations affair uncoupled from the overall organisational direction. This necessitates a discussion on CSR ownership within organisational settings. The study could have however benefited if it considered of organisational and employee fit. It is also important for companies to establish the benefits of CSR throughout the company specifically, the economic aspects.

2.3.1.3 Broad Control Design Implications for Strategic Content

In this section, the emphasis is on those studies that explore a broad range of control systems by also simultaneously exploring the strategic content. Previously, the section that looked at broad control design did so by including studies that did not explicitly consider the content of strategies that were implemented, i.e. those studies did not elaborate on the nature of strategies that were pursued in the case organisations. The next two sections group studies based on control design approach from a particular strategic lens taking into account the overall strategic direction pursued by the organisations mostly on a continuum of a reactive to proactive stance towards sustainability. Chapter 3 provides a detailed view on how sustainability strategies have been documented within the extant sustainability strategy literature. In this section, studies are consideredon the basis of a multiplicity of controls for a given strategic direction. Two key themes could be identified from studies (n=6) exploring control design holistically for a given strategic approach. In aggregate, extra-financial responsibility has been conceptualised through the environmental lens with a considerable focus on planning, PMS and governance and structural aspects with some appreciation for cultural controls. Reward and compensation receive scant attention. An overview of these studies is presented in appendix 2C.

Control Multiplicity for Environmental Strategies

Three studies were identified that explored how multiple controls are designedin accordance with the positioning pursued by firms towards the environment and/or extra-financial responsibility. While Epstein and Wisner (2005) report on control design for compliance based

strategies, Maxwell et al. (1997) present three brief cases to illustrate the role of different controls for a proactive stance towards social responsibility. Azzone and Noci (1998) while remaining largely conceptual in nature and focusing considerably on PMS, nonetheless, shed light on the differences in controlling for the environment, based on a continuum of non-responsive to proactive strategies.

Epstein and Wisner (2005) provide evidence of the presence of a variety of different control mechanisms including planning, rewards, mission statements, performance measurement capabilities as well as governance and structural capabilities at Mexican manufacturing facilitiesseeking compliance with the relevant environmental legislations. Plants with comprehensive planning processes in place were reported to enjoy better compliance levels than plants with lower levels of planning. The former facilities mobilised a range of planning mechanisms including environmental policy planning, contingency plans, community interaction plans and goals that were found wanting in factories with lower levels of compliance. In the same way, a positive association between the existence of internal mission and values with a focus on environmental responsibilities enhancing compliancewas identified.As a departure from other studies included in the sample, Epstein and Wisner (2005) also reported on a positive and significant relationship existing between rewards for environmental actions and compliance corroborating with Lothe and Myrtveit (2003) recommendations for rewards based controls for sustainability. Epstein and Wisner (2005) provide evidence ofthe significance of a range of rewards promoting environmental compliance including monetary and non-monetary. Furthermore, in plants where such rewards were in use, a high percentage were found to be rewarding non-environmental workers in a non-managerial capacity similar to Masanet-Llodra (2006)observations.

Other than the mobilisations of planning and belief based controls, other mechanisms were also found to have been associated with compliance. These included top managerial commitment and structural arrangements (Epstein and Wisner, 2005; Maxwell et al., 1997). For instance, Maxwell et al. (1997) observed thata director level role was in place to ensure regulatory compliance before the move towards a proactive stance. Additionally, Epstein and Wisner (2005) found top managerial commitment playing a vital role in environmental compliance. The reliance on top management commitment to sustainability further gives credibility to concerns voiced by scholars such as Neugebauer et al. (2016) that strategy is a structured process and inherently top-down. However, Maxwell et al. (1997) noted in one of the case organisations, environmental responsibility was initiated at the middle management level but

does not elaborate on it. Regarding structural arrangements, Epstein and Wisner (2005) findings indicated that shared functional responsibilities that go beyond operations for environmental responsibilities, may contribute towards better compliance corroborating with Albelda et al. (2007) assertions for cross-function collaboration. It may imply functional collaboration enhances sustainability performance. However, Maxwell et al. (1997) point out that structures designed for supporting compliance based approach may not offer the necessary facilities for communication and monitoring required to implement a proactive strategy.

Finally,Epstein and Wisner (2005) study also found a strong link between pollution discharge measurement capabilities and compliance. While, a simple measurement control may suffice for a compliance based approach, Azzone and Noci (1998) notedacomplete redesign of existing PMS to accommodate the move towards a proactive stance is necessary. Specifically, proactive strategies require the measurement of both physical and economic indicators (efficiency based indicators) reflecting the competitive advantages arising out of a proactive stance. This also includes the capacities to design PMS capturing the entire product life cycle and how proactive strategies contribute to the shareholder wealth (increase in market share).Besides the controls for compliance discussed above, Azzone and Noci (1998) give examples where companies responded to environmental regulations by updating the procurement policies and adopting prohibitive criteria barring the use of thehazardous material. Furthermore, additional training was provided to employees to augment their knowledge of legislative requirements.

Maxwell et al., (1997) brief cases provide the understanding that companies may place different emphases on certain controls to support proactive CSR strategies and when directly contrasted with Epstein and Wisner (2005) report on controls for compliance based approach broadly reveals certain differences in control design.A number of actions are undertaken to create a shared understanding of extra-financial responsibilities transcending merely written mission and vision statements required to achieve regulatory compliance as observed by Maxwell et al. (1997) in contrast to Epstein and Wisner(2005) findings. How companies create shared understanding also differs between firms pursuing proactive CSR strategies. For instance, in Polaroid, instead of providing environmental training for all employees which was predominant in Volvo, extensive campaigns were undertaken to facilitate the dissemination of environmental values within the workforce.Furthermore, environmental actions and performance were also included as one of the performance evaluation criteria to ensure group-wide participation in the environmental management programme.Polaroid's efficiency programme was enhanced by its reliance on environmental accounting techniques, but financial

aspects were not calculated. That is cost savings were not objectively calculated but understood to be a natural outcome from the efficiency programme, thereby falling short of Azzone and Noci (1998) recommendation for PMS to measure both non-financial and economic aspects simultaneously. At Volvo, newer management structures were set to facilitate long-term goal setting and monitoring by top managers. Additionally, the new structures allowed the implementation of four broad objectives throughout the group organisation with working groups created to implement each of the objectives. Additionally, Environmental Excellence centre was established for further monitoring, coordination and implementation purposes. The reliance placed on new organisational structures, organisational-wide training and goal settings were the primary means of implementing the proactive strategy. Consistent with the implications arising out of Epstein and Wisner (2005) findings on structural integration, the newer structural arrangements need to be put in place to ensure functional integration and cross – functional collaboration and the newer structures at Volvo ensured coordinated effort to support the implementation of the proactive strategy. Maxwell et al. (1997) opine that structural arrangements for compliance "were often created to buffer the organisation from environmental pressures" and not equipped for supporting proactive strategies as noted earlier (p. 130). What is common to all the cases in Maxwell et al. (1997) study is the extensive reliance placed on creating a shared understanding of extra-financial responsibilities and the associated investments to propagate such commitments, structural systems (either modified or newly set up to accommodate a proactive stance, for instance an environmental group to develop policies at P&G) and goal setting with the establishment of both short-term and long-term goals to provide direction.Regarding the use of planning systems, the goals and objectives responded to the proactive nature of the strategic direction. In other words, plans were put in place to prevent wastage and inefficient use of resources and generate competitive advantage as opposed to formally comply with prevailing legislative requirements (for instance, in P&G).

The studies provide some understanding of controls for strategies at two ends of the continuum (reactive and proactive), and that a number of controls are employed simultaneously and that certain differences exist in the ways a given control mechanism is designed for two different strategies. However, we are yet to understand the interaction effects of multiple controls for a given strategy, the variations of a given control according to various strategic orientations when studied holistically and the way multiple controls of various strategic orientations combine in organisational settings. For instance, Bedford and Malmi (2015) develop a typology of control combinations for business strategicorientations.

Antecedents of Control Multiplicity

While the above studies concentrated on exploring control design for environmental strategies, Pondeville et al.(2013) retake a step to understand the antecedents of such control systems. One of the major findings of the study is that perceived uncertainty in the decision-making context hampers the development of both formal and informal controls for environmental strategy, while additionally hampering proactivity towards the environment. In other words, since environmental proactivity remains impaired in uncertain ecological settings, consequentially controls for environmental strategy remain undeveloped. The finding reinforces Neugebauer et al. (2016) concern noted earlier about the planned nature of strategy assumed by sustainability scholars. Hart (1992) and Regnér (2003) note that a structured approach is valid in controllable environments where decision-making is straight forward, simple and not subjected to ambiguity. Contrastingly, in contexts characterised by ecological obscurity, dealing with environmental issues is not straightforward due to the lack of intelligible information. Pondeville et al. (2013) provide the empirical evidence in support of the arguments put forward. Furthermore, the study notes that environmental information systems remain unused partly explained by the resource intense nature of information systems and the possible inclination towards a "wait and see" stance (Pondeville et al., 2003, p. 320). However, this attitude towards environmental cause contravenes the accepted principle that information systems are strengthened in uncertain business environments (Chenhall and Morris, 1986). Moreover, although not explicitly noted by Pondeville et al. (2013) it will be interesting to see if in uncertain conditions, interactive use of controls is relied upon more extensively and how environmental issues of strategic importance that emerge are controlledfor. The study opens further avenues of research, namely in situations characterised by uncertainty, how are control systems designed and used for emergent strategies?

Other than the importance of perceived ambiguity, the paper also highlighted the role stakeholders play in influencing environmental proactivity and the subsequent design of controls. First and foremost, organisational stakeholder commitment and participation are absolute requirements for a proactive stance, and the study finds likewise. Organisational stakeholder pressure influences the development of informal controls for ecological strategies. Other stakeholders including community and market stakeholders were found to positively influence strategic proactivity with varying influence on the direct development of controls. Regulatory stakeholders were found not to influence strategic proactivity but prompted firms to collect environment related information.

2.3.1.4 Narrow Control Design Implications for Strategic Content

The preceding sections pointed out that a range of controls simultaneously plays a role in supporting sustainability strategies and that the level of control design complexity increases with the underlying strategic proactivity (Azzone and Noci, 1998; Epstein and Wisner, 2005; Maxwell et al., 1997). The studies identified in this section (n=10) explore some of the controls in isolation to gather anin-depth understanding of how strategic contexts drive their designs and the changing control design complexities. An overview of these sampled studies is presented in appendix 2D. Specifically, as a departure from the studies included in the previous section that focussed on strategic content albeit from a broader perspective on controls, the studies covered in this section focus exclusively on a single control mechanism and explore their design and underlying attributes in detailin accordance tothe type of strategy pursued.

Six studies concentrate on the design of a BSC for a strategic orientation, while each of the remaining fourfocuses on the design of PMS for sustainability, governance as well as the roles of IT and rewards for different strategic orientations. Thereby, highlighting the fact that different strategy orientations necessitate different control designs and that control is subordinate to the strategic direction pursued by a firm (Langfield-Smith, 1997). In other words, controls are influenced by the type of strategy pursued by a firm. Although as many as 69studies have been identified focusing on the relevance of BSC for sustainability, largelyfrom the conceptual level, yet its adoption in practice remains questionable for a variety of reasons. From the French context, Gates and Germain (2010)provide empirical evidence of its low adoption. Specifically, the survey reveals sustainability measures are not adequately represented within BSC, indicating that sustainability remains decoupled from the overall strategy monitoring process. Hence, although sustainability agenda is increasingly entering the strategic planning process (Galbreath, 2006; Riccaboni and Leone, 2010; Morsing and Oswald, 2009), yet it's representation within the BSC remains underachieved. As pointed out in Hansen and Schaltegger (2016), this could be because of a lack of expertise or internal capabilities and the availability of resources to integrate the measures within a BSC. It could be however argued that as firms continue to integrate sustainability into their strategic planning systems, there may be a higher likelihood of sustainability measures becoming integrated within BSC in the near future. Also, the question of how measures could be incorporated also remain a subjective phenomenon (Figge et al., 2002). The study, however, finds that share market listing has an influence on measures been incorporated within a BSC whereas the level of inclusion was not informedby the type of business strategy pursued. Also, within the BSC agenda and included

within this category is van der Woerd and van der Brink (2004) advancement of a BSC model that reflects a particular strategic orientation. Noting the limitations of BSCs advanced in literature including the one size fits all approach to BSC design for sustainability, van der Woerd and van der Brink (2004) develop a BSC for a community driven strategic focus that emphasises stakeholder engagement in the value creation process as briefly mentioned previously. Furthermore, the BSCSis also sector specific as there is also a wanting of sector specific BSCs. Informed by the strategic focus on stakeholder engagement and stakeholder relationship, the model reflects theintended strategic direction by redesigning each of the perspectives of the scorecard such that the resulting BSC reflects thestakeholderinputs in the value creation process. In other words, each of the Ps making up sustainability i.e. People Planet and Profit find equal significance within the BSC. There is also an equal focus given to external customers and supply chain (market); society and planet (non-market)) and internal stakeholders/perspectives (finance/owner; employees and internal mechanisms). The model indicates the growing complexities with regards to BSC design as the type of CSR/Sustainability changes from a profit driven perspective to a stance driven by stakeholder relationships. The changes in design could be contrasted with a profit and/or compliance driven strategies requiring no such changes as the authors assert that a traditional BSC suffices the requirements (see also the discussion in Hansen and Schaltegger, 2016).

Whereas the above two studies focused on a specific element of a PMS, Perego and Hartman (2009) demonstrate the increasing complexities of the overall PMS design with ahigher level of strategic approaches. Additionally, the study confirms greater reliance placed on PMS by firms pursuing a proactive environmental strategy relative to those that are merely reacting to institutional requirements. For firms pursuing a proactive environmental strategy, the PMS design reflects the posture through its design attributes of timeliness, scope and quantification (Chia, 1995; Tillema, 2005). A proactive strategy requires the PMS to be more sophisticated in nature equipped with the ability to provide timely information for decision-making, capture both financial and non-financial aspects of the firm's environmental performance while also capturing environmental data from beyond the organisational boundary. The study also provides evidence of the positive relationship between thefinancial quantification of environmental attributes and the use of PMS for decision-making. That is a sophisticated PMS that delivers information regarding the financial consequences of environmental actions is better suited for organisational decision-making. Furthermore, the study finds that the properties of environmental key performance indicators (KPIs) also differ from that of reactive

strategies.For a proactive pursuit, the KPIswere found to be more sensitive in nature, that is the KPIs possessed enhanced informational capabilities to provide insights into potential risks, or input-output relationships were greater, could be independently verified and designed in a way to reflect the overall strategic posture (Wruck and Jensen, 1994; Holliday et al., 2002).

It was noted earlier that compliance based strategies attracted both monetary and non-monetary compensations (Epstein and Wisner, 2005). However, Berrone and Gomez-mejia (2009) found proactive environmental strategies attracted greater executive compensation than reactive environmental strategies, i.e. the compensated amounts were higher for executives assuming more risk in making proactive environmental decisions (Hart, 1995).Since the two studies are not directly comparable as the former focuses at the unit level while the latter at the top individual level, it will be interesting to explore if the compensated difference is significantly higher for those at different levels (Luft and Shields, 2003). Additionally, the study finds reward mechanisms informed by proactive strategy considersthe longer-term perspective, i.e. it influences the long-term pay of executives. Reward systems are aligned with the level of thestrategy pursued and that non-financial elements of performance affect the total pay package. While Berrone and Gomez-mejia (2009) provide evidence of higher pay for executives pursuing a proactive strategy assuming greater risks, Shaukat et al. (2016) identify the attributes of governance and leadership mechanism that inform a proactive strategy. Specifically, a proactive CSR strategic orientation is supported by board characterised by board independence, gender diversity as well as the presence of financial expertise within audit committee, which in turn augmented sustainability performance. Additionally, the study found that with an increase in non-financial performance, the board CSR attributes will be enhanced thereby indicating the presence of a cyclical link between board levels attributes, CSR strategy and sustainability performance.

As one of the only two articles identified focusing on the information systems (IS) perspective, Benitez-Amado and Walczuch (2012) research demonstrated that proactive strategies require firms to develop information technology (IT) capabilities to support the implementation of such a proactive stance. IT is identified as one of the key resources that inform the capacity of a firm to implement a proactive strategy.

The review illustrates the necessity of different controls to be designed in certain ways that support the implementation of proactive strategies. It also highlights the fact that strategic content need not be overlooked when exploring controls for sustainability. If Durden (2008)

and Riccaboni and Leone (2009) case organisations are compared, the former lacked any form of control, but in the latter, a multiplicity of controls were identified to exist. Arguably, this difference could be because of the differences in strategic content or strategic direction pursued by each of the organisations resulting in differences in control approaches. Hence, future studies looking at thestrategicprocess may wish to go a step further by simultaneously looking at the type of strategy pursued by these firms. This will facilitate a better understanding of thecontrol-strategy relationship and the nature of controls based on a given contextual arrangement. Interestingly, no studies were identified looking at the antecedents of individual control designs from a narrow control perspective although Pondeville et al. (2013) discussed the antecedents from a broader control perspective.

2.3.2 Control Use

Considering the small number of articles (n=5) identified in the sample exploring how controls are used for managing sustainability, further categorisationson the strategic aspect has not been undertaken. Largely, two different types of studies could be identified, one that applies Simon's Levers of Control(LOC) (1995) as the underlying framework to guide research and the other that does not use such premise.

Nonetheless, useful information can be obtainedbecause whether a specific framework is used or otherwise. For instance, Adam and Frost (2006) assert that (KPIs) need to be used not only for external reporting purposes but also for internal decision-making. Where KPIs for sustainability are used for internal use, the benefits of pursuing sustainability could be easily internalised. Furthermore, superior benefits are obtained if sustainability KPIs are designed to return financial information, or in other words, sustainability KPIs are quantified in financial terms and are used in internal decision-making. Perego and Hartmann (2009) finding corroborate with Adam and Frost (2006) claims of the use of financially quantified environmental KPIs for internal decision-making purposes. Additionally, the more sensitive a KPI i.e.,the greater the ability of KPIs to capture diverse aspects of sustainability performance, the more reliance is placed on the KPIs for internal decision-making. In essence, the aforementioned studies identified the characteristics that make KPIs worthy of *internal* use acting through the properties of sensitivity and financial quantification of sustainability KPIs (Perego and Hartmann, 2009).

While the above studies highlighted the KPI properties facilitating decision-making, both Rodrique et al. (2013) and Arjaliès and Mundy (2013) articles bring in the notion of risk management and discuss how controls are used to manage uncertainties and sustain legitimacy.

These studies typically rely on Simon's LOC framework and map the use of controls along the four levers namely belief, boundary, interactive and diagnostic uses. For instance, using belief systems, firms can disseminate the commitment top management places on sustainability, facilitating the diffusion of values on which sustainability is based. It becomes the means to implement the mission and vision of the organisation by helping to create a shared or collective understanding towards sustainable practices (Arjaliès and Mundy, 2013). Additionally, Rodrigue et al. (2013) note that stakeholder concerns become infused throughout the organisation, by the belief systems and that such use helps translate stakeholder views into practice. The use of codes of conduct and policies informed through both legislative as well as voluntary standards establish the boundaries and the constraints within which employees are to perform their duties. Such constrains provide the means for organisations to manage risks emanating from both internally as well as externally. The use of supplier codes and policies provide ways to maintain legitimacy and manage any risks associated with the use of child labour in thesupply chain or unhealthy practices (Arjaliès and Mundy, 2013). Similarly, environmental policies secure organisations from regulatory and legitimacy risks (carbon emissions for instance). Internally, the codes of conduct shield organisations from risks emanating from within organisational boundaries in the form of unethical behaviour.

The two studies also provided evidence of the interactive and diagnostic use of controls for sustainability. Through interactive use, Rodrigue et al., (2013) find the rhetoric of legitimacy and risk management resurfacing. For instance, the case organisation relied extensively on the interactive use of environmental KPIs with thecommunity, regulatory and internal stakeholder groups as means of managing uncertainties and understanding potential threats to organisational legitimacy.Beyond the need to maintain legitimacy and manage risk, Arjaliès and Mundy (2013) found interactive use associated with the development of strategies through the sharing of emergent ideas and as means of implementing intended strategies holistically throughout the organisation by bringing in different actors from different organisational departments together. The interactive use of performance management system enables functional collaboration and coordination between the various firm level departments such that the implementation does not happen in asilo. Both studies also found evidence of the use of interactive systems as means of engaging with stakeholders both for legitimacy as well as managing uncertainties. While the interactive use enabled ideation and holistic implementation of strategies, the diagnostic use enabled units to verify if the performance was in par with firm level expectations so that corrective measures could be undertaken (Rodrigue et al., 2013;

Arjaliès and Mundy, 2013). It provides evidence that merely incorporating sustainability KPIs within PMS may not be sufficient unless the KPIs are used in certain ways. Both control design and use play a vital role in controlling for sustainability.

2.4 Summary and Conclusion

The low number of publications (n=57) indicate that the research field is at a very nascent stage and is still emerging as a fully-fledged area of interest. Consistent with the emerging nature of the field, the studies that have been part of the review remained largely exploratory in nature as is expected of an area of emerging interest (Gold et al., 2010). The emerging nature of research is reflected in the simplistic advancements of knowledge within the field that is yet to take into account the level of complexity inherent in the extant management control literature. Nonetheless, a number of learnings could be observed from the reviewed literature. These learnings are contributions to this doctoral research and may also form the foundational bases of future research within the field. Some of the key understandings of control and sustainability strategy relationship are depicted below.

The empirical publications largely demonstrate that sustainability strategy need to be brought under the purview of control mechanisms and that strategy implementation requires a carefully considered control design and use. The publications revealed a range of controls for sustainability strategies while noting that both formal and informal controls have significant roles to play consistent with the conceptual frameworks that have been advanced. Informal controls are required to acquaint the firm culture with sustainable thinking and formal controls including structure, governance and leadership, planning, rewards, information technology/system and performance measurement system are required to promote the cause of sustainability beyond the financial aspect.

Whilst it is evident from the case studies and the conceptual frameworks that both forms of controls are significant, yet disparities exist within the literature with views ranging from control congruity. Control congruity is the balance that needs to exist between formal and informal controls (Norris and O'Dwyer, 2004), that both forms of controls need to reinforce one another to promote sustainability objectives internally (Durden, 2008) and the primacy of informal controls negating the need for formal controls (Epstein et al., 2015). In other words, the case studies have provided anecdotal evidence of the need to consider both types of controls to implement strategy effectively (Slack et al., 2015; Riccaboni and Leone, 2010; Norris and O'Dwyer, 2004; Durden, 2008). Although the review indicates a significant number of controls

necessary for managing sustainability, yet caution must be exercised when debating the appropriateness of visible adaptations made to internal controls for sustainability. An implementation may remain inadequate and ineffective even if sustainability is reflected in visible changes to control mechanisms. For instance, from Slack et al. (2015) study it was evident that structural changes were inadequate to control for sustainability without the proactive participation of employees (see also Berrone and Gomez-mejia, 2009). Rodrigue et al. (2013) identified employees as one of the major stakeholder groups without whom implementation remains challenging. The same premise was also put forward by Grubnic et al.(2015) who observed the intrinsic motivation of staff driving sustainability at the case organisation. The lack of cultural controls and a shared understanding of sustainability hampered the implementation process (Slack et al., 2015). This provides prima facie evidence of the interdependencies between different control mechanisms for sustainability and the need for formal and informal controls to reinforce one another (Durden, 2008). In other words, controls need to exist in certain configurations for them to be effective in promoting sustainable thinking due to the inherent dependencies and complementarities that may exist among different control types (Sandelin, 2008). The review also provided similar inferences about the proactive role strategy play in control design and use (Langfield-Smith, 1997). It was observed that controls differed in their design complexities by differences in sustainability strategic pursuits (Epstein and Wisner, 2005; Perego and Hartmann, 2009; der Woerd and den Brink, 2004; Azzone and Noci, 1999). Higher level of sustainability strategies were associated with more complex control designs. For instance, the PMS attributes of informativeness and sophistication increased as a result of proactive strategic pursuit (Perego and Hartmann, 2009). Even at the same level of strategic pursuit, different control designs were observed in Mexican factories by Epstein and Wisner (2005). These observations indicate that different organisations may choose to rely on various control types or put different emphasis for pursuing a given strategic orientation.

Therefore, there is a need to study a range of controls holistically and explore if and how control arrangements differ amongst different organisations for the same strategy, if at all, and of the various strategic orientations.

2.4.1 Key existing empirical gaps

Many instances could be identified where the current literature falls short of reaching complexities observed within the extant management control and business strategy research,

revealing the many gaps that are yet to be solved. Some of these existing empirical gaps are discussed below.

External orientation for image enhancement - Case studies provide evidence to negate the inherent assumption within the extant sustainability literature that a seamless integration takes places for internalising sustainability (Morsing and Oswald, 2009). On the contrary to this assumption, visible changes need to be made to existing controls to manage sustainability even at the stage of compliance (Riccaboni and Leone, 2010; Epstein and Wisner, 2005). In other words, sustainability strategies are accompanied by modifications to existing control mechanisms although not in all instances is this observed (Durden, 2008) indicating a possibility of an inherently external orientation towards sustainability for image enhancement purposes and not a genuine attempt to make a move towards sustainable strategies by some firms. Perhaps it could be argued that studying internal controls may provide the means to verify whether firms are genuinely moving towards sustainability rather than engaging in an empty rhetoric without any substance.

Optimal configurations of different types of controls - The case studies have provided anecdotal evidence of the need to consider both formal and informal controls to implement strategy effectively but we are yet to learn about the optimal configurations of different types of controls that exist in practice. Our understanding of control congruity or primacy is based on research undertaken on a limited number of organisations and as such statistical tests examining the role of both types of controls are yet to be undertaken. Case study evidence shows that incongruity led to tensions in decision-making as formal controls failed to promote sustainability and focused primarily on financial aspects of decision-making (Norris and O'Dwyer, 2004). Calls have been made to subject investigation based on happenings in practice, and as such, there is a need to broaden the research horizon to include a larger number of organisations to explore controls for sustainability (Bedford and Malmi, 2016; Gond et al., 2012).

Role of sustainability strategy in control design - Only a small number of articles have focused on how sustainability strategy plays a role in control design, and even a smaller number have surveyed a large number of companies to provide measures of statistical significance (Epstein and Wisner, 2005; Perego and Hartmann, 2009). Additionally, although these studies demonstrate the role strategy plays in shaping controls, yet, the focus has been on a limited number of controls. For instance, Perego and Hartmann (2009) focused on PMS, der Woerd and den Brink (2004) on BSC, and Lock et al. (2016) on structural arrangements. Future

studies need to consider a larger set of controls and explore how different strategic orientations influence the type, nature, relevance and emphases given to a set of controls.

Strategic content and control designs: Only few studies concentrating on strategic content have explored the attributes of a limited number of control designs for a given strategic outlook. For instance, we are yet to learn about the attributes of reward based systems and how strategic orientations shape such compensation systems although its relevance has been conceptually studied in the literature (Lothe and Myrtveit, 2003).

Controls that shape strategies - The majority of publications have regarded controls passively or as a subordinate to sustainability strategy. By doing so, the field has undermined the abilities of controls to shape strategies which have been demonstrated within the extant management control literature (Kober et al., 2007). However, the opportunity exists for researchers within this field to explore controls as a powerful mechanism of strategy formulation process. The gap is inherently due to the preoccupation of researchers within this area to explore and identify controls that are designed to implement strategies in practice or to prescribe means of implementing strategies. This necessitates the need to refer to strategy classifications and reflect on how strategies are actually formulated. By doing so, the proactive role of controls in strategy formulation could be identified and demonstrated.

Controls that creates new strategies - Simon's LOC framework (1995) has already been applied in the study of sustainability strategy and control. The framework provides the means of unpacking the proactive nature of controls (specifically through its interactive use) to give rise to new strategies. On this note, it is also important to consider Neugebauer et al. (2016) concerns about the obsession of researchers considering strategy as a structured and planned process. The LOC framework could be applied to study the role of controls (again its proactive nature) in giving rise to emerging strategies. Moreover, the research has identified informal controls as significant means of raising awareness of CSR within organisations and additionally attributed organisational stakeholders as an important partner to facilitate the implementation of strategies (Rodrique et al., 2013).

Two-way relationship between control and sustainability strategy - The interactive use of controls with employees may benefit firms in promoting bottom-up strategies. Once controls are recognised as playing a proactive role within sustainability literature, the level of complexity of research within this field could be further enhanced by investigating if a two-way relationship exists between control and sustainability strategy (Kober et al., 2007).

Longitudinal case studies that are yet to gain grounding could be the means of investigating the strategy-control lifecycle, and the role controls have played in strategic progression, and the role strategies played in control design and use.

Development of a coherent body of knowledge - A focus on a narrow range of controls and the variations in the types of controls researched limited the "development of a coherent body of knowledge". The variations in the types of controls researched also inhibit comparisons between different studies. The ad hoc selection of controls may be attributed to the lack of control frameworks guiding research.

Research on complex aspects - Until now, the focus has been on discovering the different types of controls for sustainability. However, advancements within the extant management control field could be relied upon to extend knowledge within this field by focusing on complex aspects. For instance, different control package frameworks that have been developed could be applied to transcend simple discovery type cases and providing a structured approach to derive knowledge and make further advancements within the field (Malmi and Brown, 2008).

2.4.2 Conclusion

In light of some of the significant gaps in the literature, the current study endeavours to advance our knowledge of controlling for sustainability strategies in the following areas – holistic control package framework, survey based research, theoretical premise.

Firstly, it could be argued that the field will benefit from a focus on content based studies that seek to identify patterns of approaches to management controls for specific sustainability related strategies while adopting a broader view of controls. A structured and systematic approach is required to understand how a range of management controls traditionally found in practice is adapted to manage sustainability on the basis of the strategic focus. Thus, as stated in the introductory chapter, the first aim of this current study is to seek an understanding of how a number of controls are designed and used shaped by a given contextual factor, in this case, sustainability strategy explored through the lenses of the control package perspective. The package perspective promotes the understanding that the individual controls do not operate in isolation but as part of the overall control structure of the firm that consists of both formal and informal controls (Otley, 1980). A narrow perspective of controls fails to provide a holistic picture of controlling for sustainability strategies. By subjecting the same range of controls in different empirical contexts in different strategic orientations, a better and complete understanding of how sustainability strategies shape management controls operating as part of

a control package would be obtainable. This will allow the exploration whether some controls acting in combinations are found to match certain strategic orientations or whether certain controls receive relatively greater or lesser emphasis under specific strategic contexts (Bedford and Malmi, 2015; Chenhall and Langfield-Smith, 1998). To facilitate such an exploration, a suitable sustainability strategy framework that identifies different strategic orientations pursued by firms needs to be identified. In addition, an appropriate management control package framework needs to be identified and adapted with a focus on sustainability. Chapters 3 and 4 relate to these objectives respectively.

Secondly, the review also indicated the need to undertake large scale surveys of how a broad range of management controls traditionally found in practice are designed and used by specific sustainability strategies. Survey based research within the field is yet to take prominence as concepts and theories are still explored due to the novelty of the area of research. Thus, the second aim of the study is to develop a survey instrument based on a holistic approach to management controls (i.e. from the control package perspective) that may facilitate the identification of the different control combinations shaped by different strategic contexts, identified to exist in practice. Arguably, a survey based approach will help in overcoming the limitations of case based research where evidence is gathered from a small number of samples with findings limited to the case study observations. In other words, the findings obtained from the case studies cannot be generalised to a given population (Yin, 2003). Chapter 8 is about the survey instrument development.

Thirdly, the review indicated the lack of theoretical underpinning driving research in this field as studies have remained descriptive and prescriptive in nature. Typically, theories explain the relationship between the objects under exploration, in this context, sustainability strategy and management controls. As stated in the introductory chapter, this research brings in the Configurational-Congruency framework to explain the significance of studying sustainability strategy-management control relationship from the package perspective. Chapter 5.0 establishes the significance of the theoretical framework driving this research.

CHAPTER 3

THE CONTEXT: SUSTAINABILITY STRATEGY

3.0 Introduction

A key observation from the review of the literature on management controls for sustainability strategy as presented in Chapter 2.0 pertains to the limited focus on understanding and exploring controls for sustainability based on the strategic content i.e. studying management controls on the basis of the type of sustainability strategy that has been pursued by an organisation (Chenhall, 2005). Studies exploring strategic content in essence looks at the final outcome of the strategy formation process and in doing so establishes the intended course of direction undertaken by an organisation to achieve its end objectives (Chenhall, 2005;Johnson, 2011). In other words, content focused studies offer an understanding of how an organisation chooses to establish itself in relation to a particular goal. Within the context of this study, strategic content relates to the different approaches firms may undertake to position themselves in relation to the social and environmental dimensions of organisational performance. This chapter serves two primary purposes. Firstly, by exploring the different strategy models advanced within the extant sustainability strategy literature, the chapter explores the diverse approaches informing sustainable business practices. In other words, the chapter provides an understanding of what sustainability strategy means within the context of the study and the diverse approaches that may be undertaken by firms to fulfil their social and environmental responsibilities. Secondly, in relation to the research aims and objectives, where the focus is

on understanding and exploring how specific sustainability strategy contexts may shape management controls, this chapter facilitates the identification of a suitable sustainability strategy model/framework (objective 1) that will help identify the approach undertaken by the companies included in the empirical study sample (Chapter 6).The chapter begins with a brief into corporate motivations for adopting extra-financial responsibilities leading onto the discussion on the different strategy models explaining the different approaches to sustainable practices. Next, a suitable strategy framework is identified and discussed and the chapter concludes with a summary of the key aspects identified in the chapter.

3.1 Motivations for Corporate Responsiveness

Corporate responsiveness typically alludes to the range of initiatives undertaken by firms to mitigate the impact of its operations on the natural environment and the extant society (Bansal and Roth, 2000). These initiatives could range from implementing an EMS, application of Total Quality Management/Life Cycle Analysis (TQM/LCA) techniques to make products sustainable and incorporating extra-financial dimensions within corporate policies. The strategy literature has identified a range of motives or factors explaining why companies might engage in ecological responsiveness or assume an explicit position with regards to the natural environment and the extant society. For instance, Bansal and Roth (2000) found three key drivers for ecological responsiveness. Based out of apprehensions of losing public face or the acceptance within the society (Bowen, 1953), companies are motivated to comply with the norms emanating from the institutional environment. These include meeting the standards and rules prescribed under the law (Post, 1994; Lawrence and Morrell, 1995; Porter and Linde, 1995), engaging with the most influential stakeholder groups with a view of minimising risks of disrepute (Lawrence and Morrell, 1995; Berry and Rondinelli, 1998; Starik, 1995; Cordano, 1993) and also to mimic practices of competitors (Matten and Moon, 2008). These approaches are passive in stance based on minimising risk and establishing legitimacy. On the other hand, those firms motivated by competitiveness based on ecological responsiveness, are seeking to enhance long-term profitability (Porter and van der Linde, 1995; Hart, 1995). This approach focuses on capital investments in clean technology, development of new product lines that are environmentally friendly, and undertaking modifications to make processes more efficient. The underlying difference between these two drivers for ecological responsiveness is while the former is passive and reactive in nature, the latter seeks to compete on extra-financial issues by actively seeking opportunities to augment value. The latter also takes a longer-term approach to positioning itself with regards to the natural environment and the extant society (Porter and

Kramer, 2006). Hence the motivations to be sustainable may vary and as such different scholars have attempted to capture the ways in which companies choose to position themselves in respect to the natural environment and the extant society (Bocquet et al., 2013; Azzone and Bertele, 1994; Srivastava, 1995). In doing so, different scholars have sought to understand the various strategies that are employed by companies seeking to incorporate responsible practices informed by different motivational factors. The paragraphs below provide a review of some of the models that have been developed to capture firm level strategies towards the natural environment and the extant society. Table 8 provides a snapshot of the different strategy models that have been advanced in the literature and elaborated subsequently.

PAPER BY	FACTORS/CRITERIA ADOPTED	FOCUS	RESPONSIVENESS TYPE	PHASES /TYPES
AZZONE AND BERTELE (1994)	externally situated	public opinion; technology; norms	environmental	5 – stable to creative
BURKE AND LOGSDON (1996)	internally situated	integration with overall strategic direction	value creation - environmental	strategic CSR based on integration with strategic vision
BOCQUET ET AL. (2013)	mostly internally situated	alignment with strategic goals stakeholder engagement	value creation – both social and environmental	strategic vs responsive typologies
BUYSSE AND VERBEKE (2003)	both internally and externally situated	investments; inclusion in control systems other internal capacities engaging different stakeholders	environmental	3 – reactive to leadership
FREEMAN (1984)	externally situated	engaging with different stakeholder groups	social, stakeholder focus	5 types
GALBREATH (2006)	both internally and externally situated	stakeholders – internal and external	social, stakeholder focus	4 typologies
HART (1995)	internally situated	internal resource-based perspective	environmental	3 levels of proactive strategies from pollution prevention to sustainable development
HUNT AND AUSTER (1990)	internally situated	commitment; objectives; structure; reporting	environmental	5 – beginner to proactivity
KATSOULAKOS AND KATSOULACOS (2007)	both internally and externally situated	social and relational capitals knowledge management collaboration	value creation – stakeholder focus	competitive advantage generating strategy
MEZNAR ET AL. (1990)	externally situated	engaging with different stakeholder groups creating benefits for different stakeholder groups	social, stakeholder focus – value creation	8 types
PORTER AND KRAMER (2006)	both internally and externally situated	tailored approach both internal and external context analysis innovation led values driven sustainable product attributes	value creation – both social and environmental	responsive vs strategic - typologies
SHARMA AND VREDENBURG (1998)	both internally and externally situated	Investments knowledge management collaboration recycling	environmental	proactive vs reactive typologies
SRIVASTAVA (1995)	mostly internally situated	relational capital co-creation knowledge management	environmental	3 business strategy types adopted for ecological responsiveness

Table 8: An Overview of Sustainability Strategy Models

3.2 Typologies Advanced in Literature

Kolk and Mauser (2002) find as many as fifty models seeking to capture how companies respond to environmental issues. These models could be broadly categorised into either phase or stage-based models demonstrating the gradually evolving nature of environmental management over time; and static models that capture a generic positioning of a firm's ecological responsiveness. The focus of the static models is based on "ideal types" that take into account multiple organisational attributes contributing towards relevant outcomes (Doty and Glick, 1994). Hence, a firm could be classified under a typology-based model by its closeness to an ideal type. For instance, a generic positioning of a firm's competitive strategy could be based on the business strategy typologies advanced by Porter (1980) indicating an ideal strategic orientation that would contribute towards the firm competitiveness. Although the models offer some insights into organisational response to environment, nonetheless, Kolk and Mauser (2002) warn about the difficulty associated with operationalising the models in empirical contexts. For instance, majority of the models included in their research, was conceptually derived or based on intuition.

Hunt and Auster (1990) point to five distinct stages through which environmental management programmes (EMP) are developed. The stages were developed based on the responses of a survey instrument that measured to what extent EMP reduced environmental risk, level of organisational commitment (includes resource commitment, Top Management Team (TMT) commitment and managerial mind set towards environment) and the extent to which environmental concerns were reflected in objective settings, reporting structure, inter-departmental involvement and TMT reporting.

Azzone and Bertele (1994) advocate the need for companies to pursue proactive strategies to fully internalise the benefits offered by the effective management of environmental issues. For instance, they cite the example of the rise in green customers. Firms adopting a proactive environmental strategy can differentiate themselves from competition by developing environmentally sustainable products and serving a niche market or by investing in clean technologies to create the credentials of a green company. In addition, proactive companies investing in Research and Development (R&D) may benefit from developing new products as means to overcome issues associated with existing products. For instance, the Retiflex was developed as an alternative to asbestos. The company benefited from not only abating pollution related issues associated with asbestos but also lowered the recycling costs by developing

Retiflex. The typology advanced by Azzone and Bertele (1994) are based on the role of industrial norms, technology and public opinion. Environmental responsiveness is defined under five different contexts. The paper relies on the role of context and contingent changes in institutional environments as means of determining the environmental responsiveness of a firm. For instance, if there is a strong presence of public opinion on environmental issues and availability of a niche market for green products, the response should be matched to fit the institutional expectations. Hence, firms operating in such contexts, may opt to adopt a proactive strategy, and invest in R&D to develop new products having green credentials using technology. The companies at the proactive end of the spectrum can internalise the opportunities from environmental problems.

Gago and Antolin (2004) empirically study the environmental positioning of Spanish manufacturing firms. In doing so, they rely on the continuum based strategic typologies already advanced in literature to derive at twelve variables clubbed into four factors (Henriques and Sadorsky, 1999; Aragón-Correa, 1998; Roome, 1992). The factors captured the level of information provision for environmental management, long-term commitment to environmental issues, and the adoption of corrective and preventive measures. Cluster analysis revealed five different groups of companies ranging from firms paying little emphasis on environmental management to those championing it. Buysse and Verbeke (2003) employ ten items largely based on Hart (1995) natural resource based view theory to determine the environmental positioning of the sample companies based in Belgium with the objective of investigating the significance attached to primary (not applicable to regulators) and secondary stakeholder groups. These ten items measured the investments made in green technology and products, employee training and capacity building, organisational functional representation in environmental decision-making, formal management systems including environmental plans and the application of LCA in any of its many forms, environmental reports for both internal and external audience, environmental criteria to evaluate top management, inclusion of environmental aspects in strategic planning and the inclusion of environmental management personnel in corporate strategic planning. A cluster analysis based on a survey instrument incorporating the above ten items revealed three distinct positions (reactive, prevention and leadership) bearing close resemblance with other typologies advanced in the literature (Azzone and Bertel, 1994; Hunt and Auster, 1990; Roome, 1992; see also Carroll, 1979;Wartick and Cochrane, 1985). The study finds the emphasis given to a larger stakeholder set as firms move towards a leadership strategy. Moreover, firms adopting a prevention strategy attached greater

importance to regulators relative to both reactive and leadership oriented firms. Moreover, relative to reactive companies, prevention firms attached importance to a larger set of stakeholder groups including shareholders and the media. Reactive companies attached importance primarily to regulators. It indicates that those firms that are reactive, are mostly driven by the significance attached to regulators whereas those with a proactive stance i.e. a prevention strategy, attaches the highest importance to regulations and undertakes an adaptive approach. The regulatory requirements act as a guide for investing resources for environmental improvement.

There has been a growth in studies that look beyond the environmental positioning but extend to include the social dimension of sustainability. For instance, Burke and Logsdon (1996) and Porter and Kramer (2006) base their conceptual advancements of sustainability strategy based on the notion of "value creation" and does so, by attempting to look at sustainability holistically rather than through the narrow environmental focus. Burke and Logsdon (1996) define value creation as the measurable economic benefits that a company might receive from CSR activities through various means including efficiency gains, attracting new customers, developing new products and/or entering new markets as well as securing the loyalty of customers (Husted and Allen, 2007). Burke and Logsdon (1996) embed the longer-term value creation capabilities from CSR programmes into their framework. How can CSR activities contribute towards the long-term survival and success of firms? The basic premise of the underlying basis of these papers is that by strategically designing CSR activities, firms can serve both their and society's interests. For instance, Carroll and Hoy (1984, p. 55) call for CSR responses to be "strategically related to the interests of the firm" as echoed elsewhere. Burke and Logsdon (1996) framework provides a basis to investigate the extent to which a firm's CSR activities are aligned with the overall strategic vision of the firm. The framework measures the extent to which CSR programmes contribute towards the realisation of the overall competitive or strategic objectives of the firm measured through the closeness of fit of CSR programmes along the five corporate strategy dimensions.

The strategic CSR approach is a response to the statement that "the 'CSR Bubble' has become over-inflated which, at worst, tries to create a parallel universe dangerously separate from business purpose and strategy" [Graham Baxtercited in Husted and Allen, 2007, p. 595]. The approach advocates the alignment of CSR activities with the strategic direction of a firm. Strategic CSR is about transforming "non-market social activities into value creating marketing activities" such that firms pursuing CSR strategically, may add value to their bottom-

line(Husted and Allen, 2007, p. 595). McWilliams and Siegel (2011, p. 1480) also investigate the value creating potential of CSR and define a strategic CSR as any "responsible activity" undertaken regardless of the underlying motive that contributes towards sustainable competitive advantage. Within the extant literature, CSR has been recognised for its strategic importance in a firm context and calls have been made to integrate CSR with the overall strategy followed by the firm (Galbreath, 2006; Carrol and Hoy, 1984). Pointing out to the notion of value, Meznar et al. (1990) refer to the value the firm creates for both its financial stakeholders as well as for other stakeholder groups existing within the social fabric. In other words, value for the extant society is created when the firms' generation of social goods in the form of employment and community improvement exceeds any negative externalities it produces. The value creating capacity of the firm contributes towards its continued acceptance by the society over the long-term.

Meznar et al. (1990) build on Freeman's (1984) seminal paper on firms seeking social legitimacy through stakeholder engagement underpinned by the need for firms to contribute towards the wellbeing of its different stakeholder groups. Meznar et al. (1990) incorporate the value perspective by discussing "how the firm attempts to adds value to its stakeholders" for legitimacy purposes (Meznar et al., 1990, p. 333). In other words, the paper focuses on the ability of firms to add value by engaging in activities that are beneficial to a wide range of stakeholder groups. Previously, Freeman (1984) identified five different strategy types firms could pursue to manage the interests of diverse stakeholder groups. However, the framework did not incorporate the benefits received by the stakeholder groups. Accordingly, Meznar et al. (1990) classification scheme identifies eight enterprise strategy types based on the scope of stakeholder focus (broad/narrow) and the type of value added (through a decrease in social costs; increase in social good; combinations of both).

Recently, Porter and Kramer (2006) advocated the necessity of bringing in a broader perspective when looking at the society and business relationship. They focus on the interdependencies between the society and the business – in terms of reciprocity and the dependency for each other's survivals through the generation of shared value that benefits each other. Porter and Kramer (2006) echo Burke and Logsdon (1996) focus on the longer-term perspective – terming it to be dangerous for businesses to benefit over the short-term at the society's expense. Hence, the guiding principles of companies as reflected in the strategic approaches, need to embed sustainability principles to direct actions that generate shared benefits – that is both the society and the business derive value out of sustainability actions

over the long-term. Materiality analysis becomes the key for companies to recognise and implement those sustainability projects that intersect with the core businesses and have the potential to create shared value rather than implementing projects on an ad-hoc basis.

Bocquet et al. (2013) attempt to explore the link with the level of CSR responsiveness and engagement with product and process innovation. In other words, does the type of CSR strategy pursued by a firm inform innovation? Whilst other studies discussed previously have focussed on the link between sustainability and innovation, but has done so by including a narrow version of sustainability. That is the focus has been on environmental responsiveness and not including social or economic aspects that complete the sustainability profile (Sharma and Vrendenburg, 1998; Arago´n-Correa and Sharma, 2003; Buysse and Verbeke, 2003). Bocquet et al.(2013) rely on Burke and Logsdon's model (1996) to classify firms' CSR strategy as either been strategic or reactive in nature (Porter and Kramer, 2006). A firm pursuing CSR strategically measured by the extent to which CSR aspects are integrated with the overall strategic vision, can create value or benefit competitively through its engagement with CSR activities (measured along the five aspects of Burke and Logsdon's model, 1996 capturing the economic benefits and formalised approach to CSR). In sharp contrast to the strategic or the value adding capacity of CSR commitment of a strategic CSR, responsive CSR strategy is characterised by its legitimacy management potential, where CSR aspects remain de-coupled from the overall strategic vision of the firm. Best practices are adopted for legitimacy purposes. In other words, firms are classified by the extent to which CSR aspects are coupled with the overall competitive strategy of the firm. A strategic approach to CSR is found to be driving both process and product based innovations, whereas a responsive CSR approach was found to be inhibiting innovation particularly process led innovation. The study also shows that there needs to be a strong coupling along all the five strategic dimensions for firms to create value through innovation.

Galbreath (2006) also advances four strategic typologies but based on home country and host country contexts. Accordingly, four home country context or CSR strategies at the corporate context are identified. Firstly, based on the argument advanced by Melton Friedman (1970) that managers are only accountable to their shareholders and that profit maximisation is the only obligation and by fulfilling such obligations, organisations can justify their responsibility to the society. The shareholder oriented CSR positioning is based on maximising the bottom-line by minimum compliance with legislation and remains a short-term approach. The altruistic positioning is based on the understanding that there is a responsibility of the firm to the society.

This strategic approach is based on normative pillars of "doing the right things" and any benefits to the firm remain unmeasured (Galbreath, 2006, p. 177). It takes the shape of corporate giving largely steered by managerial values. This approach remains isolated from the overall corporate strategy. The reciprocal strategy seeks to embed social concerns with its core business activities with a view of benefiting both the society and the business. It seeks to do more than is legally required and understands the benefits accrued to the firm by engaging in socially responsible actions. The firm undertaking a citizenship strategy proactively engages in a dialogue process with stakeholders to understand their concerns and embeds those in decision-making. Been accountable to stakeholders is a top most priority and disclosure through external reporting and websites are undertaken.

Strategic approach to sustainability has also been studied from a resource based perspective and strategic typologies based on a phase model or a path dependant model has been advanced (Hart, 1995, 1997). Those resources that are rare, scarce, hard to imitate as well as specific to the firm contribute towards building capabilities and capacities leading to sustained competitive advantage. Hart builds on the resource based theory to develop the natural resource based view of the firm – in other words Hart illustrates how ecological positioning may contribute towards competitive advantage. A significant aspect to note from Hart's work is the importance attached to capability and capacity building – capabilities and capacity building are tacit in nature in that they are ambiguous and socially complex thereby hard to imitate (Winter, 1987). Building capability is time intensive and is an outcome of collective organisational learning and knowledge gathered through experience. It is about employee upskilling and the augmentation of human capital. The resulting resource is hard to imitate due to the socially complex nature of its being – an outcome of engaging multi-functional human resources over time. Such that capability becomes an "invisible asset" that is organisational specific, rare, difficult to copy due to its tacit nature remaining deeply embedded within the organisations thereby having the potential to contribute towards the competitive advantage of the firm (Hart, 1995, p. 989; Teece et al., 1997). These unique strengths or capabilities are an outcome of organisational learning that takes place over time and across functions and remain embodied within the organisational collective cognition and consciousness (Barney, 1991). Sharma and Vredenburg (1998) empirically analysed the theoretical advancements forwarded by Hart (1995) on capabilities and capacities led approach to strategic sustainability. Sharma and Vredenburg (1998) explored Oil and Gas companies along two typologies – reactive and proactive measured along 11 dimensions of environmental responsiveness relevant to the

industry. The major difference between the proactive and reactive companies was that the latter viewed ecological response as a distraction from shareholder value creation and unlike the proactive companies, they failed to recognise any source of competitive advantage. Their main motivation was risk and liability reduction. However, the proactive companies identified different competitive advantages from voluntary adoption of proactive ecological practices and were perceived to be "outcomes of [built up] strengths" in other words identified as "organisational capabilities" (Sharma and Vredenburg, 1998, p. 735). The proactive companies thus acknowledged the role of collective strength giving rise to competitive advantage through careful consideration of ecological aspects. The study finds capacities and capabilities that are valuable, rare and imitable as well as organisational specific include the ability to build relationship with a diverse range of stakeholders for collaboration, consultation as well as pre-empt social concerns; capacity to continuously learn about environmental issues through internal information exchange, finding solutions, reporting and creating an environmental knowledge-base; and the ability to continuously innovate based on the accumulated knowledge and capabilities with a view for long-term survival (see also Aragón-Correa and Sharma, 2003).

Hart (1995) advances the view that the future competition "will be rooted in capabilities that facilitate environmentally sustainable economic activity" (p. 991). It echoes Shrivastava's (1995, p. 940) advocacy of the need to effectively "manage ecosystem resources" and for corporations to adopt strategies that contribute towards ecological sustainability. The first strategy advanced by Hart (1995) is pollution prevention that transcends the minimum compliance requirements and pollution control and illustrates corporate voluntarism (Burke and Logsdon, 1996). It is dependent on employee engagement and participation through training (Shrivastava, 1995) to continuously improve existing processes, undertake process innovation and search for substitutive materials with a view to improve efficiency and reduce cost. Pollution prevention or efficiency approach to sustainability results in cost reduction (Shrivastava, 1995; Rooney, 1993; Buzzelli, 1994). The path dependence approach facilitates the development of capabilities at the operational and production levels leading onto an environmental strategy based on product stewardship that calls for internalising future environmental impacts by implementing techniques such as life cycle analysis (Davis, 1993; Allenby, 1991). This is akin to Shrivastava's (1995) assertion of the need to use Total Quality Environmental Management systems (for instance, LCA) as an effective way of managing scarce ecological resources. It involves identifying potential environmental impacts at product design stage. It induces companies to carefully consider impacts from cradle to grave. It

requires close functional cooperation and the resulting resource is built on a socially complex process of cross-function collaborations and cooperation that is hard to imitate and is also firm specific. Organisational capability is built around its ability to develop products based on interactions across functions as well as internalising the external perspectives of salient stakeholders in product design. Competitive advantage could be achieved by gaining preferential access to key raw materials or raising the competitive levels by creating new institutional expectations or standards or legal norms as well as through reputational gains (for instance, BMW "design for reassembly" subsumed into German standards for automobile manufacturers) (Hart, 1995, p. 996). Competitive advantage is gained not only through higher internal capabilities but also through relational capital – having the capacity to build partnerships with external stakeholders. Sustainable development phase is based on a shared vision engaging different stakeholders including the employees based on the recognition of the ills of economic activity on environmental impact. It calls for a long-term vision as well as investments made into technological know-hows. It is built on a collaborative approach with external stakeholders for instance, technological collaborations. Positioning based on sustainable development agenda requires anticipating the future and developing products for future markets (Hamel and Prahalad, 1994). Hart (1995) points out that developing a shared vision contributes to competitive advantage as it is firm specific and rare – a product of effective leadership and complex social process necessary to create the internal environment bringing different constituents towards a collective vision for sustainable development (Campbell and Yeung, 1991). Hart further points out the complexities and difficulties associated with "generating such a consensus about a purpose" that transcends the business as usual mind set and is also difficult to "maintain a widely shared or enduring sense of mission" (Hart, 1995, p. 1002).

Whereas Hart (1995, 1997) strategic ecological positioning was based on generation of capabilities and scarce and inimitable resources, Shrivastava (1995) builds on Porter's (1980) low cost, differentiation and niche market strategies grounding the aforementioned with ecological sustainability stances. For instance, differentiation strategy based on ecological principal would be of strategic competitive advantages as products are developed with environmental value added and minimum packaging. In the same vein, least cost ecological strategy would entail the development of standardised products that is developed considering environmental impact using clean technology promoting resource conservation but produced in high volume. But what is common to each of the strategies is the need to develop partnerships

and relational capital. For instance, niche strategy requires close collaboration from the highly knowledgeable customers for product co-creation or with suppliers to pursue least cost strategies. Like Hart (1995), Shrivastava (1995) also asserts the need for capability building through the provision of basic or specialised trainings for employees. Similarly, there is a need to alter internal processes to capture market dynamics and organisational structures to pave way for interactions and collaborations with external stakeholders.

Katsoulakos and Katsoulacos (2007) stakeholder based integrated strategic management framework brings together the value based, and capability based dimensions as means of discussing CSR contributing to the overall competitive advantage. More specifically, the study brings together six alternative but closely related theories including Resource Based View(RBV), environmental positioning as well as stakeholder theory to develop the framework. Does the approach to sustainability/CSR lead to the development of core competences leading onto competitive advantage? Specifically, they refer to "collective knowledge and learning capacity" as aspects of generating core competences inherently based on the "networking and knowledge management" approaches undertaken by respective organisations (2007, p. 359). In essence, value creation is based on the capacity of companies to learn with a view to increase productivity, where knowledge is also acquired externally through the provision of effective networking strategies. Whereas this aspect of value creation is based on the capacity and capability of companies to learn through its knowledge management strategies, the authors also stress on the capacity of companies to build meaningful relationships with salient stakeholders – that is to augment value through effective social and relational capital management. More specifically, they argue that stakeholders have the ultimate power to control resources and that through networking strategies, trust needs to be developed. The latter in turns yields "advantage creating resources" contributing towards legitimacy, employee motivation as well as other benefits (Katsoulakos and Katsoulacos, 2007, p. 359). Furthermore, the paper focuses on the ability of companies to develop dynamic capabilities associated with the ability to respond swiftly whilst reacting to changes in institutional environment. The dynamic capability in other words is dependent on the company's capacity to constantly learn and gather knowledge (through networking and collaboration) and to be flexible in their approach associated with their ability to "reconfigure and release resources" in a speedy manner (Katsoulakos and Katsoulacos, 2007, p. 360). As this is an outcome of a socially complex, path dependent, time lagged approach to resource management, the resulting capability and competence, to continuously scan the environment

for technological improvements, internalise external perspectives with a view to constantly learn and capture knowledge, is tacit and idiosyncratic in nature that makes it firm specific, rare and hard to imitate thereby leading on to sustained competitive advantage. The ability to innovate new products and develop/enter newer markets is based on the learning capacity (having the ability to generate advantage creating knowledge) of the companies – which leads on to the development of dynamic capabilities.

Given, that some models have addressed social issues and some environmental issues without explicitly considering all the three dimensions of sustainability; and given the fact that sustainability strategy and control literature has focused mostly on environmental strategies, it is imperative to study control for sustainability based on a framework that captures all the three elements of sustainability, namely social, economic and environmental. For instance, of the limited number of studies concentrating on strategic content, Perego and Hartmann (2009) focus on the natural environmental aspect of the sustainability strategy and measure environmental strategy on a proactive/reactive scale by the level of environmental integration with formal controls. Likewise, Berrone and Gomej-Mejia (2009) also focus on the environmental dimension and specifically classify companies according to their stance towards pollution prevention and reliance on end of pipe solutions.Pondevilleet al. (2013) also focus on environmental aspect but goes beyond how environmental aspects are integrated in formal systems or the type of pollution control measure adopted to include managerial consideration of supplier performance, reliance on internal and external communication as well as focus on new product development based on green credentials. However, Benn et al. (2014) advance a phase based sustainability strategy model capturing all the three dimensions that simultaneously embeds some of the key aspects of the models reviewed previously.

Sustainability Phase Model | Sustainability Strategy Models

Dimensions	Sustainability Phase Model	Azzone and Bertele (1994)	Burke and Logsdon (1996)	Bocquet Et Al. (2013)	Buysse and Verbeke (2003)	Freeman (1984)	Gago and Antolin (2004)	Galbreath (2006)	Hart (1995)	Hunt and Auster (1990)	Katsoulakos and Katsoulacos (2007)	Kolk and Mauser (2002)	Meznar E. Al. (1990)	Porter and Kramer (2006)	Sharma and Vredenburg (1998)	Srivastava (1995)
Responsiveness Type	environmental, social and economic	environmental	Value creation - environmental and social	Value creation - both social and environmental	environmental	social, stakeholder focus	environmental	social, stakeholder focus	environmental	environmental	value creation - stakeholder focus	environmental	value creation - social, stakeholder focus	value creation - social and environmental	environmental	environmental
Factors and Criteria Adopted	both internally and externally situated	externally situated	internally situated	mostly internally situated	both internally and externally situated	externally situated		both internally and externally situated	internally situated	internally situated	both internally and externally situated	internally situated	externally situated	both internally and externally situated	both internally and externally situated	mostly internally situated
Key Points	compliance driven, decoupled philanthropy, reduce risk/liability, safeguard reputation, cost reduction driven, efficient use of human and ecological resources, capacity driven, niche products, niche market, clean technologies, stakeholder engagement, sustainability driven, partnership and collaboration, long term future oriented thinking, shared value proposition	environmentally sustainable products, niche market, clean technologies, public opinion, investment in R&D.	efficiency gains, new customers, new markets, long term value creation	CSR responsiveness, process innovation/efficiency and product innovation/efficiency	compliance driven, stakeholder management, green technology and products, employee training, capacity building, organizational functional representation in environmental decision-making, formal management systems, inclusion of environmental criteria in strategic planning.	engaging with different stakeholder groups	environmental management, long term commitment on adoption of corrective and preventive measures	stakeholder management - internal and external, disclosures through external reporting	Internal resource based theory (capability and capacity building), pollution prevention, process efficiency, relational capital, long term-vision, product development	resource commitment, top management commitment reporting, structure, objectives	resource based view, social and relational capital, knowledge management.	organization's response to environment		shared value and benefits (business and society), long term perspective, innovation led values driven sustainable product attributes	Investments knowledge management, collaboration, recycling	relational capital co-creation knowledge management
Phases/Types	4 phases	5 - stable to creative		strategic CSR based on integration with strategic vision	strategic vs responsive typologies	3 - reactive to leadership	5 types	4 typologies	3 levels of proactive strategies from pollution prevention to sustainable development	5 - beginner to proactively	competitive advantage generating strategy	phase/stage model and static model	8 types	responsive vs strategic typologies	proactive vs reactive typologies	3 business strategy types adopted for ecological responsiveness
Overlaps		environmental focus - niche products and market, clean technologies.	social and environmental focus, CSR with strategic vision, measurable economic benefit from new products, new markets and efficiency, long term value creation	social and environmental value creation, product and process based innovation	environmental focus, stakeholder management, green technology and products, employees training and capacity building, organizational structure and reporting, compliance driven	social stakeholder focus	environmental focus, long term commitment	social stakeholder focus	environmental - pollution prevention, training, knowledge management, process innovation, efficiency, relational capital, long-term, shared vision	environment focus, structure, objective, reporting	stakeholder based, resource based view, strategic CSR	environment focus	social stakeholder value creation	social and environmental value creation, shared value, long term perspective	environmental, resource-based approach, risk and liability reduction, knowledge management	capability building, collaborations, niche market strategies, green products, clean technology
Gaps		social and economic	economic	economic	social and economic	environment and economic	social and economic	environmental and economic	economic and social	social and economic	environmental and economic	environmental and economic	social and economic focus, mostly conceptual and intuitive	environmental	economic	social and economic	social and economic

Table 8.1: Comparison of Sustainability Strategy Models and Sustainability Phase Model

3.3 The Sustainability Phase Model

Benn et al. (2014, p. 29) develop a phase model that captures the different stages that corporations could go through to reach "full sustainability" i.e. it embeds both ecological and social aspects of sustainability. The model put forward is comprehensive as it incorporates both environmental as well as the social aspects of sustainability and how the phases drive the value adding capacity in terms of both social, environmental and economic value added. It outlines distinct phases that organisations would go through before reaching the epitome of sustainability. Each phase is distinct in the sense that it captures how an organisation treats "the human and natural resources" it manages. It incorporates the different perspectives that were discussed earlier including the resource based perspective focussing on the need to develop internal capabilities (Hart, 1995, 1997), internalising multiplicity of stakeholder perspectives as well as the most recent concepts including shared values (Porter and Kramer, 2006). The model recognises that sustainability is a gradual process and that different organisations could be at different stages in their sustainability journey or evolution. Each of the phases are now described below with parallels drawn from the models explored previously, where relevant.

The compliance phase entails reacting to institutional expectations arising from the regulatory environment (Hart, 1995). It entails fulfilling the expectation of regulatory stakeholders and to

protect monetary loss arising out of fines and other liabilities. However, regulation does encourage and motivate companies to identify ineffective practices that generate negative externalities. It encourages companies to actively search for processes that under-utilise resources and create negative implications for the society at large (Porter and Linde, 1995). At the efficiency phase, companies work on the external stimuli created by legislative pressures to actively seek out means to use resources efficiently and cut costs. It creates a step closer to augment "resource productivity" (Porter and Linde, 1995, p. 120). The authors identify three ways in which firms could work towards improving the efficiency of their operations namely efficiencies gained through cost cutting measures, efficiencies gained through value adding activities and efficiencies based on innovation and flexibility.

The authors opine, that a focus on efficiency starts with "picking" out the "low hanging fruits" that have "ripened" (Benn et al., 2014, p. 106). In other words, implementing measures that will allow the companies to reduce wastes and associated costs over the short-term – a step in the right direction towards sustainability. However, to achieve efficiencies over the long-term, there is a need to augment human capital driven by corporate values. While cost efficiencies provide a short-term advantage, however, such initiatives may not offer the long-term strategic advantage as competitors may easily imitate such initiatives (Benn et al., 2014). Nonetheless, it triggers a need for continuous improvement in search of "new breakthroughs" (Benn et al., 2014, p. 105). That is there is a role of corporate cultural systems as well as capacity building of employees through training and induction programme as also asserted by Shrivastava(1995) and Hart(1995). Furthermore, to augment employee capabilities, the authors advocate employee engagement and participation in formulating action plans and active engagements in meetings.

However, achieving efficiency through improved product performance materialised through innovation and enhanced value may contribute towards the strategic advantage (Bocquet et al., 2013). Investments in R&D to innovate value added products may allow firms to enter niche market or create a new customer base thereby offering the strategic benefits. SC Johnson's journey into initiating efficiency based approach to sustainability illustrates the perspective presented here. Initially, the focus was on short-term gains by implementing technical solutions to reduce wastage, decrease reliance on conventional sources of energy and rely on recycling to reduce wastage. That is to pick out the already ripened low hanging fruits! However, the second phase saw a companywide initiative to develop human capital and enhancing employee capabilities and know-how in issues related to sustainability. What had initially started as a

risk and liability reduction exercise soon paved the way for ideating new safer products by engaging employees company-wide. What had remained isolated at the operational level, became a company –wide affair. What had started as a cost cutting, waste reduction exercise paved way for investments in R&D with a view to develop innovative and value adding products.

Benn et al. (2014) also list flexibility as means of obtaining strategic benefits. Firms need to take an anticipatory approach to speedily respond to changes in the institutional environment. This will be dependent on internal capabilities to understand institutional changes as well as the ability to innovate and introduce products/services quickly. Benn et al. (2014) term value adding, innovation and flexibility led approach to sustainability as "higher level" efficiencies clearly distinguishing from short-term cost cutting approach to efficiency gains.

To summarise, efficiency entails recognising the significance of scarce resources and their optimal utilisation, be it natural resources or human resources. It also entails the understanding that poor utilisation of resources or under-utilisation of resources lead to wastage or under-utilised capabilities that also have cost implications associated with it. However, efficiency is not solely about cost reduction or implementing end of pipe solutions, if strategic advantage and long-term sustainability is the objective, it requires a move towards enhancing the value adding capacities of human resources, a value driven approach setting the vision for a sustainable future as well as investments in R&D as well as in human resources development. It takes a holistic approach where entire organisation contributes to efficiency creating activities relative to it remaining an isolated approach. Higher level efficiency programme leads to greater benefits to both firms, society and environment or in other words a multitude of stakeholders receive the benefits over a longer period. The focus is on creating shared value, the notion discussed earlier based on Porter and Kramer (2006) shared value focus.

Short-term Benefits   Capability and Capacity driven

Temporary Competitive Advantage   Long-term focus/Innovation driven

Cost Reduction Way to EfficiencyHigher level efficiencies

Figure 2: Efficiency Based Approaches (Benn et al., 2014)

The pathway to link sustainability to overall strategy as suggested is through innovation (Bocquet et al., 2013). Strategic sustainability as defined by Benn et al. (2014) is the integration

of both human or social and environmental aspects of sustainability with a view to create competitive advantage that could be sustained over the long-term. It resembles the view of shared value creation (Porter and Kramer, 2006). How can sustainability contribute towards the competitive advantage? – The next two phases illustrate the strategic value adding capabilities of sustainability. It is not a mere cost reduction or compliance based approach but itself is a powerhouse of competitive advantage. It presents opportunities awaiting discovery. The authors stress the importance of innovation and creativity as well as capability building in this phase. These capabilities are future oriented. These capabilities form the foundational basis for strategic flexibility, the ability to respond swiftly to market changes as well as to be innovative thinkers and to develop products and services with value added potential. Capacity and capability augmentation is strategic in nature because it is hard to imitate and not readily available – something that remain intrinsic to the organisation (Hart, 1995). The internal capability development approach and its significance in terms of sustainability was discussed earlier (Hart, 1995; Shrivastava, 1995; Katsoulakos and Katsoulacos, 2007). At this phase, the focus is on simultaneously developing both human capital (developing "core competences") as well as investing in technologies to minimise environmental impact. Employees are provided the training to develop the competence and know-how of sustainability. At the same time, relational capital is developed as key stakeholders are identified with a view to building partnerships with them (Katsoulakos and Katsoulacos, 2007). It is based on the understanding that an integrated approach is required to derive strategic advantage from sustainability – in other words both ecological and social aspects of sustainability need to be developed; for instance, environmental capabilities depend on the "proactive advanced level human capabilities" (Benn et al., 2014, p. 150). The capabilities include the know-hows for addressing ecological issues – for instance, actively seeking solutions for resource conversation aligned with the overall organisational mission or value statements. Capabilities also include the knowledge guiding technology uptake (clean development mechanisms) and develop metrics for informed decision-making. Furthermore, capabilities relate to the ability of employees to foster meaningful relationships with key stakeholder groups as well as actively seek to develop newer products and services by anticipating changes in institutional contexts (Katsoulakos and Katsoulacos, 2007).

In this strategic proactivity phase, an overhaul in cultural perspective is undertaken with sustainability values driving the thought process. There is a need to institutionalise sustainability thinking where employees simultaneously fulfil the sustainable corporate

objectives. There is a departure from an isolated approach to sustainability towards an institutionalised approach. The focus is also on cross-function collaborations based on holistic or systems based thinking. Sustainability becomes a shared agenda that employees are empowered to pursue. It calls for employee engagement to think creatively. Resource "productivity" and efficiency of material usage is taken to the next level. Corporations seek ways to convert waste "into something of value" (Porter and Linde, 1995, p. 125). Any wastes could be sold to auxiliary industries. Innovation drives sustainability. At this phase, corporations actively seek out alternatives. Compliance requirements may drive companies to lower impact, but strategic use of sustainability involves finding alternative solutions to enhance resource utility. For instance, 3M responded to legislative requirements to cut down solvent emissions by the application of water based solvents (Porter and Linde, 1995). In the same vein, investments in R&D in response to CFC related legislation enabled Raytheon to modify its existing manufacturing processes that also decreased costs and improved quality. Innovation does not only lead to efficiency gains but also capture new markets or charge a premium price. For instance, German companies benefitted as first movers to develop less packaging intensive products. Burke and Logsdon (1996) framework for capturing strategic sustainability bear resemblance (see centrality, specificity attributes). Parallels could also be drawn from the other frameworks advanced in literature including shared value and stakeholder inclusion.

The final phase includes corporations that not only "fully" embeds both human and ecological aspects of sustainability but actively promotes its own sustainability principles within the greater human society (Benn et al., 2014, p. 180). The sustaining corporation actively forms alliances with diverse external stakeholder groups including closely related industrial constituents to advance the cause of sustainability within the greater society and relies on innovation to drive sustainability. Additionally, the sustaining corporation takes a holistic long-term view of its survival and considers future generations as a key stakeholder considering their welfare in decision-making.

An example of the mind-set of a sustaining corporation is illustrated below:

"*It's Black Friday, the day in the year retail turns from red to black and starts to make real money. But Black Friday, and the culture of consumption it reflects, puts the economy of natural systems that support all life firmly in the red. We're now using the resources of one-and-a-half planets on our one and only planet.*

Because Patagonia wants to be in business for a good long time, a leave a world inhabitable for our kids—we want to do the opposite of every other business today. We are asking you to buy less and to reflect before you spend a dime on this jacket or anything else." – Patagonia (http://www.patagonia.com/eu/enGB/worn-wear/)

In other words, sustaining corporations proactively engage with both internal and external stakeholder groups to augment both relational and human capitals. They invest in training suppliers and employees with a view to building capacity as well as intellectual capital. The continuous upskilling becomes an intangible strategic asset as it develops employee capacity and capability to continuously search for opportunities of strategic nature, adapt swiftly to changing markets and identify opportunities hidden in changing market dynamics and/or introduce newer or value-added products or services.

The strength of these corporations lies in their capacity to collaborate with other stakeholder groups and create radical opportunities based on the strength of relational and human capitals for instance, engaging in shared value creating activities, catering for Bottom of Pyramid markets as well as engaging in innovative solutions for instance, biomimicry. As part of their commitment to sustainability these corporations use their "influence" to promote sustainable thinking within the society (Benn et al., 2014, p. 193). Sustainability remains coupled with corporate strategy driving the creation of shared values (Burke and Logsdon, 1996). As accountability is key for these organisations, independent auditors are appointed to provide assurance on their sustainability practices. Furthermore, these organisations rely on value alignment i.e. a basic match between corporate values and values of those employed.

From an ecological perspective, the sustaining corporation is characterised by its adoption of life cycle assessment techniques for all products (Hart, 1995; Shrivastava, 1995). It also relies on its relational capital to innovate solutions for any environmental implications arising out in its value chain (Katsoulakos and Katsoulacos, 2007). Such corporations, use eco-design techniques to eliminate waste and develop sustainable products using non-toxic ethically sourced materials. These organisations advocate resource stewardship, strive for zero waste operations, form alliances to create business opportunities for waste and invest in renewable energy to achieve carbon neutrality or positivity.

Hence the last two phases are about using resources in a productive manner, be it human or natural that may lead onto competitive advantage (Porter and Linde, 1995). The last phase

advocates the role of corporations in undertaking an "educational mission" to bring radical changes within the larger society (Shrivastava, 1995, p. 954). Table 9 provides a snapshot of the key aspects from the Sustainability Phase based model and illustrates how a gradual development towards a sustaining corporation might occur.

	Phase 1	Phase 2	Phase 3	Phase 4
Social	Attention is primarily on complying with relevant pieces of work place related legislation Philanthropic activities may be additionally undertaken but remaining largely uncoupled from core business activities Focus is on regulatory stakeholders The major aim is to reduce the organization's exposure to liability and the risk of penalty, fines and loss of reputation.	Better resource utilisation Staff development Community projects undertaken based on cost-benefit analysis	Engagement with different stakeholder groups Develop and use human capital	Collaboration and Partnership for regenerative actions – human capital Focus on future generation
Environment	Attention is primarily on complying with relevant pieces of environment related legislation The most obvious environmental abuses are eliminated, particularly those that could lead to litigation or strong community action directed against the firm The major aim is to reduce the organization's exposure to liability and the risk of penalty, fines and loss of reputation.	Emphasis given to recycling/reuse to reduce wastage Lesser reliance placed on conventional energy Better resource utilisation Identification of waste streams and reducing associated costs	Develop products based on ecological capabilities Innovations that benefit the environment	Collaboration and Partnership for regenerative actions – ecological capital
Key Points	**Compliance Driven** **Decoupled Philanthropy** **Reduce Risk/Liability** **Safeguard Reputation**	**Cost Reduction Driven** **Efficient use of Human and Ecological Resources** **Training** **Communication** **Short-term Focus**	**Capacity Driven** *Product* *Innovation Driven* *Swiftly Respond to Market Changes* **Stakeholder Engagement** **Long-term Focus**	**Sustainability Driven** (competitive advantage) **Partnership and Collaboration** **Regenerative** **Externally Oriented Value Promotion** **Shared Value Promotion** **Long-term future oriented thinking**
Value	**Conservation**	**Creation (Short-term)**	**Creation (Longer Term)**	**Augmentation**

Table 9: An Overview of Sustainability Phase Model (Benn et al., 2014)

3.4 Conclusion

The chapter provided the basis for exploring the different approaches that could be undertaken by organisations to position themselves in relation to their social and environmental responsibilities. By doing so, the chapter promoted the understanding that sustainability strategy in the context of this study generally relates to the diverse approaches or diverse means that could be adopted by organisations for sustainable business practices. By reviewing different strategy models advanced within the sustainability strategy literature, the study provided numerous examples of how strategic pursuits with sustainability as a goal could be undertaken. By doing so, this chapter recognised the gradual evolution of sustainability strategy models, with earlier models focusing on one aspect of sustainability (namely, social or environmental) informing standalone models that focused on either of these dimensions (Freeman, 1984; Hart, 1995), to more recent models that have undertaken holistic approaches to capture both dimensions of sustainability in a quest to capture "full sustainability" (Benn et al., 2014).It identified Benn et al. (2014) sustainability phase model as a suitable framework providing the basis of identifying how firms included in the empirical sample have approached their sustainability pursuits.

The chapter recognised sustainable development as a gradual process that is time boundand calls for radical changes in corporate cognition as well as adaptations inmanagement systems. Such changes begin with the recognition that sustainability needs to be embraced and not to be avoided or revolted against. Institutional pressures push companies in the direction of unpacking the huge potentials offered by sustainability (Azzone and Bertele, 1994; Bansal and Roth, 2000). For instance, legislative pressure makes companies to measure its impact on the environment. It makes them provide better working environment to its employees. Compliance provides the direction and those that choose to transcend the phase of compliance driven approach to sustainability, finds themselves with achieving more with less(Porter and Linde, 1995). Lower order efficiencies may encourage companies to look beyond and recognise the unrevealed potency of fully embedding sustainability into its operations and strategies. The full potency is recognised by those that take the challenge to proactively engage with stakeholders and recognise the need to preserve scarce resources (Benn et al., 2014). These companies are the thinkers, challengers and game changers. They anticipate institutional changes rather than just reacting as and when necessary. They invest today so that they can harness the developed capacities and capabilities in the future. They invest in human resources and uphold the

strengths of collaborative practice (Benn et al., 2014; Hart, 1995; Katsoulakos and Katsoulacos, 2007). They are willing to listen, learn and co-create. These companies look at sustainability as a source of value addition and as a source of long-term survival. Through investments in human resources for capacity and capability building, they simultaneously invest in R&D to develop newer sustainable products or create new industrial markets.

CHAPTER 4

THE CONTROL PACKAGE CONCEPT

4.0 Introduction

The core focus of the research has been to establish how strategic content influences the design and use of a multiple of management controls traditionally found in practice. From the review of the management control and sustainability strategyliterature, it was apparent that there is a need to study controls for sustainability systematically. Although the review has identified studies that have focussed on a number of controls, nonetheless, there has been a lack of a structured and systematic approach towards subjecting multiplicity of controls in different organisational settings characterised by different approaches to sustainability strategy. The study is interested in exploring how the same range of control mechanisms subjected to different strategic settings, namely compliance, efficiency, proactive and sustainable practice as introduced inChapter 3, might be designed and used. The purpose of this chapter is manifold. Firstly, the chapter introduces the significance of the package concept before defining it in relation to the current study; secondly, it identifies key themes emerging out of the literature on management control package to guide the current research; thirdly, to introduce several control package frameworks before finally discussing the management control package framework adapted for organisational sustainability. In relation to the overall research aims and objectives, this chapter facilitates the development of the conceptual framework that explores the relevance of a number of management controls typically found to exist in practice in relation to sustainability management (Objective 2). It adapts an appropriate package framework in relation to sustainability management. The management control package framework thus developed with an exclusive focus on sustainability will facilitate the exploration of the research topic in a systematic and structured manner.

4.1 Significance of a Package Concept

Perhaps the earliest proponent of the package concept was Otley (1980) who reviewed are the application of the contingency theoretical framework within the management accounting literature. In his review, Otley (1980) heavily criticises the overly "simplistic" linear approach undertaken by contingency researchers studying Accounting Information Systems (AIS) design. Otley (1980) points out that AIS is only a part of the overall control structure of a given

organisation asserting the necessity of taking a holistic perspective. To elaborate, other control systems must be considered alongside AIS when studying control systems design investigated in relation to contingency variables. By citing the instance of studying AIS design from a contingency perspective, Otley (1980) provides three crucial aspects for consideration. Firstly, when studied holistically, some control systems may act as "substitutes" to other systems (Dent, 1990); secondly, as "complementary" to other control systems such that any "interdependencies" between the systems would need reflecting upon; and thirdly, different "combinations" of controls may exist that will subsequently give rise to the "equally good results, indicating that a wider perspective is necessary to yield a useful contingency theory for (in this instance) AIS design" (p. 421) (also noted by, Fisher, 1998). Furthermore, to illustrate this concept further, Otley specifically applies the word "package" to point out that AIS is a part of an overall control system designed by a given organisation. Moreover, he deems it necessary to consider the overall control package when studying control design as the bare minimum requirement (see Figure 1, p. 421 of Otley, 1980 for a full coverage of his proposed framework). In the framework, the author considers organisational objectives as contingency variable and highlights the fact that different combinations of controls may be appropriate in accordance with the objectives pursued by the organisation. However, Otley (2016) notes that research on MCS based on the package concept remains undermined. Whereas Otley (1980) review has pointed out the need to reflect on achieving a broader understanding of controls, Macintosh and Daft (1987) advances the concept by empirically exploring the relationship between control systems and interdepartmental interdependence. Similar to Otley (1980) conviction, Macintosh and Daft (1987) argue that for a thorough understanding of controls, a narrow approach needs to be shunned, such that accounting controls are studied simultaneously in conjunction with other organisational characteristics as well as non-accounting controls. They convincingly argue that other control techniques including culture, structure and employee reward systems are "in many cases...the tangible elements of a strategy to create an integrated organizational control package" rather than just "ad hoc collection of techniques and mechanisms" (Macintosh and Daft, 1987, p. 50). In the same vein, it is important to consider how a range of different controls traditionally found in practice may form visible elements of translating different types of sustainability strategies. Although the study did not elaborate on control package per se, it did consider both accounting and non-accounting controls to study the relationship. The difference is that the study has shunned a narrow approach and has considered both accounting and non-accounting constituents of control, reflecting a broader perspective, but has fallen short of considering all the elements that form a control package.

However, the study findings provide a basis to appreciate the package concept exploration in that it provides strong evidence of complementary roles played by each of the three control systems studied. For instance, the use of non-accounting controls namely, standard operating procedures and policies (SOPs) was found to play a role in directing employee behaviour whereas accounting controls were used extensively in planning and monitoring in independent departments. However, for departments with pooled interdependencies, SOPs were found to be the most influencing mechanism, whereas accounting controls did not receive much emphasis. The package concept thus aids in our understanding of how different controls may combine or may not be a part of a package in different situations and the nature of the relationship prevailing amongst the controls constituting a package. Moreover, the study also offers an understanding of how control packages could be empirically studied.

Substitution effect implies the application of an alternative control mechanism that yields similar outcome whereas complementarity implies the "reinforcing" nature of a given control mechanism or a class of control mechanism (formal or informal) (Fisher, 1998).

4.2. Exploring Research as a Package Concept

Although the significance of investigating control design from a package concept and its necessity is well established in management control literature from a conceptual perspective for over four decades (Ouchi, 1977a; Otley, 1980; Fisher, 1995) as discussed previously, yet majority of empirical investigation has been limited to the Level 1 and Level 2 types of control-contingency analysis (Fisher, 1998). Fisher (1995, 1998) has classified control-contingency research by their level of complexity. Level 1 analysis entails studying only one control mechanism and its relationship with one contingency variable whereas at level 2 the analysis proceeds further to ascertain the effectiveness of control design on organisational outcomes (Fisher, 1998). At level 3 analysis, multiple control mechanisms are subjected to investigation. Although this level of complexity helps to transcend the narrower focus of level 1 but does broadening the scope of the number of control mechanisms constitute a "package" level focus? For instance, Macintosh and Daft (1987) refer to the package concept but only studies a subset of controls (SOPs, statistical reports and budgets) but not all the constituents that form the total organisational control package. Does this genuinely help alleviate the concerns noted in the previous section?

Studies that have broadened their scope of the number of control types included for empirical investigation do rightly reinforce the need to extend beyond focussing merely on accounting

controls or other formal controls towards a combination of both accounting and non-accounting or formal and informal controls (see Auzair and Langsfield-smith, 2005; Macintosh and Daft, 1987; Abernethy and Brownell, 1997). However, it can be strongly argued that such an approach still fall short of a package level exploration in its true form and spirit. For instance, although Abernethy and Brownell (1997) study considers use of budgets for performance measurement (accounting), accountability processes for employee behavioural control as well as the use of training procedures and selection to subject employees to a socialisation process (non-accounting), yet other useful constituents of a control package are not included namely, rewards or culture (Fisher, 1998). Nonetheless, the study sheds light on the fact that broadening the scope of control types provides substantial empirical evidence of why non-accounting controls (as opposed to accounting controls) are more useful in some situations and vice-versa. However, the study did not explore the effectiveness of the combination of controls in given situations. The same observation has been true in the studies reviewed in chapter 2 that partly considers a range of management controls for sustainability, thereby failing to provide a holistic perspective (Galbreath, 2010; Durden 2008; Norris and O'Dwyer, 2004).

The question that now arises is what constitutes a control package? Grabner and Moers (2013) offer substantial insights on this view and to provide a working definition of the "package" concept by differentiating between what constitutes a control "package" and a control "system". In their views, the fundamental point of distinction relates to the "interdependence" between control practices. Whereas Otley (1980) pointed out the need to take the interdependencies into account while studying control design and hence a broader perspective on controls was necessary – giving rise to the package concept; contrastingly, Grabner and Moers (2013) opine that it is "interdependency" between practices that distinguishes a package from a systems perspective. Specifically, according to their working definitions, management control (MC) practices constitute a control "system" when control practices are mutually interdependent, and the design takes this into account. In contrast, MC practices constituting the entire set of control practices irrespective of any interdependencies form a control package. The latter view is similar to Malmi and Brown (2008) definition of a control package. The latter define control package as "a collection or set of controls and control systems" (Malmi and Brown, 2008, p. 287). In other words, package denotes the *multiplicity* of controls deployed by an organisation at any given time in practice irrespective of any explicit interdependencies between individual practices. The package concept thus aims to provide a "holistic" perspective on control practices adopted by an organisation not necessarily defined by any

interdependencies between them (Grabner and Moers, 2013, p. 410). Support for such an approach to defining package is found in Fullerton et al. (2013) study of lean controls where control packages were constituted by accounting and other control practices irrespective of whether there was any association amongst some of the examined control practices. That is, it mirrors Grabner and Moers (2013) definition that a package may consist of control systems as well as individual practices. On the other hand, Abernethy and Chua (1997) define a package based on the notion of internal consistency – that is a package is comprised of controls that operate in congruency to achieve a similar outcome (Bisbe and Otley, 2004). Although conceptually, the differences do matter, yet given the novelty of the "package/system" approach and its lack of prominence in either accounting or sustainability literature, the current study will adopt the simplistic view of a control "package" as forwarded by Malmi and Brown (2008). The following section explores some of the recent empirical studies undertaken from the package perspective to understand how the concept has been studied noting any distinct themes.

4.2.1 Key Themes

The most recent study explicitly focusing on the package concept was undertaken by Bedford and Malmi (2015) advancing our knowledge on the control-context relationship albeit from the management control and business strategy perspective but illuminating the concept of the control package. The focus is on studying accounting controls and how these combine "as a package" with other control mechanisms including those of a non-accounting nature in certain contextual situations. Specifically, the study adopts the configuration theory approach to develop taxonomies of accounting and non-accounting control configurations by investigating how multiple controls *combine* in certain contextual situations brought about by variations in national cultural contexts, use of technology as well as varied strategic orientations. As the starting point of the research is accounting controls, it pays attention to the role of accounting controls within the five different empirically derived configuration types. Furthermore, the study closely captures how different contexts influence the control membership of each configuration type. The central premise of the study is built upon the idea of accounting controls existing within an overall organisational control package and that achieving internal consistency between control practices becomes the key to an effective control design (Otley, 1980; Grabner and Moers, 2013; Chenhall and Langfield-Smith, 1998). In other words, certain control mechanisms will systematically operate as a cluster based on the logic of internal consistency thereby enhancing performance (Chenhall and Langfield-Smith, 1998; Bedford

and Malmi, 2015).The study acknowledges the difficulties in including all control mechanisms available to an organisation for empirical research emphasising "the need to balance parsimony and exhaustiveness of coverage (of control)" (Venkatraman, 1989, cited in Bedford and Malmi, 2015, p.6). Two approaches are noted. One approach would be to include controls based on the level of priority or significance of control attributes, and the other way would be to adopt "a more constructive approach" (Bedford and Malmi, 2015, p.6). The latter entails selection of relevant measurement constructs to account for the various "theoretical categories" of controls advanced in the literature (Bedford and Malmi, 2015, p.6). However, the question of achieving balance persists. The study also provides a thorough understanding of the "control logic" that forms the basis of each cluster (Bedford and Malmi, 2015, p. 13). For instance, the nature of controls in the "simple" cluster characterised by small, early-stage, non-listed firms and low uptake of technology is informal with dependence on the tacit knowledge of employees for task execution rather than reliance on formal guidelines. The configuration approach advances our understanding of control-context relationship broadly and allows us to readily visualise the unique groupings of control-context that exist in the empirical setting. In a follow up study, Bedford et al., (2016) provide the effectiveness of the control-context relationship; that is to study the effect on the organisational outcome variables? (Otley, 1980; Fisher, 1998).So, the key themes arising out of this study from a package perspective would include control package effectiveness and how the package influences organisational outcomes; the combinations in which controls exist as a package as observed in practice as well as the relationship between accounting and non-accounting controls.

Sandelin (2008) provides evidence of the occurrence of equifinality in control design. Equifinality can be defined as the "potential for achieving the same final state by various configurations of control elements and systems in the face of similar contingencies" (Sandelin, 2008, p. 325). In other words, it can be elaborated as different control designs having the same effectiveness on the organisational outcome (namely performance) in similar control contexts (see also Doty et al., 1993; Gresov and Drazin, 1997). Explaining the concept further, Sandelin (2008) posits that organisational control designers have the freedom to decide on how controls are designed to achieve optimal organisational outcomes. However, the exploration of this concept is still at its nascent stage within control and management literature as this notion primarily is referred to in the biology literature (Sandelin, 2008). Sandelin (2008) presents a comparative account of two control designs influenced by the same contextual situation, namely competing by low price but based on diverse functional demands, namely new product

development and efficiency respectively. The two accounts are based on the same case organisation over two different time periods, the high growth phase and the subsequent IPO entry stage that followed a crisis stage. The case study provides crucial learning points in the advancement of control-context knowledge based on the package concept. In the first control situation, owing to the functional demand of harnessing technological knowledge to develop new products, the main emphasis was placed on cultural controls. The cultural control was complemented by personnel controls (i.e. only those employees who were suitable for the "chaotic" and "entrepreneurial" environment were selected). Action controls were mostly informal, with no specific job instructions in place and decision-making was facilitated by personal supervision with managers were "walking the talk" (Sandelin, 2008, p. 329). Formal controls such as budgets or performance measurement were largely left to aid top management decision-making decoupled from daily operations. In contrast to the above, the second case saw the thrust on formal controls (results oriented controls) to meet the demand of achieving efficiency amidst the prevalence of the same strategic contingency of competing on low prices. Results-oriented controls were adequately supported by a change in the personnel control. Employees were now selected by competence rather than their ability to adapt to the organisational culture. The organisational cultural focus shifted from being "entrepreneurial" to "accounting" based. Meetings involving employees on interim financial reports were undertaken to develop results oriented accounting based culture. Both these configurations resulted in "equal final state", one that resulted in the development of new products and the other that allowed the organisation to achieve efficiency although based on the same strategic orientation. The case proves that equal outcomes could be achieved by different configurations of control practices lending empirical support to the theoretical concept of equifinality. In addition to the above, the study also showcases several other learning points as discussed below.

Referring to the earlier discussion on internal consistency, Sandelin (2008) offers a different abstraction of the debate around what is meant by internal consistency. Sandelin points out that internal consistency could be achieved through a "reciprocal process" where the primary control (culture or results) shapes the secondary controls (personnel or action) which in turns reinforces or complements the primary control. That is there is a coupling or linkage in the ways secondary controls are designed. The complementary nature and its relevance in studying control design have also been observed by Kennedy and Widener (2008) study of lean control package. Although Kennedy and Widener (2008) do not segregate between primary and

secondary modes of controls, they observe the synergies existing amongst individual controls forming a control package (see also, Kristensen and Israelsen, 2014). For instance, they noted the interdependence between social controls and output controls and that the former is also dependent on behavioural controls as well as the output controls. Sandelin (2008) distinguishes between primary and secondary modes of controls by the *supremacy* or emphasis given to a specific type of control that drives the core business philosophy implying the interdependence existing between the two modes of controls. It indicates the prevalence of a certain combination of controls that drives organisational functionality. However, this view should be treated as one logical possibility of attaining internal consistency. For instance, as discussed before internal consistency could be built around loosely coupled individual control practices combining to form a control package (Abernethy and Chua, 1996). However, similar to Sandelin (2008), Kennedy and Widener (2008) also report on the tightly coupled nature of a lean control package. They opine that taking social control in the form of peer pressure from the overall control package would constitute a different control package implying that peer pressure as a control mechanism complements the other forms of control. Kirstensen and Israelsen (2014) take this further to empirically investigate the complementary effects on performance of a somewhat tightly coupled Lean control package. They posit those control elements of a Lean package if designed symmetrically (maximum level) will enhance performance. Similarly, the paper attempts to shade light on the performance effects of controls that complement each other but situated at different levels (low to high). In other words, the study enhances our understanding of the complementary effects of different control systems on performance. While control complementarity has been studied at the package level, Sandelin (2008) case study also indicates the prevalence of control substitutes. For instance, the informal nature of controls in the first case context where the logic of internal consistency was met through the couplings or linkages between both primary (organisational culture) and secondary controls (personnel, action) could be substitutes for a formal approach to control (Sandelin, 2008).Furthermore, Fullerton et al. (2013) study the relationship between the extent of lean strategy adoption and the reliance on a package of accounting and non-accounting controls. The study also observed the existing associations (positive/negative) between control practices within the package for high/low lean environments. In other words, the study explored the extent to which the controls were congruent with one another within the package. They found relative to a highly lean environment; five controls were positively associated with one another contrary to a lowly lean environment where only three controls practices were positively associated with one another. Abernethy and Chua (1996) focal point was accounting controls

amidst organisational control mix. Their study further endorses the concept of substitutability made by the inference drawn from qualitative data. They point out that the need for "sophisticated" accounting systems was substituted by "crude" accounting controls since the other individual controls within the package operated simultaneously to meet ends. The case study showed that organisational reforms were undertaken by changes made to some control elements (culture, budgets etc.) not led by a focus on any specific control element. The accounting control is seen to have played a complementary role within the package of controls to drive organisational goals.

In essence, studying controls holistically by employing a package perspective offers a range of possible research outcomes. This is indeed useful from a sustainability point of view as a structured and systematic way to exploring control multiplicity for sustainability is yet to be undertaken as the review indicated a tendency towards discovery type cases where the primary goal is not to investigate any of the key themes identified from a review of the control package literature. In essence, the key concepts identified from the review include exploring different control clusters for different sustainability contexts as found to exist in practice (Bedford and Malmi, 2015); understand how internal consistency between different controls are achieved i.e. either through loosely coupled elements forming a goal consistent control package or driven through primary and secondary modes of controls where the latter acts as complementary to the former mode of control (Bedford and Malmi, 2015; Chenhall and Langfield-Smith, 1998; Sandelin, 2008); studying the interrelationships between each of the individual control practices and ascertaining if these exist as tightly (loosely) coupled (Kennedy and Widener, 2008; Kirstensen and Israelsen, 2014; Abernethy and Chua, 1996); understanding the potential performance effects of control clusters (Bedford et al., 2016; Sandelin, 2008) as well as the nature (level) of association between different controls in a package and its potential performance implication (Fullerton et al., 2013).

4.3 Package Frameworks

Having explored the different interpretations of a control package and some of the key themes arising out of research into control package phenomenon, this section briefly considers a number of control package frameworks that have been advanced in literature. Subsequently, a conceptual model based on the package perspective but adapted for sustainability is presented and discussed.

4.3.1 Levers of Control Framework (Simons, 1990, 1991, 1995)

Simons defines MCS exclusively based on its formal aspect, and the same is reflected in the LOC framework that excludes informal control mechanisms (Merchant and Stede, 2007; Malmi and Brown, 2008). Although the eligibility of the application of this control framework in this research is reduced for its exclusive preference for the formal controls and not on control design, nonetheless the framework provides useful means of testing how controls are *used* in the sustainability control-strategy context.

The usability aspect is significant from the point of view of this research. Specifically, the framework is significant to understand how specific controls are used in the context of managing sustainability. The four aspects of controls as defined in the framework relate to belief systems (or the formalised approach that declares and establishes the organisation's value and purpose); boundary systems that mark the minimum standards to be followed by organisational members akin to the bureaucratic behavioural control systems (Ouchi, 1977, 1979a). The latter includes standard operating procedures and the explicit rules and procedures that organisational members are expected to adhere to (for instance, environmental policy, a purchasing policy with sustainability criteria). In Simons' words, it is created considering the risks the organisation wishes to avoid and to draw the limits directing decision-making. For instance, planning systems could be used as an example of a boundary system that dictates how sustainability goals could be pursued. The third formal element of the framework is the formal measurement and feedback system that enables management to ensure organisational outcomes are in line with expectations and any deviations could be monitored and managed.

Whereas boundary and belief systems are based on how certain controls may be used (e.g. planning for providing a boundary or governance techniques including policies as boundaries or vision statements used as enforcing belief), Simons (1991, 1995) also refers to how measurement systems (e.g. PMS) are used. Firstly, the diagnostic usage (DU) of formal measurement systems in which techniques including variance analysis are applied by subordinates to examine if outcomes are as expected or planned or otherwise. That is, the systems are used to monitor activities and ascertain goal congruence through the examination of KPIs. According to Simons, diagnostic system (DS) is significant as this approach helps to "communicate, educate, signal and build confidence" in the underlying strategic directions (Simons, 1994, p. 178). In other words, the KPIs would allow TMT to firstly signal and communicate the expectations to the subordinates and secondly, to make them accountable for their actions. However, the DS could be transformed into interactive controls (IC) if these are

regularly used by top management teams (TMT) who personally involve themselves in interactive settings with subordinates. The IC systems are mobilised to manage strategic uncertainties and to foster a better understanding of issues through face to face debates and discussions involving both TMT as well as the subordinates. It signals the priorities that TMT attaches to issues, triggers organisational learning and engages subordinates to actively look out for opportunities to tackle those issues (Simons, 1980). Mobilising IC allows TMT to monitor progress made against the strategic plan personally. Hence, while DS is mobilised to implement intended strategies and monitor critical success factors periodically (Kober et al., 2007; Simons, 1991), IC is used to manage strategic uncertainties by signalling issues that are perceived to be significant by TMT. This acts as a guiding mechanism for organisational learning and establishes the need for information search to seek newer opportunities (Simons, 1980; Simons, 1991) IC use stimulates continuous discourses amongst subordinates on issues perceived to be significant by TMT that generate ideas about how to best manage strategic issues. These ideas and subsequent action plans are discussed and debated with TMT. Such that through ideation and debates, newer strategies might emerge (Marginson, 2002; Simons, 1991).

4.3.2 Object of Control Framework

What are controls trying to achieve? It comes down to the very definition of what controls are. Are controls implemented to motivate employees? Are controls implemented to direct employees or to act as behavioural constraints or to help employees overcome personal limits? Merchant and Stede (2007) categorise controls based on the purpose the controls serve rather than based on the type of controls. For instance, they describe performance systems as motivating agents and point out the need to link performance measures with compensation systems terming it as "pay for performance" control (2007, p. 26). For Merchant and Stede (2007), pay for performance or compensation linked with performance is a type of results control that is associated with motivating employees to achieve good results. Although results control as argued by Merchant and Stede (2007) make employees act in ways that will bring in the best results, and they are empowered to do so. However, this form of control will work only when the desired outcomes are controllable to some extent and are effectively measurable. In situations where result controls can be implemented, they act as signalling agents to direct employees towards results that are deemed significant. So, are these controls well suited in organic environments and where bureaucratic controls in the form of SOPs and supervision are less emphasised as subordinates are empowered to act in ways that will bring in the desired

results? Since personal reward is linked with results that are produced, results control motivates the subordinates to act in ways that will maximise the chances of their personal rewards and at the same time producing desired organisational outcomes. However, for results control to work, desired performance dimensions need to be defined in a way that these are aligned with organisational objectives, followed by reliable measurements. The type of measurement (financial or non-financial) will depend on the defined performance dimensions. The remaining two predecessors of results control implementation include defining performance targets or standards for each of the dimensions defined and setting extrinsic or intrinsic rewards to goal attainment. Merchant and Stede (2007) point out that targets act as motivating agents in that targets establish the level of outcome desired by the organisation and indicate tangible goals to aim for. Secondly, performance appraisal could be obtained by comparing actual performance against set targets. However, given the fact that intrinsic rewards are difficult to measure specifically when the unit of analysis is not individual employees, extrinsic rewards both monetary and non-monetary are subjected to exploration.

Merchant and Stede (2007) also touch upon the concept of control substitutability and complementarity, although not explicitly. For instance, they elaborate by saying certain controls could be implemented to either replace or supplement other forms of control (results with action etc.). Action control could be likened to behavioural controls or negative controls that define what actions are desirable or effective (undesirable or ineffective) or bureaucratic controls in the form of SOP or rules or codes of conduct or policies that form the basis for action, i.e. constraints are placed upon employee behaviour (Ouchi, 1977) closely matching boundary lever within Simon's LOC framework. That is these controls state how employees need to act. Close supervision is then kept determining if employee actions are in line with those prescribed. However, the effectiveness of this control type depends on the availability of information for managers to decide what actions are desirable and useful. Pre-action reviews are also a form of action control where proposed actions are reviewed before being approved to keep activities in check with what is desirable. However, such an approach makes the concept of workforce empowerment questionable. Additionally, the framework classifies controls into two further categories namely, personnel controls and cultural controls. The former controls are implemented when management prefers employees to perform tasks "on their own" that is with minimum supervision (2007, p. 76). Whereas cultural controls are those that shape the norms or acceptable behavioural expectations within an organisation and to create an environment of peer-led monitoring and peer support.

Whereas Simons LOC package framework is best suited to ascertain how controls are used rather than designed and Merchant and Stede (2007) model focuses on the purposes the controls serve, a suitable candidate for facilitating the current research is Malmi and Brown (2008) model that provides a selection of typical management controls found in practice derived from a review of the extent management control literature incorporating theoretically advanced control elements as identified from the extant scholarly literature. The framework includes controls that have been theoretically and conceptually validated (Malmi and Brown, 2008). The model provides a simplistic means of exploring controls for sustainability in a systematic and structured way without having to identify first what purposes certain controls may or may not serve in a sustainability context (Merchant and Stede, 2007). However, it provides the means to subject a number of individual controls found to exist in practice in the sustainability context and identify if variability exists in the ways controls are designed by sustainability strategies. Additionally, it helps to explore at what stages of sustainability uptake firms integrate sustainability strategies within different existing control mechanisms. Riccaboni and Leone (2009) observation that firms typically adapt their existing control mechanisms to support sustainability implementation. Furthermore, the framework considers the majority of the control mechanisms found in the reviewed literature but leaves out those control mechanisms that solely exist in a supporting capacity (Malmi and Brown, 2008). The framework thus leaves out control mechanisms such as environmental accounting techniques, information technology platforms as well as sustainability reports as distinctive control mechanisms but assumes these to play a supportive role in facilitating decision-making. Thereby, providing the opportunity to concentrate on a manageable quantity of control mechanisms that play a substantive role in facilitating quality decision-making (Bedford and Malmi, 2015).

However, what is clear, is that no matter how the controls have been classified, be it bureaucratic, results, boundary systems etc., there are certain aspects of these controls that are common to control package frameworks in quality or spirit. For instance, Simons refers to belief systems that are also present in Malmi and Brown's framework as part of the cultural control systems. Although the research relies upon Malmi and Brown's framework to provide the basis for analysis, nonetheless, parallels between other control frameworks will be drawn where appropriate. This will serve the purpose of reinstating the significance of the particular control in demonstrating or exploring its importance to drive the sustainability agenda.

The section below unpacks the control package framework advanced by Malmi and Brown (2008) and discusses how each of the control elements may be related to the sustainability context by also relating to the preceding focus on sustainability strategy literature.

4.3.3 Controlling for Sustainability Strategy Framework

4.3.3.1 Organisational Culture as a Control Mechanism

Dent (1991, p.705) defines organisational cultural contexts as "*systems* of knowledge, belief and values in which action and artifact are vested with expressive qualities" (*emphasis* added).To elaborate cultural systems, hold the ideas that are present in the forms of knowledge and beliefs as well as the sentiments that manifest as values that organisational members prescribe to. Such that any actions emanating from such a system give those actions a meaning. Furthermore, the system beholds the platform where norms for behaviour and expectations are established. The system shapes the rituals, symbols and the language embodying the organisation. Culture is also interpreted as a power construct in that it is the intangible force that may alter the understanding of what is constituted as legitimate or acceptable. Moreover, that provides the basis of "accepted criteria for action" (Dent, 1991, p. 708). It gives meaning to the very existence of the organisation and the platform to rationally interpret the actions and activities of the organisation (Greenwood and Hinings, 1988). However, organisations operate within the social fabric of existence where inter-institutional interaction paves the way for the import of new values or beliefs (Dent, 1991). From the sustainability perspective, isomorphic pressures emanating from the wider social or institutional context may make organisations to import sustainability values and beliefs within its organisational cultural context thereby ushering in a new direction or change within the organisational context (Matten and Moon, 1998). The review provided contrasting pictures of culture as a power construct where informal controls promoted a shared understanding of sustainability and gave legitimacy to the actions of its employees (Norris and O'Dwyer, 2004), whereas in Slack et al. (2015) cultural systems were not significantly mobilised creating confusion as to what constitutes sustainability. In the latter case, it did not promote an understanding of what is meant by sustainability or the expectations to drive sustainable practice.

Organisational culture is akin to "knowledge systems" that weave the "realities" of purpose or existence (Dent, 1991, p. 726). For instance, a company moving away from the bottom line approach to competing on the triple-bottom-line approach will move away from a knowledge system that sustains the economic bottom-line towards a social-environmental focus in addition

to the economic outcome. Such shifts of what constitutes reality may also be followed by changes in other control arrangements, both structurally as well as in terms of emphasis given to particular controls. For instance, Dent (1991) case study illustrates the changing reality (formerly based on public service) towards a business culture based on economic prioritisations. Such that the emphasis before the change was on personnel control and quality service provision where profit and accounting controls were secondary; towards the emergence of a new knowledge system where the language, symbols, beliefs and rituals were reshaped on the basis of profitability and bottom-line; paving the way towards a significant emphasis on the accounting systems. In Epstein et al. (2015) examples, the employees were acting on the understanding of the importance attached to diverse stakeholders as well as the implications of environmental impact on the bottomline such that they were mindful of the importance of integrating sustainability concerns into their decision-making.

From the sustainability perspective, the significance of organisational cultural systems for propagating sustainability oriented values have been a steady feature in sustainability literature (Harris and Crane, 2001; Newton and Harte, 1997). Such literature equivocally endorses the need to bring about cultural change in organisations to embrace sustainability through value reorientation and reshaping knowledge systems based on the premises of sustainability (Harris and Crane, 2001; Shrivastava, 1995). The literature warrants a need to institutionalise sustainability into organisational knowledge systems and processes (Purser,

1994; Jennings and Zandgergen, 1995). The institutionalisation was missing in Slack et al. (2015) study (see also Durden, 2008). Peattie (1995) argues from a strategic-fit perspective that such cultural orientation would signal a genuine attempt made by organisations to embrace sustainable practices to a range of stakeholders (refer to discussions on Norris and O'Dwyer, 2004; Morsing and Oswald, 2009 findings). Shrivastava (1995) asserts the need for a change in organisational value systems that have so long advocated the exploitation of natural resources rationalising the rhetoric based on economic goals. A move towards a sustainability led strategy brings in a shift to the short-term perspective induced by the economic prioritization towards a long-term, integrated thinking (Welford, 1995; Chung and Parker, 2008). The infusion of sustainability values within organisational culture communicates the purpose laden nature of the long-term corporate survival (Chung and Parker, 2008). They note as such that it gives new meanings to how activities need to be performed, where and how opportunities are to be sought. It shows how value is to be enhanced and maintained. For instance, a company pursuing a sustainability strategy based on increasing efficiency may

communicate such priorities through its cultural knowledge systems directing its employees to look for opportunities that will allow the company to improve its eco-efficiency (eco-product efficiency, looking for low carbon materials etc.). In this respect, if culture is defined as a power construct, it gives legitimacy to the actions of the employees to act according to the strategic basis and simultaneously creates an expectation of prescriptive actions. The relevance of organisational culture as means to managing sustainability has been noted by Adams and Frost (2008). They point out to the level of emphasis laid on organisational culture as the means of communicating about sustainability in one of the companies under investigation. Such that the company was noted to have even placed a regional manager in another location to revive the cultural environment.

As have been discussed previously, the strategic pursuit of sustainability based on higher order efficiencies rely on the path-dependent approach of instigating changes in business philosophies and values – it calls for a cultural transformation (Benn et al., 2014; Hart, 1995; Chalmeta and Palomero, 2011). Such transformations, as noted earlier, are a product of a socially complicated process, time-consuming, hard to imitate and organisational specific – thereby contributing towards the sustainable competitive advantage. It was also noted that not many organisations succeed in sustaining such a transformed intangible environment. Contraffato and Burns (2013) study highlighted that the change process included cultural transformation for the Italian company moving towards strategic sustainability. It was also noted earlier that once the ripened low hanging fruit has been picked, organisations wanting to move forward to achieving higher order efficiencies need to take a broad, institutionalised approach that includes employees from across functions with a departure from an isolated approach (Benn et al., 2014); furthermore, it was noted strategic sustainability is associated with the organisation's ability to develop higher order efficiencies including "advantage creating" knowledge and relational capitals (Katsoulakos and Katsoulacos, 2007). Knowledge is accumulated collectively through organisational learning processes. However, according to Banerjee (1998), the learning process will be dependent on how the firm chooses to position itself concerning sustainability (environmental) issues. Banerjee (1998) differentiates between the learning processes at the group and organisational levels in that the former occurs through cooperation amongst members while learning in the latter happens through its interaction with the contextual environment. Furthermore, for an organisation looking at complying with regulation or making efficiency gains, learning may be limited to detecting errors and undertaking corrective measures through routinized responses (to follow law or maintain a

localised recycling programme) limited to few functional areas (manufacturing). On the contrary, for a proactive stance that goes beyond compliance and efficiency gains, the learning process results in a change in norms and strategic direction with regards to sustainability. It takes a holistic approach spanning different functional areas resulting in "integrated efforts by cross-functional teams" and a longer-term outlook and technological interventions (Banerjee, 1998, p. 150). The higher level of learning or double loop learning will be associated with significant increase in cooperation with diverse stakeholder groups. Relational capital is augmented through interactions with diverse stakeholder groups operating within the business context – where acquired knowledge is translated into actionable goals. Organisational cultural control has a critical role to play in shaping an environment that values collective learning and promotes stakeholder-based thinking. Popper and Lipshitz (2000) contend that learning is productive if it is promoted and embedded in the shared values and beliefs that make up the organisational cultural system. Alternatively, in other words, organisational culture must promote an environment that brings together members to actively learn and transform the latter into "actionable knowledge" (Popper and Lipshitz, 2000, p. 181; Schein, 1990). Jones et al. (2007, p. 138) coin the term "stakeholder culture" to discuss the necessity of a cultural context that will direct decision-making to augmenting relationships and thereby contribute towards the relational capital. The reviewed literature puts enormous stress on the training aspect to control for sustainability with Pondeville et al. (2013) putting implicit emphasis on learning (Norris and Dwyer, 2004; Masanet-Llodra, 2006; Maxwell et al., 1997;Khoo and Tan, 2002;Cramer, 2005).The cultural context needs to instil an understanding that sustainability is a long-term commitment and not a cost draining activity that if pursued strategically may create shared value, i.e. add value to both the organisation and the diverse stakeholder groups (Porter and Kramer, 2006).

The more formalised aspects of organisational culture that are written mission and vision statements communicate the purpose of the organisation giving explicit meaning to its desired actions. Such formalised approach frames the assumptions about the organisation. It also helps to communicate the significance of the organisation's existence and draws its employees to act according to the objectives embodied in the mission statements. Such that the underlying activities will be directed by the established norms or expectations. The mission states the "overriding purpose of the organization in line with the values or expectations of stakeholders", and the vision establishes the "desired future state: the aspiration of the organization" (Johnson et al., 2005, p. 13). In line with Simons' framework, these statements form part of the extant

belief systems that explain the purpose of the organisation (1995). The formalised approach would allow the strengthening of sustainability culture based on the three cultural dimensions identified by Harris and Crane (2002) namely diffusion, degree and depth such that sustainability philosophy transcends departments or any department but becomes institutionalised within the very organisational fabric. The inclusion of sustainability values in mission statements convey the philosophy upon which the organisation aims to compete thereby reducing friction between conflicting philosophies of competing based merely on economic prioritisation and sustainable values. Schein (2004) asserts that to understand the organisational culture, it is necessary to examine if and what values are espoused in the formal publicly available decrees in the forms of mission and vision statements. This should be followed by an examination of how and to what extent these values have been translated into norms directing actions (Lee et al., 2013). In other words, Schein (2004) calls for a scrutiny of the values relating to sustainability that organisations have formally declared to their various stakeholders. Lee et al. (2013) assume that unless such commitments are publicly declared (made to stakeholders), there may not be the integration of these values at the different organisational levels. Broadly, through a vision statement, an organisation communicates its purpose and what its aims are while mission encapsulates the activities directed towards those aims (Hitt et al., 2011). The aims in the vision statements are subsequently transformed into achievable targets through the interplay of various controls, for instance, strategic planning. Thus, the formal decrees could be understood as acting as directives that aim to bind organisational members towards common goals and how these goals ought to be achieved. Does the organisation outline sustainability in its mission and vision statements? If so, how are these communicated and how are employees made to engage according to the values ascribed in these statements? (Ferreira and Otley, 2009; Merchant and Stede, 2007).

The reviewed literature has provided numerous examples of organisations promoting responsible values to undertaking an institutionalised approach to sustainability bringing in all employees within the sustainability rhetoric. Norris and O'Dwyer (2004, p. 176) refer to socialisation controls as one such control aimed at "internalising socially responsive/ethical standards within employees" with a view of promoting sustainable decision-making (Soutar et al., 1994). Gandz and Bird (1989) note that socialisation controls support organisational cultural development, making employees aware of the values the organisation ascribes to. Here, controls could be playing the role of "communicating" organisational values and objectives to instil sustainability thinking (Lindsay et al., 1996). For instance, P&G communicates

sustainability-related information with the organisational members through newsletters that emphasise top management commitment to sustainability. Ad hoc events such as Earth Days are celebrated to build an environment that promotes the emphasis attached to sustainability in P&G (Riccaboni and Leone, 2010; Morsing and Oswald, 2009; Maxwell, 1999). It was also evident from the literature that increasingly organisations championing sustainability are assigning individuals to assume the role of "Sustainability Ambassadors"... In P&G, Ambassadors are tasked with raising awareness at individual sites. Other mechanisms to facilitate the socialisation process included exertion of peer pressure to ensure employees' decisions and actions are attuned with organisational values (Norris and O'Dwyer, 2004). This is undertaken to continuously disseminate organisational objectives and goals, and plans for sustainability throughout and is associated with double loop learning (Banerjee, 1998). Additionally, a reference needs to be made in this context to Merchant and Stede (2007) personnel control that management may employ to control employee behaviour with least supervision. Merchant and Stede (2007) refer to selection processes as well as the provisions for training. It was noted previously, that higher order efficiencies are path dependent on the capability and capacity of organisational members. Hart (1995) and Shrivastava (1995) both contend, the necessity of the provision of training for employees (see also Benn et al., 2014). Specifically, Shrivastava (1995) calls for specialised training for employees in firms pursuing a niche sustainability strategy. It is apparent from Norris and O'Dwyer (2004) case study that organisational members were trained on internal value systems and sustainability principles through the leadership courses as well as induction events. For firms pursuing strategic sustainability, the focus will be on providing training to every member of the organisation rather than those within specific functional areas. Comprehensive training provides the means to upskill employees throughout the organisation and augment their capability for proactive thinking (Banerjee, 1998). Whereas in organisations pursuing sustainability for compliance and efficiency gains, training will be limited to specific functional areas (Banerjee, 1998). Currently, a rising number of scholarly papers are paying attention to the link between employee values and sustainability and examine the same by building on the concept of person-environment fit. For instance, Spanjon et al. (2015) demonstrate that a high level of congruency between firm and employee concerns for environment positively affects job satisfaction and creativity than otherwise. It was noted earlier, that strategic sustainability is associated with the ability to innovate (new products or services, processes) (Benn et al. 2014; Porter and Linde, 1995; Shrivastava, 1995). Shalley et al. (2004) note that creativity constitutes the initial step towards innovation and for firms to be innovative, their employees are required to be creative

(Amabile et al. 1996; Amabile, 1988). Spanjon et al. (2015) study that surveyed Australian engineering employees illustrates that firm-individual value alignment leads to creative thinking in employees. The findings demonstrate a possible need for companies, specifically those that are pursuing strategic sustainability to employ selection controls (Merchant and Stede, 2007) to recruit those individuals highly oriented towards sustainability as a low fit would imply lesser creativity leading to impaired innovative capabilities. Florea et al., (2013, p. 394) assertion that "the value based actions of internal stakeholders are the cornerstone of organizational sustainability" closely echoes Bolton et al. (2011) comment that ultimately sustainability success lies in the hands of the individual employees (also emphasised byRodrigue et al., 2013) and more specifically in the personal values that they bring in to the organisation (Florea et al., 2013). Through the selection based approach, sustainability could be managed through firm-individual value alignment and individual concerns for the extant society. For instance, Wright and McMahan (2011) point to the significance of identifying the individual values that employees carry, if human resource practices were to contribute to organisational sustainability. An instance of the application of selection controls was exhibited earlier in Norris and O'Dwyer (2004) case study, where managers' personal values and selection processes aiming at value congruence were extensively relied upon for managing sustainability.

Through the processes above including mission statements, internal communication, socialisation and training programmes, firms attempt to promote organisational learning that inherently remains within the "collective consciousness" of the firm directing employee behaviour than in the minds of individuals limited to a few departments (Banerjee, 1998, p. 149). Based on Banerjee (1998) conviction on levels of organisational learning, collective learning through the above processes will be reflected in organisations pursuing strategic sustainability. Through the propagation of shared values through cultural mechanisms, innovation will not be limited to few functional areas but will be shared across the entire organisation facilitating the dissemination of sustainability throughout the company, something that was wanting in Slack et al. (2015) case company (Banerjee, 1995).

4.3.3.2 Strategic Planning as a Control Mechanism

However, as noted by Hart (1995), cultural systems may promote a vision for sustainability within the organisation indicating corporate "intent" in the direction of sustainable business practice. However, to turn the "intent" into a reality, actionable plans must be put in place. In other words, there should be mechanisms that would allow the organisation to realise the intent

or vision (Senge, 1990; Hamel and Prahalad, 1994; Hart, 1995). It is important to ask how the planning process accounts for translating shared values and vision into collective reality through collective actions. In other words, what drives values in discourse to be translated into values in action? Williams (2002) cautions against the decoupling of values from long-term actionable plans and processes in that misalignment may cause "chaos" (Williams, 2002, p. 222). This chaos was observed in Norris and O'Dwyer (2004) where tensions grew because of incongruent controls. Given the current management approach of fulfilling short-term goals measured extensively by financial performance, does sustainability remain simply a rhetoric that remains untranslated into actionable goals?

Strategic planning, an ex-ante form of control, although receiving less attention within sustainable management literature, has a significant role to play when it comes to managing for sustainability (Langfield-Smith, 2007; Galbreath, 2010; Banerjee, 2002). Within the extant strategic management literature, strategic planning mechanism has been identified as a significant means for engaging with issues of strategic importance by incorporating these in the planning process (Judge and Douglas, 1998). Judge and Douglas (1998) cite the example of General Motors that improved its financial and environmental performance after incorporating environmental aspects into its strategic plans after the latter was identified as a strategic issue. Maas and Reniers (2014) refer to the identification of sustainability issues of strategic importance.

From the strategic sustainability literature, it was evident that firms placing strategic importance to sustainability must manage the interests and expectations of salient stakeholders. They must also internalise the diverse perspectives into decision-making to benefit from the relational capital. However, the ability to foster meaningful relationships does not only depend on the cultural prevalence but also how it is formally constituted. A systematic approach is required to manage such relationships, and it has to be planned efficiently. Strategic planning is the mechanism that provides the means to define how an organisation chooses to position itself with regards to conditions and expectations imposed by diverse stakeholder groups, manages social issues as well as maintains its relationship with the natural environment (Carroll and Hoy, 1984; Freeman, 1984; McWilliams et al., 2006; Kargar, 1996). Strategic planning "guides" and sets forth the direction of sustainability (Galbreath, 2010, p. 511; Baron, 1995). Galbreath (2010) explains the link between strategic planning and CSR through the latter facilitating the process of assessing the conditions imposed both by external and internal stakeholder groups, through the application of analytical techniques. A systematic examination

of the institutional environment is important as it allows firms to understand and interpret sustainability issues and take appropriate actions of strategic importance (Slater et al., 2006; Fineman and Clark, 1996; O'Shannassy, 2003). In other words, it facilitates interpreting the "context" within which the firm operates, identifying and managing critical issues (Rolland and Bazzoni, 2009) and subsequently assessing them for appropriate "response" (O'Riordan and Fairbrass, 2008, p. 750). Qualitative analysis is undertaken to determine the contextual factors based on their relevance relative to the firm along each of the dimensions of sustainability (Baumgartner, 2014). Additionally, the evaluation of the context will provide the means for the organisation to understand the "change elasticity" of the environment or how rapidly expectations or issues may change (O'Riordan and Fairbrass, 2008, p. 752) and thereby manage uncertainty (Pondeville et al., 2013). For instance, Covin and Miles (2007) study illustrate the reliance placed on strategic dialogue between internal stakeholder groups and the firm to augment relational capital. It is the strategic planning process that enables the firm to assess diverse stakeholder expectations (Galbreath, 2010). Such stakeholder dialogue and engagement have also been given much importance in management practice frameworks that were identified through the literature review process in Chapter 2 (Cramer, 2005; Maon et al., 2009) and also in empirical studies (Albelda et al., 2007; Riccaboni and Leone, 2010; Epstein and Wisner, 2005).

Strategic sustainability also requires developing human resource capacity and capabilities and the need to bring in diverse perspectives into decision-making by augmenting the relational capital with stakeholder groups. Augmenting human resource capital requires a long-term vision and a long-term commitment (Benn et al., 2014). Moreover, as such these processes have to be controlled. Strategic planning needs to consider, and chart out plans to develop such capacities as it was argued before strategic sustainability is a path-dependent process that relies on the competence of human resources to develop abilities to foster relations with stakeholder groups, scan the institutional environment continuously, swiftly respond to market changes with value-added products. Hence, firms need to plan how it intends to develop firm-specific resources for strategic sustainability.

Sustainability management also requires the allocation of scarce resources which includes both monetary and non-financial inputs (Burke and Logsdon, 1996; Galbreath, 2010). Unlike Merchant and Stede (2007), Malmi and Brown (2008) however separates financial planning from strategic planning function and reserves the former under budgetary planning provisions. The financial planning aspect of the allocation of scarce resources is a topic for the subsequent

section on budgetary controls for sustainability. Intangible inputs are required to plan for sustainability in a comprehensible way (Galbreath, 2010). Such that the firm has to rely on the inputs of several actors including internal and external players. Strategic sustainability requires the ability for the firm to learn continuously through its knowledge management strategies. Hence, through the medium of formal planning mechanism, firms can internalise the views of external stakeholder groups as well as those residing in the collective consciousness of its employees. Specifically, for the latter, employees could be assumed to be in a position to think strategically (in addition to top management) and contribute towards setting the sustainability strategic direction (O'Shannassy, 2003) or to formulate ways to translate sustainability vision or intent into concrete plans (see also Rodrigue et al., 2013). In other words, strategic planning enables the integration of diverse perspectives to facilitate the development of goals, objectives and actions and allocate resources to meet the objectives set for the non-market environment (Kargar, 1996). In this context, strategic planning could be interpreted as a "process of openness" contributing towards accountability and setting the future direction through collaborative approaches and stakeholder dialogue (Williams, 2002, p. 219). However, this process was lacking in Durden (2008) case organisation resulting in sustainability existing as mere rhetoric. Specifically, through informational exchanges with stakeholders, firms understand the non-market "context", learn about the particular "obligations" towards stakeholders and design the appropriate "response" (O'Riordan and Fairbrass, 2008, p. 750; Epstein et al., 2015). The knowledge acquired through the collaborative approach contributes to the ability of the firm to understand the dynamic institutional environment and to develop plans to respond quickly to changing expectations.

It is also important to reflect on Prahalad and Hamel (1990) perspective on strategic planning, specifically for its significance for sustainability control. Their view is that strategic planning promotes the understanding of how resources from diverse functional areas could be combined for generating dynamic capabilities. In this context, it is necessary to reflect on double-loop learning capabilities and the ability of the organisation to "integrating information and ideas from a variety of departments" (Banerjee, 1998, p. 155). According to Ramanujam et al. (1986), strategic planning effectiveness is significantly explained by the degree to which different functional areas are integrated (see also Judge and Douglas, 1998). Previously, it was argued that strategic sustainability requires the development of firm-level competences in learning, fostering relationships as well as swiftly responding to changes. As such, according to Galbreath (2010), strategic planning should bring together different functional areas when it

comes to decision-making. Considering that different functions may engage with different stakeholder groups learning about their diverse needs; an integrated approach to managing relationships and knowledge through the medium of strategic planning will allow the firm to augment the relational capital better and manage knowledge efficiently. Sustainability is a multidimensional construct needing the inputs from diverse functional areas. Hence strategic planning serves the purpose of bringing in collective learning to make informed decisions and develop firm-specific dynamic capabilities: specifically, which is based on its ability to combine these resources and competences; an outcome of a socially complex process, hard to imitate and firm-specific. Judge and Douglas (1998, p. 243) point out that the "successful integration" of sustainability aspects into strategic planning process may lead to the creation of firm-specific capabilities. Judge and Douglas (1998) survey-based study found evidence of the capability leading to superior environmental performance.

Strategic planning for sustainability thus entails not only facilitating interpretation of the context in which the business operates, but also identifying the salient stakeholders, internalising their views, developing and allocating resources in addition to bringing in the diverse perspectives of different functional areas. It is also associated with goals and target setting (Malmi and Brown, 2008). Baumgartner (2014) points out to the need to formulate long-term objectives for sustainability and chart out the objectives and targets by defining a time frame to translate vision into actionable goals. For instance, Lee (2012) provides an example of goal setting being an antecedent to effective carbon management. In that effective management of carbon includes planning, setting goals as well as cybernetic controls. For instance, in Lee's (2012) study, the two case organisations had set specific targets of emission reduction per unit of production (company A set a 5% target by 2013 and company B had set a 15% target per unit by 2013). P&G case study also illustrates the role of strategic planning in translating vision into actionable plans. For instance, the goal was to generate "in the least $50 billion in cumulative sales of "sustainable innovation products" with improved environmental profile over a five-year period (Riccaboni and Leone, 2010, p.137). This is in line with double loop learning that is associated with a longer-term focus and goal setting or establishing targets for sustainable products. However, where the end objective is not strategic, associated with picking out already ripened low hanging fruits or compliance with the law, the focus will be on a short-term perspective associated with single loop learning (Banerjee, 1998). Additionally, the inclusion of sustainability issues in the strategic planning also signals the importance attached to sustainability to the rest of the organisation (Judge and Douglas, 1998).

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4.3.3.3 Budget as a Control Mechanism

As evident from the literature survey on control for sustainability strategy, no studies were identified exploring the role of budgets in controlling for sustainability strategy. However, the role of budgets in controlling for business strategy is well documented within the extant management control literature (Otley, 1978; Anthony and Govindarajan, 1998; van der Stede, 2001; Langfield-Smith, 1997). There is a need to reflect on the literature above to understand the significance of budget as a control mechanism and to device ways by which the controlling mechanism could be applied in a sustainability context. Before proceeding to the extant management control literature, a brief on budgets relating to sustainability is mentioned.

Previously, the need for the allocation of scarce resources which includes both monetary and non-financial inputs to manage sustainability was noted (Burke and Logsdon, 1996; Galbreath, 2010). Burke and Logsdon (1996) contend that investment plans need to be made to support the delivery of planned outcomes. Henri and Journeault (2010) referred to the extent to which firms integrated environmental aspects into budgets regarding investment plans for environmental projects, expenses related to environmental aspects and income derived from environmental performance. That is the study focused on Burke and Logsdon (1996) assertion that financial resources related to sustainability ought to be considered in budgetary planning mechanisms. However, Henri and Journeault (2010) found that budgetary integration of environmental aspects only marginally impacted environmental performance relative to other MC elements including the provision for incentives and PMS integration.Following on from the strategic planning role for controlling for sustainability involving short-term and long-term objectives, it will be interesting to explore how companies make budgetary allocations. Roth (2008) considers the conventional budgeting mechanism as an effective cost (financial resource) management tool for sustainability management. Specifically, the author defines the role of a budget for sustainability control as a communication tool to promote sustainability objectives spanning different organisational levels (Roth, 2008;Burritt and Schaltegger, 2001**).** Roth (2008) suggests the development of "triple bottom-line" budgets that incorporates all the three sustainability dimensions, thereby aiding in decision-making. It itemises each aspect of sustainability and the measures to be adopted thereof. Roth's (2008) example includes benefits accrued from fuel conservation efforts and costs incurred for pollution itemised under the environmental category. Roth further opines that such an itemised approach to triple-bottom-line budgeting facilitates variance analysis for effective decision-making (for instance, carbon budgeting and carbon variance analysis). However, there are several drawbacks including the

ability to measure these constructs and the resources required for measurement. Burritt and Schaltegger (2001) also offer a similar opinion on the usefulness of budgets in that for eco-efficiency goals set over the long-term are to be achieved, such goals need to be incorporated into the budgets detailing the short-term plans. The budget needs to consider the monetary implications of social and environmental performance (Roth, 2008).

Exploring best practices in Thai companies, Virakul et al. (2009) found that none of the best practice case companies had any policies on budgetary allocations for sustainability. However, sustainability management depends on the availability of resources (in this instance, financial resource). Companies were found to have allocated a certain percentage of profits for sustainability. It shows that sustainability may be dependent on financial performance, thereby reflecting a short-termist attitude towards it. A firm with a longer-term vision for sustainability may be argued to make allocations for sustainability irrespective of annual financial performance. One argument put forward by Virakul et al. (2009) for the lack of a written policy for sustainability, is that it offers flexibility in allocations. Hence it will be interesting to explore how dependant budgetary allocations for sustainability is on financial performance.

The extant management control research has thoroughly investigated budgetary designs contingent upon business strategic orientations (Chenhall, 2003; Langfield-Smith, 1997). However, unlike budgetary contingency research in management control literature, research into the design of budgets for controlling for sustainability strategy is yet to take shape. To understand, how budgetary designs might be shaped by sustainability positioning, this section will explore several design attributes of budgets extensively subjected to research within management control literature. Govindarajan (1988) finds the relative de-emphasis and less reliance placed on budgetary controls for firms pursuing a differentiation strategy. Nilsson and Rapp (1999) reach a similar inference and explains that for Sandvik pursuing a differentiation strategy and operating in an uncertain environment, it is difficult to incorporate factors contributing to a differentiation strategy efficiently within its budgeting process (Govindarajan, 1988). A formal budget is laid out to signal the underlying aims. van der Stede (2000) also finds that those pursuing a differentiation strategy would have less rigid budgetary controls (in other words formal controls) as such the strategic pursuit requires the flexibility and built-in slack necessary for responding to uncertainties and changes and focus on innovation that requires a longer-term outlook. Furthermore, too much of budgetary rigidity may cause long-term prospects as it allows too little flexibility for managers to make discretionary decisions for innovation research (Merchant, 1990). It should be noted that in this context, rigidity or

reliance is defined as the emphasis given to budgets for evaluating subordinate performance and in their ability to meet targets (van der Stede, 2000; Govindarajan, 1988). On the contrary to these findings, Shih and Yong (2001) findings indicate a greater emphasis on budgetary controls placed by prospector firms owing to uncertainties in foreseeing financial performance (see also Simons, 1987). Relative to defenders, Simons (1987) study found rigid budgetary controls were pursued by prospectors. Commenting on this puzzling situation, Chenhall (2003) opines that the greater emphasis placed on budgetary controls act in unison with organic forms of control with an emphasis on communication and dialogue leading onto better performance (Abernethy and Brownell, 1999).

In this context, Simons (1995) framework on the use of MCS is relevant. Previously, it was noted that interactive use of MCS is suited in organisations facing strategic uncertainties due to rapidly changing market dynamics. Simons (1987) study bears significance. It was found that prospectors used budgets interactively and the budgeting process leading on to discussions and debates on strategic uncertainties. Tight budgets in prospector type organisations could be associated with the necessity to curb out excessive innovation (Chenhall, 2003). The interactive use of budgets paves the way for the flow of information across hierarchical boundaries as well as across functions. This paves the way for two – way interactions between subordinates and top management as well as between employees across different functions. Consequently, the process allows the participation of diverse groups of employees in the budgeting process (Abernethy and Brownell, 1999). The participatory approach to budget setting facilitates debates on strategic uncertainties and how best these could be managed. Additionally, it paves the way for designing appropriate plans to respond to changes in the institutional environment. Hence participatory approach acts "as an integrative liaison device that breaks down the functional and hierarchical barriers that inhibit information flows" (Abernethy and Brownell, 1999, p. 192). An assumption made in the participatory approach to budgeting is based on information asymmetry in that employees from a certain level, or functional area will have access to quality information (Nouri and Parker, 1998). Moreover, that the exchange of such information will lead to superior budgets (Nouri and Parker, 1998). The information exchange may also lead to the allocation of adequate budgets for a concerned functional area to accomplish the targets and objectives (Nouri and Parker, 1998). Brownell (1982) defines budgetary participation as "the process in which individuals are involved in, and influence the setting of budgets" [in Parker and Kyj, 2006, p. 30]. Milani (1975) refers to "high" participation as that involving frequent interactions between top management and others on a plethora of

issues. Kober et al. (2007) study shed light on the significance of participative budgeting in light of a changing orientation from reactive towards prospectors underlying by a need to differentiate from competitors. The interactive use of budgets and participation from subordinates in budgeting process facilitated the move towards the prospector strategy. However, such an exchange is based on individual commitment and alignment with organisational objectives (Parker and Kyj, 2006). Additionally, Parker and Kyj (2006) hypothesise that budgetary participation leads on to more significant commitment for organisational goals. The role of eco-champions was noted earlier. They act as a conduit for carrying information from top management to different levels of organisation and vice-versa. It is expected that such individuals may play a role in budget setting. Simultaneously, it was suggested earlier that the strategic planning mechanism plays an integration role in that it brings voices from different functions for effective planning. If this is true for sustainability management, it is highly expected the significance attached to participatory budgeting. Participatory budgeting facilitates the occurrence of double loop learning where cross-functional teams or their representatives interact with one another and contribute collectively to the budgeting process. This makes the budgeting process holistic in nature, contributes to quality budgeting for sustainability and efficient allocation of scarce financial resources for sustainability management. This may include the allocation of financial resources to achieve specific sustainability goals set out by the strategic importance the organisation attaches to the objective. Additionally, budgeting for sustainability will also aid in the communication of sustainability objectives as noted earlier (Roth, 2008).

In the context of "tight" budgetary control, it should be noted that subordinate involvement in the budgeting process is classified as a micro-attribute of "tight" budgetary control (van der Stede, 2001). Van der Stede (2001) notes the problems associated in the extant management control literature in that different authors have defined the term differently. In this study, the emphasis is on understanding the level of reliance placed on a budget as a control mechanism for sustainability management – be it through the use of budgets interactively (participatory budgeting) facilitating double loop learning and/or having an element of budgetary flexibility (allowances for revisions). From Simon's perspective, participatory budgeting may be classified as a "loose" form of control due to the freedom offered to subordinates in revising targets which contradicts the definition of "tight" form of control as advanced elsewhere (Merchant, 1981). However, van der Stede (2001) opines that such interactive use of control could be classified as "tight" as communication between subordinates and top management

makes underperformance noticeable. The use of budgets interactively also signals the importance attached to sustainability objectives. It also influences the way individuals attach importance to sustainability and their role in achieving those objectives – in other words, they feel valued (Kung et al., 2013).

In terms of budgetary flexibility, it entails the provision of necessary revisions undertaken during budgeting period. However, it has been suggested in the literature, that such provisions do not make budgets a suitable control mechanism. van der Stede (2001) adopts the capacity to revise budgets as a component of the type of budgetary control (tight or loose/flexible). It can be argued that since some of the factors that define a strategic approach to sustainability may not be known at the time of budgeting (stakeholder response, changing market expectations, innovation), budgeting could be used as a planning mechanism with the provision of updating targets and allocations as and when necessary. From a sustainability management context, budgetary flexibility may be necessary for those pursuing strategic or proactive sustainability. Anthony and Govindarajan (1998) however, terms budgetary flexibility as that pertaining to "systematic updating" of a budget used as a planning tool (van der Stede, 2001, p. 129).

4.3.3.4 Performance Measurement Systems as a Control Mechanism

As noted previously, for an organisation aiming to embrace sustainability, the formal measurement systems need to reflect this. Durden (2008) case study highlighted the problem associated with the misalignment of strategic intent with PMS design. The PMS did not account for the triple-bottom-line approach the organisation was intending to pursue as it still measured only financial performance indicators (see also Chung and Parker, 2008). Durden (2008) and Norris and O'Dwyer (2004) noted that the lack of formal measurement system for sustainability created confusion amongst employees, where the cultural mechanisms were mobilised to promote sustainable decision-making, but formal assessment of sustainability performance did not materialise (Norris and O'Dwyer, 2002). In other words, PMS needs to be tailored towards sustainability, if the latter is a goal to be achieved. The inclusion of sustainability KPIs or in other words, the need to go beyond measuring financial KPIs, if sustainability is an objective have been extensively advocated in the management practice frameworks (Khoo and Tan, 2002; Maon et al., 2009; Cramer, 2005).

An extensive literature exists that looks at PMS for sustainability purposes (Searcy, 2012). Industry-specific, sector-specific, individual firm-specific as well as a standardised set of

performance indicators for sustainability have been extensively developed (for instance, Global Reporting Initiatives). Furthermore, indicators have been developed focussing solely on salient functional areas including supply chain and production. The advent of sustainability/extra-financial reporting may have contributed to the growth in the range and diversity of sustainability indicators that have been developed overtime (for instance, GRI in Herzig and Ghosh, 2014). However, Staniskis and Arbaciauskas (2009) point out to the need for PMS to be designed by considering the need for internal decision-making to improve performance rather than having a sole focus on external reporting as also concurred by Searcy (2012). For a firm to be sustainable in its performance, the PMS will be ineffective if such information derived from the system is not used for internal decision-making and planning, other than its sole use for external reporting purposes (Adams, 2002). From the literature survey, it was evident that firms pursuing a sustainability strategy, need to modify its PMS to incorporate measurements for sustainability (see Perego and Hartmann, 2009; Epstein and Wisner, 2005; Riccaboni and Leone, 2010; Morsing and Oswald, 2009; Azzone and Noci, 1998). Current literature provides mixed understandings of whether PMS is used for decision-making or otherwise. Palme and Tillman (2008) study highlights the link between established sustainability targets and the use of PMS for internal decision-making. In other words, where strategic planning mechanisms have been mobilised to generate sustainable goals and targets, PMS would aid in monitoring the attainment of such goals and targets (Riccaboni and Leone, 2010).Additionally, Maas and Reniers (2014) also advocated the ranking of sustainability KPIs by the importance attached to sustainability issues. Adams and Frost (2008) study highlights the extensive use of PMS in decision-making and planning processes. Henri and Journeault (2008) found that proactive environmental strategy is related to the greater use of environmental performance indicators for decision-making and continuous improvement relative to passive environmental strategy. The inferences drawn from Henri and Journeault (2008) study alludes to the fact that PMS contributes to the attainment of sustainability goals set out during the planning process. Some companies have advanced PMS in place to monitor "critical success factors" of non-financial nature integrated with planning mechanisms (Adam and Frost, 2008, p. 297). The use of life cycle assessment techniques has also been advised aiding in informed decision-making (Azzone and Noci, 1998). Some studies have expressed concerns about the extensive use of PMS for external reporting purposes to gain legitimacy (O'Dwyer, 2002). Larrinaga-Gonza´lez et al. (2001) concluded the environmental performance disclosure did not lead to any organisational changes implying the limited use of sustainability KPIs for internal decision-making. Contrastingly, Adams and McNicholas (2007) action

research indicated sustainability reporting process as facilitating the use of sustainability information within the planning process. Several studies indicate the use of sustainability performance information gathered for reporting purposes have been used for evaluation and decision-making purposes (Dias-Sadinha and Reijnders, 2001).

The literature also alludes to the need to develop organisational context-specific indicators, involving external stakeholders in the selection process while also engaging employees for their inputs (Adams and Frost, 2008). For instance, Azapagic (2004) and Keeble et al. (2003) highlighted the significance of stakeholder input in the PMS design process. The engagement of stakeholders in the PMS design may contribute towards augmenting the relational capital and organisational learning. Furthermore, involving employees for their input may enhance the informative attributes of the PMS and lead to the development of a more sophisticated PMS. Perego and Hartmann (2009) findings indicate PMS sophistication through environmental performance information quantified in financial terms influenced decision-making. The study also found that KPI attribute of informativeness was related to the type of strategy pursued. In other words, a proactive strategy required enhanced informative properties of the metrics – through how congruent and sensitive the KPIs are in relation to strategic objectives as well as the verifiability of these KPIs. Adams and Frost (2008) provide examples of companies where stakeholders and employees were involved in the development of KPIs. The KPIs through its informative properties provide the means to measure progress so that any corrective action arising out of variations from expected performance may be corrected. Furthermore, Adams and Frost (2008) stress the importance of gathering sustainability information in monetary terms in addition to physical units implying the need to develop sophisticated PMS for sustainability (Perego and Hartmann, 2009; Azzone and Noci, 1998). For instance, Koehler (2001) case study illustrates the measurement of sustainability performance in financial units leading to decisions of strategic significance. Hence, PMS need to be used beyond reporting purposes, for future planning as well as in the identification of risks and strategic planning (Adams and Frost, 2008).

Having a PMS permits a firm to monitor its compliance with established norms and legislations. Epstein and Wisner (2005) found that the use of PMS led to better compliance with environmental regulations. Additionally, Henri and Journeault (2008) note the role PMS plays in communicating objectives throughout the organisation thereby aiding in organisational learning. Porter and Linde (1995, p. 132) opine that a simple "act of measurement alone leads to" productivity gains. So even for a firm pursuing an efficiency-based strategy, the

performance measurement system will need to integrate KPIs that measure the areas where efficiencies are going to be gained. A key point highlighted by Searcy (2012) is that typically PMS measure short-term performance, however, given that sustainability warrants a longer-term consideration, PMS need to consider the longer-term dimension (Lenzen et al., 2004).

Organisations that genuinely adopt the triple bottom line approach or is in pursuit of proactive sustainability strategy, keen to improve both economic and sustainability performances would find integrated performance measurement tools such as a BSC useful. For instance, Figge et al. (2002, p. 270) term the "lack of integration" as a significant hindrance in the simultaneous improvement of each of the three bottom lines. That is there is still a sense of de-coupled approach to sustainability if linkages between financial and sustainability aspects of performances are not established and monitored (Figge et al., 2002; Schaltegger and Figge, 1997). The usefulness of a BSC was discussed earlier, specifically, its use as means to monitor strategically relevant aspects and to understand the causal relationships between sustainability issues and financial performance (Epstein and Wisner, 2001). Thus, organisations that have identified sustainability goals and have formulated targets and KPIs to monitor the targets might benefit from a BSC to easily translate strategic plans into measurable goals and have a better understanding of how these KPIs affect each of the other non-sustainability related elements of a BSC and contributes to the overall performance. Also, the inclusion of sustainability objectives provide means to communicate their significance to subordinates (Kaplan and Norton, 1996). For instance, Adams and Frost (2008) provide evidence of one of the sample companies adopting a BSC for sustainability, with sixteen performance measures spread across three of the four perspectives of a balanced score-card. Additionally, Morsing and Oswald (2009) reported the emergence of cascaded BSC where the key objectives were owned by TMT.

Apart from the ability of PMS to generate information for internal use or to cater for the informational needs of diverse stakeholder groups (Lamberton, 2005) or to facilitate compliance with standards (Epstein and Wisner, 2001) or to achieve efficiency (Porter and Linde, 1995), the extant control literature also notes the role it plays in promoting and managing organisational learning (Chenhall, 2005). They advocate an integrated approach to analysing performance data that leads to managerial learning. Does the PMS measure only those indicators as required for external reporting or also for internal decision-making? Does it measure only those indicators required by law or go beyond? What is the extent to which companies rely on PMS to support their strategic positioning for sustainability? Apart from

these areas of reflection, another key element of studying PMS as a control for sustainability includes understanding the mode of use of such systems in addition to if the data informs internal decision-making. Referring to Simons LOC framework (1995) discussed previously, it will be interesting to explore whether TMT is personally involved in monitoring key sustainability KPIs that measure "critical success factors" or issues of strategic importance to the organisations. The personal involvement of TMT would also signal to the rest of the organisation the importance attached to key sustainability issues and would direct employees to actively look for opportunities to manage such strategic uncertainties (Arjaliès and Mundy, 2013).

4.3.3.5 Rewards as a Control Mechanism

A natural question that flows from the discussion on performance measurement systems for sustainability is whether there are any reward systems in place for achieving sustainability targets. For instance, international voluntary guidelines refer to the need for aligning performance targets with rewards and compensation systems to enable triple bottom line decision-making (WBCSD, 2010; UN PRI, 2012). There is also an emerging body of literature that looks at rewards and compensations as means of controlling for sustainability, but this remains a recent phenomenon (Maas and Rosendaal, 2016). Academics have voiced their support for such inclusion, specifically at the Executive level as these are the key decision makers and an alignment with sustainability targets would ensure extra-financial aspects are considered during the decision-making process (Arjaliès and Mundy, 2013; Lothe and Myrtveit, 2003; Lothe et al., 1999). The literature cites several reasons for linking performance targets with compensation systems. From a stakeholder-based view, the need to incorporate non-financial measures into remuneration packages has been well documented. Ricart et al. (2005) argue that a sole focus on compensation based on financial performance is inadequate to cater to the needs of multiple stakeholders. Cordeiro and Sarkis (2008), as well as Lothe et al. (1999), opine that targets linked compensation packages increase the accountability of key decision makers to ensure that attention is paid to sustainable business practices and to the needs of multiple stakeholders. Lothe and Myrtveit (2003) vouch for a goals-congruent rewards system that considers the fulfillment of both financial and extra-financial objectives.They argue that the sole use of financial indicators for compensation purposes may not be sufficient for incentivising those who manage and execute sustainability-oriented strategies. This is since individuals are likely to devote time and effort in undertaking activities that are measured for calculating rewards. Merchant (1998) asserts that performance-related rewards act as

motivating factors influencing the effort devoted to achieving specific goals as well as provide information with regards to the objectives that are deemed important (Ferreira and Otley, 2009). Hill and Jones (1992) and Connelly et al. (2011) build on the agency theory to further voice support for compensation based controls for sustainability. These scholars argue that rewards need to be linked with sustainability performance as means of managing the agency problem and ensuring decisions are aligned with the interests of all parties rather than just shareholders.

However, there have been mixed reviews of the effectiveness of rewards and compensations as means of controlling for sustainability and sustainable performance. For instance, McGuire et al. (2003) assert that reward by itself is unlikely to enable sustainable decision-making or impact sustainability performance positively as organisational values and personal beliefs are also critical determinants of sustainable decisions. This view is supported by several scholars including Graafland and van de Ven, (2006) and Frey and Jegen (2001) who relate to the role of intrinsic motivations as key influencers of sustainability-oriented decisions. Cai et al. (2011) and Stanwick and Stanwick (2001) also reach the same conclusion on the ineffectiveness of rewards to augment sustainability performance. On the other hand, Mahoney and Thorne (2005) reported a positive link between CEO compensation and sustainability. The study found that long-term compensations had a significant positive influence on product related sustainability aspects rather than social dimension. Callan and Thomas (2011) find remuneration (both short-term and long-term) as having a positive influence in enhancing an organisation's extra-financial performance.

With regards to the temporal aspects of remuneration, studies have focused on both short-term and long-term executive rewards and compensations and their impact on sustainability. For instance, Deckop et al. (2006) found a positive influence of long-term total pay on sustainability whereas short-term bonuses were negatively associated with sustainability-oriented decision-making. However, a study undertaken by Maas and Rosendall (2016) showed a tendency of firms aligning compensations with a preference for short-term targets over long-term. The prominence of short-term targets based compensation indicates an organisational preference towards "immediate term performance" discounting the implications on long-term performance (Mahoney and Thorne, 2005, p. 241). This stance may be argued to be against the notion of sustainability that has a longer-term focus (Mahoney and Thorne, 2005). Mahoney and Thorne (2005) argue that long-term compensations are better suited to align the interests of multiple stakeholders since irresponsible actions are more likely to be detected and

consequences identified over the longer-term than in the short-term. Berrone and Gomez-Mejia (2009) found long-term pay positively associated with decisions around proactive environmental management as opposed to reactive measures. This finding provides evidence of organisations rewarding highly those substantive decisions that augment the organisational legitimacy, improves overall performance and adds social/environmental value over the long term.

While the focus of the above studies has been primarily on CEOs and executive remuneration as well as solely on the basis of financial rewards, the use of non-financial rewards and compensations at different levels have been identified empirically (Adams and Frost, 2008). Nonetheless, the primary focus of research on controlling for sustainability remains on executive compensation (Berrone and Gomez-mejia, 2009; Maas and Rosendaal, 2016). It can be argued that the focus on executive compensation further provides evidence of the assumption that sustainability management is a structured top-down process (Neugebauer et al., 2016). Rewards of a non-financial nature include the provision for awards as part of a recognition scheme for employees linked to the achievement of sustainability targets (Adams and Frost, 2008).Others have noted the use of rewards controls at the non-management level to manage sustainability. For instance, as stated in a previous chapter, Masanet-Llodra (2006) noted the use of promotions as incentives to motivate employees to participate proactively in environmental initiatives. Likewise, Epstein and Wisner (2005) identified the use of rewards to incentivise not only dedicated environmental personnel but also non-environmental managers as well as non-environment related staff. This indicates the role rewards may play in stimulating environmentally induced actions at different organisational levels. Furthermore, Epstein and Wisner (2005) identified the non-financial rewards consisting of awards and recognitions amidst other incentives of a non-financial nature. It could be argued that different elements of the total rewards package that consists of both financial and non-financial rewards could be used as means of incentivising workforce to manage sustainability (Ferreira and Otley, 2009; Giancola, 2009). Thus, the use of rewards could be means of overcoming the "pass the buck mentality" and ensuring sustainability initiatives are developed and actioned effectively and in a timely manner and that personnel takes the ownership to deliver (Hunt and Auster, 1990, p. 15).

Moreover, not only does rewards instil a sense of ownership but it has an impact on the execution of strategies. For instance, as indicated previously, Epstein and Wisner (2005) found rewards were related to better compliance levels with sustainability related legislations. Porter

and Linde (2005) also add that adequate compensation schemes need to be designed if companies were to encourage sustainable innovation (Benn et al., 2014).

4.3.3.6 Organisational Design and Structure as a Control Mechanism

Prior research within the extant management control literature has extensively focused on studying the associations between strategy and organisational structure and design with attention also paid to understanding how external pressures shape internal organisational design and structure. For instance, according to Miles et al. (1978) structural mismatch with pursued strategy, may result in challenges associated with strategy implementation. Recent developments in the sustainability literature have focused on the link between pressures emanating from the external institutional environment for instance stakeholder expectations and its effect on the ways organisations are structured (Brammer and Millington, 2003). Atkinson et al. (2000) argue that structures will influence the ways by which environmental issues are perceived and undertaken in an organisational context. Literature alludes to the need for structures to promote cooperation and coordination both horizontally and vertically (Hunt and Auster, 1990). Moreover, as many as five different structural types were identified existing in UK Electrics Industry to facilitate environmental issues management (Atkinson et al., 2000). The study identified centrally located structures, decentralised structures, functional structures as well as divisional structures with a central presence following the existing structural arrangement already in place and adopted for environmental issues management.

The case organisation studied by Larrinaga-Gonzalez and Bebbington (2001) demonstrate the impact of strategy (environmental) on organisational design. When the top management in ASES elevated environmental challenges to the strategic level, changes were simultaneously made to the structural design. A separate department was curved out along with the installation of a TMT level position to manage environmental issues with reporting and accountability responsibilities to the CEO (Atkinson et al., 2000) and board of directors respectively. A code of conduct for environmental matters was also developed. The environmental strategy was now the responsibility of the new department that was installed because of the strategic decision. However, one may question the effectiveness of a separate department or a TMT individual to engage all organisational actors. In ASES, such developments failed to integrate all the different functional areas. For instance, the accounting department remained decoupled from the environmental engagement process, specifically the implementation of the environmental accounting procedures. For example, upon being asked about environmental matters, a member of the accounting department responded "That is the DEM's business. The ownership of the

environmental initiative appeared to be quarantined to the DEM, and other departments were not required to interact with environmental initiatives" (Larrinaga-Gonzalez and Bebbington, 2001, p. 285). This necessitates interdepartmental dialogue, engagement and representation to facilitate the integration of sustainability throughout the organisation based on an inter-functional approachas also observed by Epstein and Wisner (2005) in Mexican factories. However, in this instance, the structural arrangement failed to promote "cooperation across lines" (Atkinson et al., 2000; see also Hunt and Auster, 1990). A similar observation was also noted in one of the reviewed papers (Slack et al., 2015). Hunt and Auster (1990) emphasise on cross-functional meetings and task forces with representations of different functions. They also warn (as has been empirically identified in Larrinaga-Gonzalez and Bebbington, 2001) that environmental departments "will not be fully effective" if no reporting relations are established across different functions (Hunt and Auster, 1990, p. 14). Furthermore, the reporting relationships go across levels over to TMTs in firms that proactively engage with environmental issues management (Hunt and Auster, 1990). However, Brammer and Millington (2003) findings indicate that the responsibility of large-scale community involvement projects is anchored in specific CSR departments whereas small-scale projects remain under the domain of PR/Marketing and/or Central Administrative teams. The exploratory study also indicates that employees are more likely to get involved in community-based projects if the central responsibility lies with the CSR department. Hence, the location of responsibility for sustainability projects is likely to have an impact on organisational wide employee participation. Based on the same premise, Ditillo and Lisi (2014) argue that sustainability responsibility within a PR department may fail to integrate sustainability with the rest of the functional areas whilst those operating within finance/accounting functions or having direct reporting responsibilities to the CEO will be better able to facilitate the sustainability uptake within the entire organisation.

In other words, the structural form should facilitate inter-functional interdependencies to take shape (van de Ven et al., 1976). Lock and Seele (2016) emphasise on the need for horizontal integration of sustainability so that strategy is uniformly established across the organisational sphere (Kathuria et al., 2007). According to Abernethy and Lillis (1995, p. 244), integrative liaison devises in the forms of task forces, and multifunctional meetings are necessary to promote such interdependencies by maintaining "spontaneous contacts" with representatives of different functional areas. The cross-functional collaborations and participative decision-making are characteristics of an organic structural arrangement promoting innovative ideas to

be discussed (Chenhall and Morris, 1995). It may be argued considering the discussion above, proactive sustainability strategies may be supported by structural arrangements that promote inter-functional dialogue and facilitate participation from employees in decision-making.

4.3.3.7 Governance Structure as a Control Mechanism

Responding to calls from Kolk (2008) to investigate the "governance of ethics" (p. 146), Klettner et al. (2014) explores how corporate governance mechanisms facilitate the institutionalisation of sustainable strategies in organisational contexts. Elsewhere in the literature, it has been argued that governance mechanisms need to extend beyond financial stewardship to include environmental and social stewardships in response to fulfilling the expectations emanating from various stakeholder groups (Aras and Crowther, 2008). Although this largely depends on how an organisation understands and interprets the association between governance and sustainability (Aras and Crowther, 2008). However, Filatotchev and Nakajima (2014) proposed that firms with more emphases on strategic controls will have governance mechanisms suitable for proactive sustainability strategies.

Similar to De Graaf and Stoelhorst (2013), Klettner et al. (2014) argue that putting governance structures in place either by modifying existing structures or through the implementation of new governance mechanism, organisations are better able to engage with stakeholders and manage their interests. It was argued previously that higher levels of sustainable practice are associated with firm-specific capacities including the ability to build productive relationships with diverse stakeholder groups. The stakeholder approach to studying governance and sustainability has been noted in several studies (Klettner et al., 2014; Spitzeck, 2009) indicating the significance of the structural form of control to facilitate stakeholder inclusiveness – a necessity to advance to higher levels of sustainability strategies. Through governance mechanisms, organisations are better able to foster such relationships (Kaptein and Van Tulder, 2003). The study found the adoption of sustainability specific governance structures across three different levels ranging from a board level committee, executive-level committee as well as a network comprising of management level employees with notable differences within a given level (board level for instance as explained below). As much as 62% of the sample firms included either of the structural arrangements. The study indicates the significance of the structures in relation to the types of sustainability strategies pursued. For instance, interestingly, those firms attributable to the compliance phase of Benn et al. (2014), also had board-level committees in place, albeit, with responsibilities limited to compliance monitoring rather than strategy setting. This could be because directors have legal responsibilities in relation to

specific sustainability oriented compliance requirements. Those companies that have transcended the compliance phase towards a more strategic phase (Benn et al., 2014) had board-level committees in place responsible for both sustainability strategy making and implementation in addition to ensuring compliance. These contrasting dimensions on board level committees signify the relative influence of sustainability strategy on the functionality of a board committee. The emergence of board-level committees in assuming overall responsibilities for sustainability strategy also discounts the claim that "CSR has no place in boardroom discussions" (Kakabadse and Kakabadse, 2007, p. 196). Spitzeck (2009) study further provides evidence against this assertion. Nearly in all the companies (50/51) included in the sample representing BITC signatories, sustainability management was "anchored" in the topmost hierarchical structure, i.e. at the board level with sustainability responsibilities shared by multiple board members. The study also highlights the increasing adoptions of corporate responsibility (CR) committees to support board level committees in managing sustainability. The role of the CR committees includes both strategy formulation and implementation while keeping the board committee abreast of related issues (Mackenzie, 2007), and their significance in playing an "integrative" role has been highlighted (Spitzeck, 2009). Morgan et al. (2009) findings based on a subset of Fortune 500 companies also confirm the emergence of these committees in supporting the board with sustainability issues. Morgan et al. (2009) focused exclusively on the board level governance for sustainability and deduced that boards also undergo different phases in the pursuit of its citizenship responsibilities. At the initial phase, board functionality in relation to sustainability as well as codes of conduct are established. Nearly all the companies included in the subset had this governance mechanism in place, but only a few progressed to higher governance levels. The higher levels include boards monitoring all sustainability-related performance, as well as perform board performance appraisal.

Klettner et al. (2014) does not look into the effectiveness or any differences thereof between each of the levels of structural arrangements to manage sustainability strategies – although it claims that each of the hierarchical arrangements may lead to wide organisational adoption of sustainability practices; Spitzeck (2009) findings indicate that the adoption of CR committees led to better corporate responsibility index performance in organisations having such structural arrangements relative to those where such committees were not present. However, it should also be noted that elsewhere in the literature scholars have shown scepticism about the presence of such committees and its effectiveness on sustainability. For instance, Berrone and Gomez-Mejia (2009) did not find an impact on CEO pay based on environmental performance where

firms had both environmental committees as well as environmental pay policies. The structures are argued to have been adopted in response to institutional expectations and remain somewhat symbolic signalling the firm commitment towards natural environment (Berrone and Gomez-Mejia, 2009). Hence, although "responsible conduct" could be indicated by the institutionalisation of sustainability into governance structures (see Spitzeck, 2009, p. 496), nonetheless based on the above line of argument such structural integrations could be nothing more than mere symbolic gestures. Slack et al. (2015) found ineffective sustainability implementation through the sole means of enacting a sustainability department.

Following on, other studies could be identified that have focused primarily on newer positions including Chief Sustainability Officers/Directors been installed in large companies (Strand, 2013; Strand, 2014). These positions occupy the top ten positions within firms achieving "upper echelon status" reflecting the significance attached to sustainability objectives (Strand, 2014, p. 688). Quinn and Dalton (2009) find in companies that have embedded sustainability in their daily operations, the role of leaders in creating a culture that promotes sustainability objectives in addition to economic pursuits. In these organisations, leaders play a pivotal role in establishing the direction, aligning objectives as well as sustaining the commitment of organisational players towards sustainability. The need to create newer structural arrangements to embed sustainability principles within organisational practices was also noted. These arrangements include the need to install TMT positions including a Sustainability Director/Manager. Strand (2014) provides more profound insights into the roles of the TMT to govern sustainability practices.

The TMT positions were installed primarily with a focus on embedding sustainability within the core corporate strategy. The participation of such Officers at TMT level meetings brought the sustainability issues on the agenda and contributed towards the strategy-making process. Furthermore, the positions were understood to raise awareness of sustainability simultaneously within the entire organisation. "…moreover, Elin Myrmel-Johansen held that position for three years and did a fantastic job in both lifting the internal awareness, bringing the global challenges and the CSR agenda to a strategic level in the company, and also engaging with our line managers to make them internally operational", reported one CEO who was interviewed about the rationale of bringing in the position (Strand, 2014, p. 696). The rationale based on elevating sustainability to a strategic level became a key theme in the interviews. It may indicate that higher levels of sustainability adoption may need to be facilitated by the installation of TMT level positions. Additionally, the establishment of such positions signal to

the rest of the organisation of the significance attached to sustainability thereby also contributing to the embeddedness of sustainability within the cultural context (Finkelstein et al., 2009). Interviewees alluded to the fact that such positions helped to integrate different functional areas and provide them with support for embedding sustainability within their functional responsibilities. In this aspect, the TMT position seems to play a functional integration role in that it is "more likely for the eventual adoption and prioritization of the sustainability agenda within the agenda of their functional units through ongoing engagement and encouragement of the individual in the corporate sustainability TMT position" (Strand, 2014, p. 701). Such bureaucratization also facilitates the establishment and monitoring of key performance indicators as revealed by one of the interviewees – "we set the targets. We follow up on the key performance indicators (KPIs). We make sure it happens and create the big picture for the company. The development of KPIs is a step towards driving sustainability performance" (Strand, 2014, p. 697).

The governance structure facilitates setting direction and creating an atmosphere that promotes sustainable thinking; facilitates the integration of sustainability with the core business strategies. It also involves engaging individuals from different functions so that sustainability is taken up throughout the organisation. To operationalise it, KPIs are also formulated and monitored. The need to involve individuals from the upper echelon to manage sustainability has been echoed elsewhere in the literature with Park (2008) [cited in Aldama et al., 2009] emphasising placing someone who can influence the planning function. In this context, Aldama et al. asserts top-level involvement "places CSR issues at the core of business strategy" (2009, p. 508).

4.3.4 Superiority of Malmi & Brown model over other two models

Malmi & Brown model, 2008 is superior to the other two models – Simons, 1995 and Merchant and Stede, 2007 – because of several reasons. Table 10 is updated to show the common elements of control mechanisms between the three models. It is evident from the updated table that Malmi & Brown model is by far the most comprehensive and holistic. While Malmi & Brown model covers how various controls are designed to implement sustainability strategy in organizations, Simons model covers the types of controls and Merchant and Stede model covers the purposes the controls serve, for instance, results, replacement, supplement. Simons model covers exclusively the formal types of controls such as cultural controls and does not cover informal controls. Merchant and Stede model talks about purposes such as control

substitutability (replace) and control complementarity (supplement). In order to implement sustainability in the system, it is important to embrace sustainability through value reorientation and several controls especially cultural controls help in doing that. Malmi & Brown model covers exhaustively all management control mechanisms such as cultural controls, strategic planning, budgetary controls, performance management, rewards and compensation, organizational design and governance structure. In contrast, Simons model only covers belief systems, boundary systems, formal measurement and feedback systems as control mechanisms whereas Merchant and Stede model covers personnel and cultural controls. There are common control mechanisms among the three models in areas such as cultural controls, performance measurement, rewards and compensation and governance structure. For example, expectations setting, legitimizing actions are common control mechanisms for all three models. However, there are control elements in areas such as strategic planning, budgetary controls and organizational design and structure which are mostly covered by Malmi & Brown model. Hence, Malmi & Brown model is the most suitable model over the other two models.

The following table (10) summarises the key aspects from the different management controls for sustainability as discussed in this section.

Cultural Controls

- Sustainability inclusion in Mission Vision Purpose statements (Simons, 1995)

- Setting expectations, legitimising actions (Simons,1995; Merchant and Stede, 2007)

- Communication, shaping expectations, knowledge systems (Simons, 1995)

- Shared Value (Simons, 1995)

- Training

- Employee-Organisational Value Alignment

Strategic Planning

- Identification of sustainability issues

- Incorporation in strategic plans

- Identifying relevant stakeholders

- Assessing stakeholder expectations and formulating plans

- Application of analytical techniques

- Develop firm specific resources

• Encourage cross-function participation and dialogue		
• Goals/Target setting (Merchant and Stede, 2007)		
• Action Plans		

Cybernetic Controls

Budgetary Controls	*Performance Measurement*	*Rewards and Compensation*
• Integration with budgets • Investment plans • Budgetary allocations for sustainability • Immunity from financial distress • Participatory budgeting • Budgetary rigidity	• Sustainability KPIs • Monitoring goals (Simons, 1995) • Use for internal decision-making • Advanced PMS (life cycle analysis) • Stakeholder (incl. employees) input in KPI development process • Financially quantified sustainability KPIs • Balanced Score Card • Interactive use of KPIs (Simons, 1995)	• Alignment with sustainability KPIs • Used in rewarding workforce at different levels (Merchant and Stede, 2007) • Financial/Non-financial rewards (Merchant and Stede, 2007) • Short term/Long term dimension

Administrative Controls

Organisational Design and Structure	*Governance Structure*
• Structural type – separate department, informal groups etc. • Inter-departmental dialogue, collaboration	• TMT involvement (Simons, 1995) • Board level committee • Executive level committee • Monitoring responsibilities: Compliance and/or strategy setting • Policies (Simons, 1995) • Codes of conduct (Merchant and Stede, 2007) • Reporting lines

Table 10: An overview of key aspects of management controls for sustainability (Adapted from Malmi and Brown, 2008). The table is updated with the common aspects from other two controls – Simons, 1995 and Merchant and Stede, 2007. This also serves as a comparison between three models and shows the reasons as to why Malmi and Brown model is superior over the other two.

4.4 Conclusion

Chapter 4 served a number of purposes. In relation to the research aims and objectives, this chapter explored in detail the management control package concept locating its origin within academic discourse as early as 1980s (Otley, 1978; Ouchi, 1977). The review of the body of literature pertaining solely to the application of the package concept indicates a current renewed interest in exploring controls through a structured and systematic approach that considers a range of management controls typically found in practice (Bedford and Malmi, 2015; Sandelin, 2008; Grabner and Moers, 2013). However, its application specifically within sustainability research is yet to take shape as identified in the extant review of the literature in Chapter 2. This chapter discussed the relevance of studying controls from a broader perspective facilitated by the application of the package perspective with the view that a narrow perspective of controls provides an erroneous and incomplete understanding of the control-strategy phenomenon under study (Otley, 1980; Chenhall, 2003). Having explained the significance of the control package perspective, the chapter reviewed the core themes emerging out of recent studies employing a broader view of controls. The review indicated at least five different themes that could shape the direction of research that chooses to employ a package perspective. The identification of these emerging themes as discussed in the chapter provides a clear direction for the research to be undertaken and offers the researcher with conceptually proven approaches to studying management controls from a package perspective. It will be interesting to explore how different strategic approaches towards sustainability lead to differences in which management controls are designed and used and the underlying interrelationships existing between different controls. The thematic exploration could also lead on to the identification of certain types of controls that receive prominence in the design approach and those that receive lesser attention. Subsequently, the chapter explored key management control packages already advanced in the literature (Simons, 1995; Merchant and Stede, 2007; Malmi and Brown, 2008). By establishing the reasons for adopting Malmi and Brown's (2008) package framework, the chapter concluded by discussing how each of the control package constituents may be relevant for sustainability management and control.

CHAPTER 5

THEORETICAL PREMISE

5.0 Introduction

The previous chapter introduced the concept of control package and discussed its significance in sustainability scholarship. This chapter builds on the concept further by grounding it within an established theoretical framework. Sutherland (1975) defines theory generally as "an ordered set of assertions about a generic behaviour..." [Sutherland, 1975 as cited in Keating, 1995, p. 2]. In other words, theories provide the basic explanations underlying an assumption made in directing research. As Otley (2016, p. 11) summarises, "the underlying theories can be seen as a 'skeleton' that give researchers a language to discuss the empirical situation" offering a justification for the underlying assumption as well as shaping the discourse based on empirical findings. However, the prominence of theoretical basis driving research within this area was noted to be significantly low with only a fourth of all the reviewed sample adopting a theoretical underpinning to explain the rationale of studying controls and strategy. For instance, the case studies remained descriptive, and their contribution towards theory illustration or theory development remained at best low (Keating, 1995). This provides the opportunity to embed theoretical perspectives to drive research within this field and in doing so make a theoretical contribution (objective 3). No studies (qualitative or otherwise) were found to refute existing theoretical bases but on the contrary, were found to bring in novel theoretical concepts that are seldom applied in the context of sustainability and control (Epstein et al., 2015). Those studies that were driven by theoretical underpinnings to explore management controls and sustainability strategy relied upon different perspectives overall. For instance, the stakeholder perspective promotes the view that organisations should pay attention to and manage the interests of multiple stakeholder groups. This perspective was the underlying basis for Durden (2008) study where the driving assumption was that management controls mustbe designed in a way that promotes the concerns of multiple stakeholders.

This study is based on the fundamental viewpoint over the expectation that sustainability strategy and management controls will be associated with one another in some way. Porter (1985) has pointed out to the need for formulating a set of strategic priorities shaping an

intended course of strategic direction to be a part of effective management. However, as Chenhall and Langsfield-Smith (1998) explain, setting out strategic priorities is insufficient for achieving corporate goals if not supported by appropriately designed control mechanisms (Shank and Govindarajan, 1993; Auzair and Langfield-Smith, 2005; Chenhall, 2005; Jermias and Gani, 2004; Simons, 1987, 1990). In chapter 3, the different strategic frameworks based on sustainable practice were highlighted. However, it is the view of the researcher that adopting explicit sustainability strategy is not sufficient to drive sustainable behaviour without the support of management controls. As have been empirically evidenced, strategic implementation requires the presence of appropriately designed management controls (Norris and O'Dwyer, 2004; Durden, 2008; Riccaboni and Leone, 2010). Without management controls, strategic goals and objectives may remain short of realisation. Management controls ensure that the goals and objectives are communicated, acted upon, monitored and finally realised. Hence, the purpose of therelevant theoretical framework in this context would be to provide the explanatory basis for the underlying assumption that a relationship exists between sustainability strategy and management control.Surprisingly, the application of established theoretical frameworks (e.g. contingency perspective) is yet to find acceptance within the field of sustainability and management control, despite its proven application to provide the explanatory basis within the extant field of management control and business strategy (Fisher, 1995; Chenhall, 2007; Otley, 2016). The focus on the role of management controls on sustainability strategy implementation rather than the strategic content may be argued to have contributed to the low adoption of the contingency perspective in driving research within this field.Building on the limitations of prior research, this study applies the contingency perspective and in doing so also establishes its illustrative credentials within the field of sustainability and management control literature (Keating, 1995).

5.1 The Contingency Theoretical Perspective

Within theextant management control literature, contingency theory has been the dominant basis for explaining the relationship between management controls and business strategies (conservative, differentiation, cost leadership etc.) (Shih and Yong, 2001;Gerdin and Greve, 2004; Chenhall, 2003; Otley, 2016; Langfield-Smith, 1997). The contingency perspective has been relied upon to gather insights on MC in organisational settings due to its proven predictive abilities and as such has played a dominant role in advancing organisational theories on management control and use (for instance, Auzair and Langfield-Smith, 2005). This research focuses on the organisation as the level of analysis and seeks to understand how strategic

orientations shape a range of management controls found in practice. By doing so, the study aims to extend our understanding of MC in organisational settings within the context of sustainability and contribute towards a contingent view of management controls and sustainability strategy.Contingency theory posits, firstly, that how controls are designed is dependent on the contextual variables, in this context, sustainability strategy; and secondly, that although firms may identify clearly the strategic priorities and the strategic direction, that by itself may not be adequate to enhance organisational performance unless there is a fit between the strategic choice and the way controls are designed (Chenhall and Langfield-Smith, 1998; Govindarajan and Gupta, 1985; Govindarajan, 1988).In other words, controls need to be aligned with the contextual factors. This approach takes a functionalist perspective perceiving MC as a "passive tool" playing a supporting role and remaining informed by situational aspects (Chenhall, 2003, p. 129). In other words, MC is a linear process, unidirectional and designed according to the "context" to achieve aresult (for instance, organisational performance). It could be argued that assuming MC to play a passive role remains one of the major flaws of the theoretical perspective as previous studies have provided evidence of controls playing an active role in shaping strategic outcomes (Kober et al., 2007). However, the theory promotes the view that differences in control design and use may exist in different organisational settings facing different contextual factors. Prior research provides evidence that differences in contextual factors including but not limited to uncertainty, strategic objectives and priorities, technological advancements and cultural settings will influence how controls are designed and used in different organisational settings facing these contingencies (Chenhall, 2003). Hence, the perspective "...rejects the universalist view that "one system fits all..." (Shih and Yong, 2001, p. 482; Jermias and Gani, 2004) promoting the view that differences in management control design and use may be expected in different organisational settings. A discussion on Benn et al. (2014) sustainability phase model led to the conclusion that sustainable development is a gradual process and that different organisations may be at different phases, one that may be characterised by an outright rejection of sustainable practice on the one end of the spectrum towards championing sustainability-driven competitive advantage driving the strategic direction. It is expected that organisations at different phases of sustainable development having different strategic priorities (for instance at the compliance stage, the priority will be complying with legislative requirements rather than deriving competitive advantage from proactive approaches) will entail differences in the ways such organisations design and use their management controls. The contingency perspective, in general, supports this basic view underpinning this study. Hence, its application to provide the explanatory basis supporting such

an assumption is justified. For instance, Perego and Hartmann (2009) found that more sophisticated PMS was associated with proactive environmental strategies indicating the contingent relationship between PMS and the strategic orientation. However, the study explored the contingent relationship in isolation from other management controls that are traditionally found in practice and discussed in the preceding chapter. In doing so, it failed to examine how, for instance, PMS functions as part of an overall control package in relation to the contingent factor. Fisher (1995, 1998, see also Dent, 1990) note the shortcomings based on a narrow approach towards studying management controls. Fisher (1995) warns that the development of contingency theory (in general) to explain control design to its full potential has been impaired because of the "less than definite [and tentative] results", yielded by examining a smaller subset of what constitutes a total organisation package evidenced by the tendency to investigate only one aspect of control package within a study (1998, p. 55). As also noted by Chenhall (2003), the isolation and narrow approach lead to problems related to theinterpretation of findings propounded by a model underspecification. If the linkages between control mechanisms are not established, then the appropriateness and effectiveness of a given control aspect may not be adequately determined (Chenhall, 2003; Fisher, 1995, 1998). Such that erroneous conclusions may be reached. Otley (1980) assertion that some controls may complement or substitute another control technique explains why such erroneous inferences may be arrivedat. The example of Macintosh and Daft (1987) on control mechanisms as discussed in the previous chapter supports this observation. Hence undertaking research with a broader view of controls may provide adeeper understanding of management controls and its association with sustainability strategy.

5.1.1 The Concept of Fit and Underlying Relationships

Since the primary tenet of the theoretical perspective as previously discussed is that there must be a fit between the contextual factor and controls, it is necessary to explore the meaning attached to the concept of "fit". Venkatraman (1989, p. 438) points out that fit has been addressed simplistically with words closely associated with it including alignment, matching or congruence thereby "...treating fit as a general metaphor that has universal applicability". Venkatraman (1989) asserts strongly that the concept needs to be defined and elaborated clearly. The section below discusses the concept of "fit" illustrating how differences in the manner "fit" is defined alter our understanding of the underlying relationship between management controls and strategy having implications on theoretical advancements. It is therefore important to establish first how a study chooses to define "fit" and the subsequent

relationship (Venkatraman, 1989). Each of the concepts of fit pertains to different theoretical viewpoints that explain thecontrol-strategy relationship in a particularistic way negating the portrayed universalistic notion of fit (Venkatraman, 1989; Gerdin and Greve, 2004).

Gerdin and Greve (2004) identify distinct classifications of fit with different paradigmatic perspectives across two hierarchical levels. At the top level lies the differences between the Cartesian and Configurational forms of fit.A Cartesian form of fit fails to take a holistic approach to studying controls and contextual factors and hence have been criticised for the reductionist view defining the relationship between control and context (Chenhall, 2003; Gerdin and Greve, 2004). On the contrary to the Configurational approach to studying fit, the Cartesian focus implies that controls can be studied in isolation from one another and thus the perspective fails to consider any existing dependencies between each control mechanism (Gerdin and Greve, 2004). The package concept that has been promoted in this study is hence consistent with the Configurational concept of fit. The approach thus facilitates the identification of controls existing in particular combinations in different contextual environments.

Each of these categories or forms of fit could be further categorised as either related to a Contingency based or a Congruence form of fit (Fry and Schellenberg, 1984). The major point of distinction between the congruence and contingency-based views of fit lies in the fact that the latter form of fit is determined by an outcome variable (e.g. organisational performance). In the former category, the effect of control-context fit on an outcome variable is not assessed. It simply explains the underlying relationship between context and control without assessing the effectiveness of such a relationship on an outcome variable. In other words, the emphasis is on understanding whether certain contextual factor(s) inform(s) the control design and use. Additionally, it is important to elaborate on the contingency form of fit that is studied as different forms of contingent forms exist and thus have different theoretical implications on the control-contingent relationship (Venkatraman, 1989; Drazin and van de Ven, 1985; Gerdin and Greve, 2004). The moderating form of contingent fit defines fit through its interactive properties whereby the control and contingent factor interact having implications on the outcome variable. In other words, thefitis determinedby the joint effect of the control-context variables on an outcome variable (Venkatraman, 1989). On the other hand, the mediating form of fit promotes the significance of a mediating factor between the contextual variable and the outcome variable. It focuses on the role of the mediating control variable as a determinant of

the context-outcome variable and hence has a different theoretical underpinning to that of the moderating form of contingency fit (Venkatraman, 1989).

The underlying differences between assumptions explaining the congruence and contingency forms of fit are also interesting to note. The congruence form of fit is based on the assumption that only the "best performing organisations survive" (Gerdin and Greve, 2004, p. 305) based on the notion of "natural selection" (Drazin and van de Ven, 1985, p. 515) and hence remain for observation. The natural selection perspective argues fit as the consequence of an evolutionary adaptive process whereby controls and the contextual factor exist in a state of equilibrium over the long-term resulting in only the best performing organisations to exist. The managerial selection assumption that builds on the notion of natural selection has also been studied as a justifiable basis to explain the congruency form of fit (Drazin and van de Ven, 1985). The managerial selection perspective puts the emphasis on the management in its abilities to prescribe and implement control designs to suit the organisational contextual factors thereby imposing restrictions on the micro level organisational units either uniformly or situationally (Drazin and van de Ven, 1985). However, in the Contingency deliberation on fit, thevariability of fit is assumed to exist and hence observable (e.g. from a continuum of low performance to top performance) as this form of fit relies upon an outcome variable to assess how closely controls are aligned with the contextual variables. Close alignment may be associated with high performance (as an outcome variable) implying a higher fit between control and its situational factors. However, Gerdin and Greve (2004) caution against assuming that a congruence form of fit will also imply the existence of a contingent relationship between control and its contextual factors. They explain that a congruence fit does not necessarily imply high performance. Low performing firms due to differences in control-context alignments are observable implying that high congruent fit may not necessarily result in a high form of contingency fit. Hence distinctions need to be drawn and the observed fit depicted. The underlying assumptions could be argued to be a limitation of the congruence theory of fit as lower performing firms are also observable in practice (Gerdin and Greve, 2004).

5.1.2 Contingency Perspective Implications of Control-sustainability Relationship

The above discussion leads to the understanding that "contingency" theory perspective is, in essence, an umbrella term that is applied to collectively refer to diverse theoretical perspectives necessitating a clear depiction of how a study chooses to position itself in terms of the notion

of fit (Chenhall, 2003). Earliest proponents of contingency theory within the field of management control and sustainability strategy have been Epstein and Wisner (2005). Although the study was grounded within the overarching contingency theoretical framework, however, the study fell short of defining the concept of fit and the way the framework was applied. In other words, the study did not elaborate on how it depicts the relationship between control and sustainability strategy and the underlying assumptions informing the contingent relationship between controls and strategy.

5.1.3 Configurational-Congruent view of Control-sustainability Relationship

This study promotes the Configurational-Congruence view of sustainability control-strategy relationship. In this view, an organisation's approach to responsible and sustainable conduct is studied through the lens of how closely the strategic approach is reflected in a wider range of management controls traditionally found to exist in practice. This is because in order to understand how sustainable or responsible an organisation is, a mere focus on external aspects including stakeholder management and reporting on sustainability performance may not suffice. Even, having an explicit sustainability strategy may not indicate that an organisation is acting responsibly. Extant empirical support of the application of this view is found in several instances such as Durden (2008) said that having a strategy is insufficient by itself unless the strategic direction is promoted and actively supported by management controls. The broader focus on management controls is required based on the understanding that relying on a narrow range of controls may not suffice in the context of sustainability (e.g. Slack et al., 2015). For instance, Perego and Hartmann (2009) identify a Cartesian/Congruence type of fit existing between PMS and environmental strategy, but in doing so, fails to consider a holistic view of controls for sustainability management. In other words, internally, there needs to be a match between the strategic approach and the way management controls are holistically designed and used, consistent with the Configurational-Congruence view of fit. Therefore, the fundamental basis of linking strategy with controls, as has been established in this study, is that strategic objectives by themselves are insufficient unless supported by appropriately designed management controls (Porter, 1985).

This view develops a form of "contingency" theory that explains how a range of traditional management controls are designed and used would depend on the type of sustainability strategy pursued; such that different patterns of controls informed by different strategic approaches to

sustainability could be observed (Venkatraman, 1989). However, one limiting factor of the congruence view of control-sustainability strategy relationship relates to the basic assumptions underpinning the congruence viewpoint. Prior studies have provided mixed messages on the relationship between social and environmental performance on the one hand and financial performance on the other (Husted, 2000). Since one of the major assumptions related to the notion of natural selection where the best performing organisations can be observed, the lack of credible evidence supporting the relationship between non-financial and financial performance seriously limits the credibility of this assumption explaining the congruent view of fit in the field of sustainability (Husted, 2000). Moreover, the managerialist perspective could be argued to limit the assumption about the congruence view because it assumes management possessing sufficient knowledge to prescribe and implement effective control designs for controlling for sustainability. This was more so, arguably due to the wicked nature of sustainability issues and its unpredictability (Neugebauer et al., 2016). It will be however interesting to see if the managerialist view is supported by the empirical observations.

5.2 Conclusion

Theoretical perspectives on management controls for sustainability strategy have found limited attention within current scholarly pursuits exploring management controls for sustainability. Studies have remained descriptive and prescriptive and only a handful of studies were found to have explained the relationship between controls and sustainability strategy by explicitly relying on theoretical foundations (Epstein et al., 2015; Perego and Hartmann, 2009). This leaves ample scope for bringing in theoretical viewpoints to drive research within this field. The chapter explored in detail the different viewpoints of what constitutes "fit" and argued that a clear depiction needs to be made as different perspectives of fit provide different meanings. This study adopted the Configurational-Congruence fit of contingency theory to provide the explanatory basis for exploring controls and sustainability strategy (Venkatraman, 1989). The configurational view of fit was argued to be appropriate in the context of this study since the focus is on studying controls from the control package perspective. The configurational view supports the package perspective and provides the explanatory basis for the need to study multiple controls simultaneously to overcome the limitations espoused in a narrow view of controls. The adopted theoretical perspective explains why differences in approaches to management controls for sustainability are expected to exist in practice since controls are influenced by the context in which these exist. In other words, the adopted view supports the understanding that different companies are at different stages of sustainable development with

different strategic contexts in which controls operate. As such the prevalence of different strategic contexts will likely to lead onto differences in which multiple controls operate.

CHAPTER 6

METHODOLOGY

6.0 Introduction

The primary aims of the research is firstly, to explore how different strategic orientations (Benn et al., 2014) as identified in Chapter 3 shapes a broad range of management controls operating as part of the overall organisation management control structure (Malmi and Brown, 2008). Secondly, the research aims to develop a survey instrument to facilitate the measurement of controls for sustainability strategies from the package perspective (Malmi and Brown, 2008). At the backdrop of these aims, the primary goal of this chapter is to establish and explain the research methodology driving the empirical aspect of this study. To begin with, the chapter discusses the research paradigm denoting the philosphical viewpoint of the researcher to pursue the line of inquiry. This is followed by a discussion on the methodology that informs the knowledge generation process. Subsequently, the chapter focuses on the rationale informing the choice of industry and the population focus.

6.1 Research Paradigm: Pragmatic

The terms 'paradigm' (Mertens, 1998), 'worldview' (Creswell, 2009) or 'epistemology and ontology'(Crotty, 1998) are used interchangeably to denote the researcher's philosophical standpoint or the "basic set of beliefs that guide action" (Guba, 1990, p. 17). As Fossey et al.explain the terms describe the philosophical perspective that the researcher adopts to "generate knowledge" (2002, p. 718). The paradigms including positivist, pragmatic, critical and interpretative symbolise "different ways of looking at the world" and are associated with different means to study the topic in focus (Fossey *et al.,* 2002, p. 718). While the positivist paradigm likened to quantitative research is based on the assumption that there is an "objective reality" out there "independent of the researcher", the interpretive and critical paradigms that can be likened to qualitative research approaches, seek to understand and decipher the 'meanings' of human experiences, narratives and actions (Fossey *et al.,* 2002, p. 718).It is intrinsic to the researcher as explained by the statements above. That is the choice results from how the researcher chooses to see the world of "the absolute truth of knowledge" out there (Creswell, 2009, p. 7). Additionally, the researcher´s perspective and the overall line of inquiry will also shape the paradigm adopted for a given study.

The worldview adopted in this study is pragmatism that signifies the research issue or problem in hand and incorporates different approaches to understand better the nature of the problems thus identified or as Creswell puts it "to derive knowledge about the problem" (2009, p. 10). To elaborate further, the adopted worldview lays stress on the research problem while also relying on multiple methods rooted in diverse philosophical perspectives to enhance knowledge. Simply put, it is based on the need defined by the problem studied rather than influenced by any particular philosophical stance. In this particular context, relying on both interpretivist and positivist paradigms are necessities to seek an understanding of the research problems or lines of inquiries.

The main aims of the researchare to explore and discuss how multiple controls are designed and used in organisational settings as a consequence of following a specific strategic orientation. In other words, it is of interest to find out *how* controls are designed and used operating within a broader package of controls. In the literature review section, several controls were identified that have been found to support sustainability strategies. The other aim is to develop a survey instrument so data can be collected from a large sample and findings could be generalised. In other words, the goal is to both obtain and provide an in-depth understanding of how such controls are designed and used by exploring the phenomenon in detail in a limited number of organisational settings and to reach out to a more significant number of firms to determine what combinations work best for a given strategic context.

Given the aims of the research, the multiple or mixed methods have been adopted by drawing on the strengths of both qualitative as well as quantitative strategies facilitating the aforementioned lines of inquiries. By revisiting the remark on the choice of a particular paradigm been shaped by the line of inquiries, it is evident that assumptions from both interpretivist and positivist paradigms are required to generate knowledge on the type of problems the research aims to address. In other words, the choice of pragmatism is influenced by the research problem identified from the review of literature additionally highlighting the linear relationships between different elements required to undertake a typical research (literature review, choice of methods, data analysis tools etc.). Ultimately, the combination of methods facilitates a more in-depth exploration of research problems while generating greater insights relative to what could be derived using only one methodological approach (Creswell, 2009).

6.1.1 The Interpretivistand Positivist Views

The interpretivist paradigm emphasises understanding and making sense of the meanings intrinsic to the experience of the informants (Creswell, 2009). According to Berg, the interpretivist paradigm rooted in the qualitative form of a research design "refers to the meanings, concepts, definitions, metaphors, symbols and description of things" (2007, p. 3). As rightly pointed out by Tewksbury, the explanation above does not refer to the study of the 'amount' or 'quantity' of the topic under investigation which is the focus of quantitative research based on the scientific method paradigm (2009, p. 39). The positivist view on the other hand, is firmly rooted in an objective interpretation or analysis of facts and figures to derive at the reality.

Reliance on the strength of qualitative research approach is appropriate in this context as it allows the researcher to undertake "an inquiry process of understanding a social or human problem based on building a complex, holistic picture, formed with words, reporting detailed views of informants" (Creswell, 1994, p. 2). To elaborate, the qualitative approach is ideal as it permits the researcher to "seek a deeper truth" and obtain profound understanding of the issue or topic of focus that is consistent with the overall aims of the study that otherwise is not possible through quantitative methods (Greenhalgh and Taylor, 1997, p. 740). As stated previously, it allows the researcher to obtain rich and meaningful insights from a limited number of organisational settings and dive deep into the research problem in focus. To gather a deeper understanding of the choice of particular control mechanisms to control for a specific strategy that is not possible from the close-ended approach inherent in the quantitative approach of deductive knowledge generation (Creswell, 2009). Furthermore, the qualitative approach offers the opportunity to obtain novel insights not considered initially. In the same vein, pursuing a quantitative line of inquiry within the same study will allow generalisation of findings as reality will be shaped by the virtue of statistically derived evidence rather than created by social actors formed of words and experiences.

It is also necessary to acknowledge the major assumptions underlying theapproaches. As mentioned earlier, contrary to the positivist paradigm informing quantitative research, where the truth exists independent of the researcher, in qualitative research, thereality in essence is subjective shaped by the informants and hence can be multiple (Creswell, 1994). On the contrary, the positivist perspective views reality existing as one, independent of the researcher and promotes an objectified view of the reality. Dissimilar to the interpretivist view, the focus is not on obtaining a "holistic picture of a phenomenon formed with words", but to identify

how the studied phenomenon has "an existence that is independent of social actors" (Bryman and Bell, 2011, p. 21).

6.2 Mixed methods and Integration

Mixed methods research also referred to as integrative or blended research, has existed since the 1960s (Leech and Onwuegbuzie, 2009) and its application has spanned across diverse disciplinary areas (Leech and Onwuegbuzie, 2009; Grafton et al., 2011). Specifically, it has been applied extensively in management literature, but its adoption in accounting and sustainability research is scant, remaining an isolated phenomenon (Grafton et al., 2011). Broadly, mixed methods research could be defined as a form of research strategy incorporating both qualitative and quantitative methods/methodologies in the context of a single study informed by both the positivist and interpretivist paradigms of generating knowledge (Grafton et al., 2011; Leech and Onwuegbuzie, 2009). However, it should be noted that mixed methods research strategy continues to remain a gradually evolving term where a consensus is yet to be reached on how it could be defined (Johnson et al., 2007). Tashakkori and Creswell define the approach as "… research in which the investigator collects and analysesdata, integrates the findings and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry" (2007, p. 4).

Different criteria have been advanced in the literature to determine if a study qualifies as a mixed methods research. Grafton et al. (2011) focus on the aspect of the integration of qualitative and quantitative methods in a single study context and the level of "interdependence" between the methods to facilitate a line of enquiry. Bazeley (2009) and Yin (2006) provide examples of how such integrations might occur. These include results from one method informing the analysis of the other as well as using data from two different methods for joint analysis and inference. Grafton et al. (2011, p. 8 and 11) emphasise the need to "integrate findings" from both methods and deem it "as fundamental to the execution of research methods" (see also Bazeley, 2009). Leech and Onwuegbuzie (2009) place mixed methods on a continuum of monomethod and fully mixed methods research. The point of distinction lies in the instance where a research incorporates methods transcending a given methodological approach. According to Leech and Onwuegbuzie (2009, p. 267), "once a study combines quantitative and qualitative techniques to any degree, the study no longer can be viewed as utilising a mono-method design" and subsequently needs to be identified as either a partial or fully mixed methods design. Hence, a mixed methods study can be defined simply

for this research as one that is informed by multiple of research techniques situated within different methodological perspectives and where there is an explicit element of interdependencies amongst these techniques to drive the line of enquiry. Leech and Onwuegbuzie (2009) differentiate partial from a fully mixed design in terms of the integration of data from the two methodologies at the interpretation stage. In the former, the interdependencies may occur at different research phases including within research objectives that involve both explorations of a given phenomenon and followed by predictions; data gathering; at the analytical phase and/or at the interpretation phase.

A plethora of mixed methods typologies has also been extended in the literature (Creswell 2002; Maxwell and Loomis 2003; Onwuegbuzie and Johnson 2004; Johnson and Onwuegbuzie, 2004). For instance, Tashakkori and Teddlie (2003) identified more than thirty different mixed methods designs. Leech and Onwuegbuzie (2009) advanced eight different approaches to mixed methods design based on three criteria. The criteria include the level of mixing (that is full or partial), the time orientation (how the different methods are executed, either sequentially or simultaneously) as well as the emphasis given to each of the approaches (dominant or equal).

There are certain key characteristics of sequential exploratory design of mixed method design. It is a three-phase approach. The three phases are initial phase of qualitative data collection and analysis, a phase of quantitative data collection and analysis and a final phase of integration of data from the two earlier phases. Creswell and Plano Clark (2011) outline its core characteristics as " in a single research study, both qualitative and quantitative strands of data are collected and analyzed separately, and integrated – either concurrently or sequentially – to address the research question."

This study closely follows a fully mixed, sequential dominant status design whereby a qualitative line of enquiry informs the sequential development of a survey instrument while the former plays a dominant role in the overall research. In this study, the integration occurs at two different points. Firstly, the integration occurs at the point of generating the research questions and also at the stage of data analysis where the qualitative data informs the development of the survey instrument and items, i.e. the different variables that are included as part of the survey are informed by the analysis of the interview data and the themes (Grafton et al., 2011).The design adopted in this phase is also known as the sequential exploratory design which serves several purposes (Creswell et al., 2003). In relation to this study, the adoption of this design

firstly facilitates the exploration of the subject examined in detail and secondly allows the development and the testing of a survey instrument (Creswell, 1999 in Creswell et al., 2003). Others have noted that the design also facilitates the exploration of the studied phenomenon on a population so that findings can be generalised (Morse, 1991).

The two research objectives are one to explore and understand how different sustainability strategic pursuits impact the design and use of management control package framework and the other to develop an integrated management control package framework to understand corporate approach towards sustainability. From a methodological standpoint, the qualitative research part was carried out by doing several interviews undertaken by elite participants. The interviews provided rich insights on the role of management controls for specific strategies. Then, the quantitative research part was carried by designing the survey instrument. The interview findings along side core aspects from the literature provided the basis for developing this. These together helped in formulating the findings and the key contributions. The adopted framework remains a key contribution for future research. Moreover, to the best of knowledge, this is the only study that has brought in the package perspective to not only explore controls but also to understand how the strategic contexts might shape package constituents.

Debates have surfaced within the extant methodology literature on whether mixed methods research constitutes a mixing of different methods within a single study or whether it is based on a conflation of various methodological viewpoints (Denscombe, 2008; Tashakkori and Creswell, 2007). Two lines of argument prevail, one that denounces mixed methods as a separate strategy primarily based on the differences in underlying worldviews, the incompatibility thesis (Sale et al., 2002) and the pragmatic viewpoint. The former school of thought asserts since qualitative and quantitative methodologies are based on different paradigmatic assumptions of how reality is viewed and defined, it renders mixed methods strategies invalid as a form of enquiry driving research (Sale et al., 2002). The underlying basis of studying an area of interest or phenomenon within these two diverse methodologies entail different assumptions and means of generating knowledge and hence mixing methods is discouraged within the school of thought (Grafton et al., 2011; Sale et al., 2002). On the other hand, the pragmatist viewpoint upholds the possibilities of benefiting from theconvergence between two different methodologies (Brannen, 2005). Hence, the focus of the proponents of the pragmatist approach is to place importance to the research requirements where combining qualitative and quantitative methodologies becomes a matter of rational choice. The pragmatists view mixed methods as means of utilising the strengths of qualitative and

quantitative methods and countering the inherent weaknesses (Jick, 1979). For instance, qualitative approaches provide a rich and insightful account of the subject studied whereas quantitative methods allow for findings to be generalised. Given the exploratory nature of the study, the qualitative phase provides the opportunity to generate unexpected results that may help in generating unexplored themes within the area of management controls for sustainability and/or to obtain additional insights that may allow us to develop better perspectives of current literature. As such mixed methods have been credited for enhancing the richness of research findings and enhancing confidence in the study (Grafton et al., 2011). Brannen (2005) further identifies other benefits of conducting a mixed methods study including the ability of the researcher to learn a new skill (perhaps develop proficiency in a particular method without familiarity) and in the ability to identify novel aspects from the empirical examination not considered at the outset of the study. Although there are strengths of the pragmatist approach to generating knowledge by relying on multiple methods, nonetheless, such an approach has also received substantial criticism not discounting the practical constraints it places. For instance, following the approach is time intensive since data has to be collected extensively; both quantitative and qualitative data need to be analysed and discussed, warranting the need that the researcher is competent in both of these diverse approaches (Creswell, 2009). Mixed methods research is not merely about the application of two different methods located at two ends of the research design continuum (Newman and Benz, 1998). However, their utilisation simultaneously to enhance the strength of a research study transcending the benefits from conducting either a qualitative or a quantitative study (Creswell and Plano Clark, 2007). The relevance of undertaking a multiple methods study in this context is significant. Through the methods situated at the qualitative end of the continuum, the contextual significance of multiple forms of controls for different sustainability strategies is explored. It offers a richer understanding of why specific controls acting in combinations are designed and used for a specific strategy or if different control combinations exist for the same strategic orientation. It provides the underlying basis, through the provision of rich contextual information to unravel such occurrences in organisational settings.

The literature identifies some purposes that a mixed methods strategy serves (Grafton et al., 2011; Brannen, 2005). These include initiation where the first approach generates new research questions to be pursued by another method within the same study; complementarity whereby the data generated from both approaches are juxtaposed to create complementary understandings of the research problem; contradiction whereby the methods generate

conflicting outputs on the same underlying phenomenon leading to further investigations of a studied phenomenon; as well as extension or development which is the core emphasis in this study. The adopted sequential exploratory design supports the purpose the mixed methods approach serves in this study (Onwuegbuzie and Collins, 2007).

6.3 Industry Focus andPopulation Selection

The UK remains one of the top ten manufacturing industrial countries globally with the industry contributing to around 10% of Gross Value Added within the UK economy (Edie Insight, 2017). It also accounts for nearly half of UK exports while employing close to 3 million people (Edie Insight, 2017). However, given the ever-increasing demand due to population growth, the pressure is mounting on the industry to meet the ever-increasing demands amidst constraints in resource availability.Other challenges currently facing the industry are its resource intensive nature, utilising more resources relative to other sectors; the supply of energy at reasonable price and the availability of raw materials have already been cited as "critical" to the business (Edie Insight, 2017). In addition, the climate change has been stated to have reached a business-critical level and pose a significant challenge for the manufacturing businesses (Edie Insight, 2017). Additionally, with the rise in the number of UK legislations on climate change, waste management, supply chain management as well as global expectations (e.g. Paris Agreement 2015), the manufacturing industry faces an ever increasing need to manage legitimacy and adhere to a range of national and international legislations and norms.These important pieces of legislations include Climate Change Act (2008), policies including Clean Growth Plan, Decarbonisation and Energy Efficiency Roadmaps as well as Producer Responsibility Obligations (Edie Insight, 2017). Additionally, the UK government has released its strategic vision document (The Foresight Report) for the manufacturing industry for the year 2050 (Department for Business Innovation and Skills, 2013). One of the underlying aspects of the strategic vision document is sustainability. The document sets out three phases leading onto the year 2050 tagged as the era of sustainable manufacturing built on the premises of a circular economy within a resource constrained world. The focus is on making the industry resilient, with enhanced resource utilisation capacities. The focus is also on making the industry less prone to disruptions caused by climate change and its consequential effects on the global supply chain. The current phase until 2025 focusses on making the industry efficient in the manner it uses natural resources and low carbon technology leading onto the making of a sustainable manufacturing industry in the 2050s. Furthermore, the report highlights the need for increased process innovation and making products that are environmentally friendly. The

report envisages tougher environmental standards for products in the future and hence the need to make the industry adopt sustainable principles. The report also focuses on the need to champion thecascaded use of products so that used items could be steered away from landfill and simultaneously generate alternative revenue streams. Moreover, as highlighted in the report and elsewhere, the gradual growth in green consumerism provides an added impetus for the industry to incorporate sustainable principles in the design, production as well as how the products are reused and recycled. The Ethical Consumer market is estimated to be around £38 billion, registering 8.5% growth in 2015 (Watts, 2016). This creates anadditional stimulus for UK based manufacturing companies to focus on developing products that are sustainable. Considering the size of the UK manufacturing industry, its relative importance within the economy and its significance in the development of a circular economy, as well as the challenges it currently faces (resource constraints etc.) makes it a suitable industry to be studied. It will be interesting to explore how the businesses are currently managing their commitment towards sustainable manufacturing and how closely sustainability strategies pursued by these firms are reflected by the management controls that these companies employ. The following paragraphs lists the steps undertaken to identify the study population.

Firstly, FAME database was used to identify for-profit organisations operating within the UK manufacturing industry. By way of clarification, only companies belonging to the manufacturing SIC codes (codes 10-32excluding 18, 31) were selected to define the scope of what may constitute as those belonging to the manufacturing industry. Following the above criteria, the search returned 2292 companies. These were exported to a Microsoft Excel workbook. The following steps relate to how the data was further treated in the workbook. Figure 3 summarises the process.

The second and third steps were to ensure the companies identified were still in operation and had filed their accounts within the last three years (2013 cut of year). These steps reduced the database population to 2134 companies.

To ensure only those companies having sufficient resources to manage sustainability are included in the initial database, the fourth step ensured only medium, large and very large companies were included with definitions derived from the UK Government Department of Business, Innovation and Skills. For instance, a medium-sized company has been identified as those having a minimum annual turnover of £25 million and at least 250 employees

(Department for Business, Innovation and Skills, 2012). The database population was further reduced to 1876 companies.

The fifth step involved filtering in only those companies that are based in the UK resulting in the removal of 77 companies from the excel database. The final step was to ensure no further anomalies resulting out of FAME database search was present. This step saw the removal of further 99 companies as these companies belonged to other SIC codes not included in the study, i.e. not used in the definition of manufacturing industry. The final population consisted of 1700 companies. Below, the participant recruitment for both phases based on this population is explained.
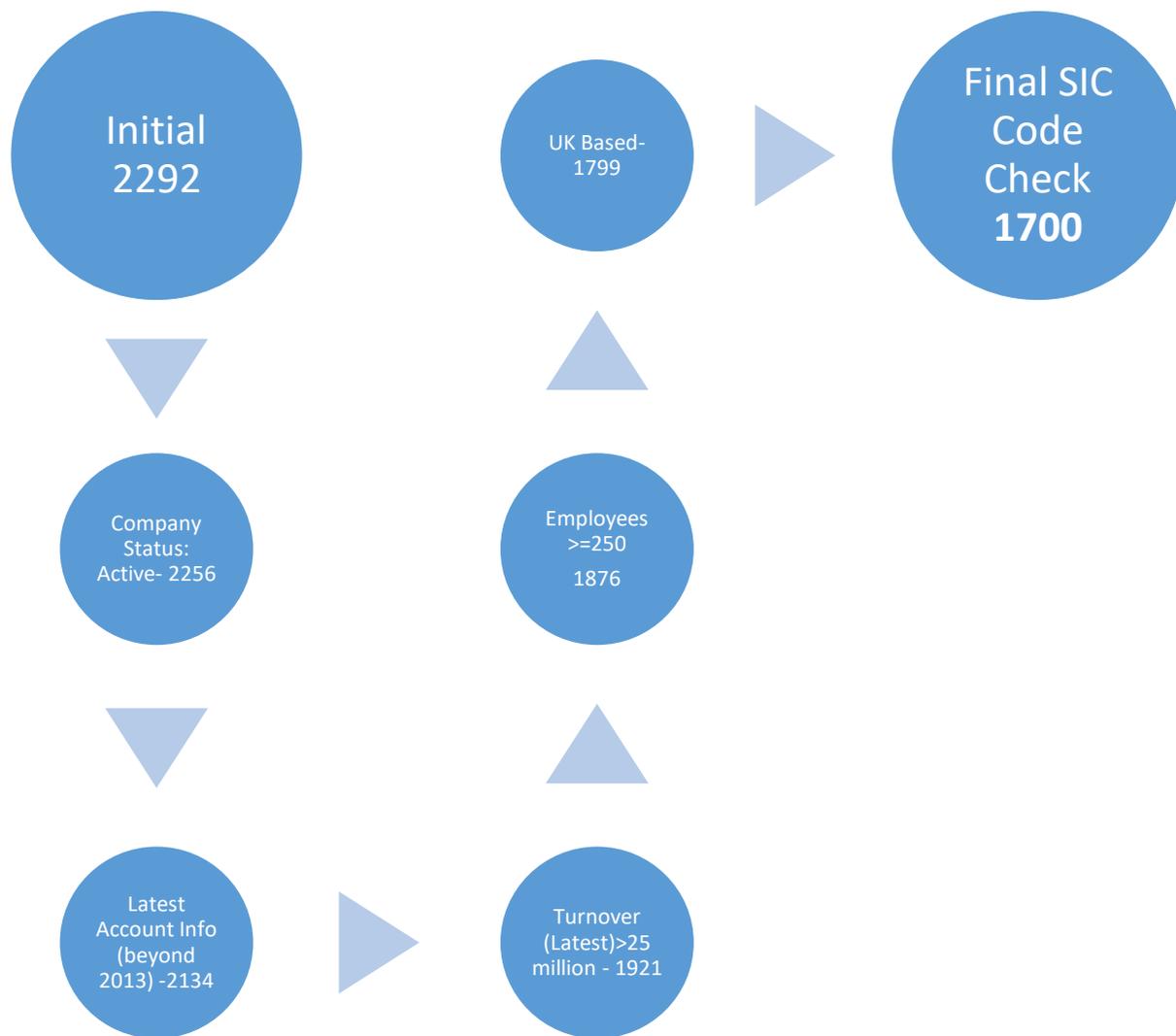
Figure 3: Final Population for Empirical Study

Considering the sequential design of the study, it should be noted that data will be collected over two phases. Chapter 7.0 documents the initial phase informed by the qualitative approach whereas Chapter 8.0 focuses on the subsequent quantitative phase. Each of these chapters deal with aspects including data collection, the approach to sampling based on the selected population, data analysis, findings as well as discussion.

6.4 Conclusion

The chapter served several purposes. Firstly, it established the paradigmatic perspective driving the empirical dimension of the research study (Cresswell, 2009). Secondly, it explained the rationale

behind the adoption of the mixed methods approach informed by the pragmatic school of thought to undertake the empirical research (Brannen, 2005). The study is informed by a mixed methods approach building on the strengths of both qualitative and quantitative approaches. A sequential dominant status design beginning qualitatively followed by the development and administration of a survey instrument informs the mixed methods strategy (Leech and Onwuegbuzie, 2009). Considering the research aims, the sequential design with an initial qualitative element was deemed appropriate as this approach will lead on to the development of the survey instrument as will be evident in Chapter 8 where interview findings inform the development of the survey instrument. A survey instrument measuring controls for sustainability strategies from the control package perspective was identified as a significant gap in the review of the literature and hence warranted its development. Given the sequential design, data will be collected over two phases. The next chapter (Chapter 7) focuses on phase 1 which relates to the qualitative part of the study whereas chapter 8 focuses on the subsequent phase informed by the quantitative approach.Finally, this chapter provided the motivations for selecting the manufacturing industry as the population focus.

CHAPTER 7

PHASE 1 -THE QUALITATIVE PHASE

7.0 Introduction

This chapter introduces the first phase of the two-phase mixed methods approach adopted in this research as discussed in chapter 6. The chapter is split into 3 broad sections. Section A discusses broadly the method adopted to generate qualitative data, the approach to forming the questions, as well as how participants were recruited. Moreover, the section explains the data analysis approach. Section B presents the findings emerging from the analysis of the qualitative data and Section C discusses the key findings in relation to theresearch question. This chapter addresses both aims informing this research.

Section A Data Collection and Analysis

7.1 Method Adopted

There are both primary methods that include direct observation and interviewing and secondary methods including historical analysis that may be applied to obtain data for qualitative research (Marshall and Rossman, 2006). This research largelyrelies on the primary method to obtain data, as the objective is to seek detailed first-hand accounts of the views of participants to answer the set research questions effectively. To achieve this aim, interviewing, defined as "a conversation with a purpose [with participants]", has been adopted as the main approach to collect data (Kahn and Cannell, 1957, p. 149). In the context of this study, the 'purpose' of the conversation is to obtain the different subjective perspectives from participants based on their experiences to answer the research question. As stated by King, "the goal of any qualitative research interview is, therefore, to see the research topic from the perspective of the interviewee and to understand how and why they have come to this particular perspective" (2004, p. 11). Consistent with the overall aim of the study, this data collection method is justified as it allows the researcher to "explore in-depth the experiences, motives, and opinions" of the participants, as understanding the subjective perspectives of participants is the objective (Rubin and Rubin, 2012, p. 3). It facilitates fulfilling both aims of the study. Firstly, by understanding and exploring how controls are shaped according to the strategic orientation and secondly, by relying on these insights to develop an informed survey instrument.

Interviews could take the form of semi-structured or unstructured, depending on the overall aim of research (Kvale, 1996). In the context of this study, since the central focus and aims of

the research are known to the researcher, semi-structured interviews are deemed appropriate as such interviews are used "to facilitate more focused exploration of a specific topic" with the use of an interview guide (Fossey *et al.*, 2002, p. 727).Furthermore, such an approach (semi-structured interview) not only facilitates comparison across different cases, meaning participants' perspectives can be compared and contrasted against one another, but the approach also offers the flexibility to make in-depth inquiry on specific areas that are of interest and emerging from the participant's responses (Hill *et al.*, 1997; DiCicco-Bloom and Crabtree, 2006).An interview guide was developed containing a series of questions to undertake the interview (Fossey et al., 2002). Section 7.2 discusses how the guide was developed.

Semi-structured interviews can be categorised into several ways including Focused Interview, Expert Interview and Semi-Standardised Interview (Flick, 2002). The type of semi-structured interview undertaken in this study closely resembles the Focused Interview approach developed by Merton and Kendall (1946) where the criterions *of specificity, range and depth and personal context* have been fulfilled(Flick, 2002, p. 75). Wherever appropriate the participant has been encouraged to provide examples to elaborate their point of views for an in-depth understanding of the participant's perspective *(specificity and depth)*. The interview guide has been designed to capture the different aspects relevant to answering the research question yet remaining flexible to allow the participant to introduce new relevant topics *(range)*, for instance, auditing.

King (2004) notes several ways in which interviews can be conducted including phone interviews, electronic interviews and the predominant face-to-face interviews. Owing to the practical constraints, phone interviews through Skype were conducted. As noted by Knox and Burkard (2009), there are comparable advantages of phone interviews as opposed to face-to-face interviews in that the response bias due to the presence of non-verbal data inherent in face-to-face interviews is reduced. Furthermore, phone interviews facilitate research through interviews with non-locals and aid in thebetter disclosure of information by participants due to the anonymity provided by conducting interviews over the phone. The most apparent advantage of conducting phone interviews over interviews by means of emails, is the swift nature of response that results in faster data collection if interviews are conducted over phone; as noted by Morgan and Symon, interviews over email may "last for some weeks until the topic is exhausted" (2004, p. 23).

Although the benefits of using interviews have been acknowledged previously, this approach has its limitations as well. As pointed out by Cassell and Symon (2004), the process is quite time-consuming and can be extremely challenging, especially for entry-level researchers. As will be evident from the section below, getting access to key informants can be quite challenging that might delay the data collection process. The outcome of the interview, i.e. the raw data gathered, can be of significant volume, which might cause a "feeling of data overload" for the researcher (King, 2004, p. 21). Apart from the above limitations, as with other direct methods of data collection in qualitative research, the success of interviews largely depends on the researcher.

7.1.1 Role of the Researcher

"The qualitative researcher is not an objective…neutral observer standing outside and above the text" (Bruner, 1993 in Lincoln and Denzin, 2000, p. 1049). As the statement implies the role of the researcher is significant in the qualitative aspect of the mixed methods research.There is a need to reflect on those aspects of the researcher's involvement with the study including the researcher's own background, interpersonal skills and other competencies, any preconceptions that are likely to have an impact on the outcome of the study (King, 2004) and how ethical issues are managed. Several scholars including Lock *et al.* (1987) and King (2004) have emphasised the need to establish the aforementioned aspects of the researcher's involvement and inform the reader appropriately.

7.1.1.1 Researcher Competence and Rapport Building

The researcher's occupation as a student and his ability to build rapport with potential participants early on, primarily through the exchange of emails and InMails ensured the full cooperation of recruited participants (Marshall and Rossman, 2006; Tewksbury, 2009). It follows Keats (2000) emphasis on certain cognitive factors to be considered for rapport building and as such these factors were closely followed. For instance, Keats emphasizes the need to explain to the potential participants of the research topic and its significance; establish the interviewer credentials; explain how the data is to be treated and how ethical issues including confidentiality will be ensured. According to Keats, the aforementioned forms the building blocks of establishing a "good relationship" (2000, p. 23). These factors were explained both in the Participant Information Sheet (PIS) and subsequently at the beginning of the interview where the research topic was once again briefly introduced. Additionally, it could be argued that the pre-availability of potential questions to be discussed during the interview made to participants also helped maintain the rapport and interpersonal relationship during the

interview. This is because if questions are deemed irrelevant by the participant, it may strain the relationship and eventually affect the quality of the responses and the interview (Keats, 2000).

Keats also discusses social factors that need to be considered for rapport building. The researcher was cautious of the "high status" of the interviewees and abided by the principle of treating them with "respect" specifically holding their knowledge to high regards and not "showing off" the researcher's own knowledge in the field (King, 2004, p. 19). Additionally, the researcher tried their best to keep personal assumptions and perceptions arising out of the conversations on a certain topic included in the guide, at bay to not also cause any offence.

The following statements demonstrates the researcher's competency in building rapport and relationship. One potential participant during the initial contact responded, "I am more than happy to assist you in your study" while another prospective participant stated, "I'd be happy to try and help with your research". Moreover, the research topic itself was a significant cause for motivating potential participants to take part in the study as evident from the statement "an interesting research" (potential participant during initial correspondence) while another participant pointed out to the significance of this research for benchmarking purposes.

7.1.1.2 Preconceptions

The researcher is familiar with the topic in general although they lack practical experience in sustainability management. It should be acknowledged that the researcher did not enter the study with any preconception or bias about the sustainability focus of any of the companies represented by the participants and the participants largely informed it. As noted by Seganti (2010) and Zinn (1979) preconception and subjectivity of the researchers can cause bias in the research process and outcome. The lack of bias, it is argued, allowed the researcher to present the findings and analysis as informed by the subjective perspectives of the participants within the context, and not by the "researcher's own pre-conception" (Fossey *et al.*, 2002, p. 728).

7.1.1.3 Ethical Issues

As pointed out by several scholars including Creswell (1994), paying attention to ethical issues including obtaining informed consent from participants, ensuring anonymity and confidentiality are key issues that the qualitative researcher needs to consider. The steps taken to safeguard the participants' interests are discussed later.

7.1.2Developing the Interview Guide

According to Keats (2000) designing questions is based partly on the creative competence of the researcher as well as their experience. The researcher typically followed the "very general open-ended questions" format designed to capture the participants' viewpoints broadly on a topic followed by "specific" open-ended questions that may be asked to seek further clarity on a particular topic (Keats, 2000, p. 35). An interview guide that typically consists of a series of questions related to the central focus or topicof the study was developed (Fossey *et al.*, 2002). The use of fully formed questions as opposed to mere headings indicating a topic of interest in the interview guide ensures that the interaction does not "slip...into that of ordinary conversation" by restricting the interaction to what is of primary importance and having the overall control of the interview (King, 2004, p. 16). In essence, the guide served as a checklist for the researcher ensuring each of the topics were addressed also to ensure conformity across the different interviews (see also Durden, 2008). The interview guide consisted of 4 Parts (appendix 7A).Part A sought to seek an understanding of the participants' role and specifically if they were involved in the implementation as well as the formulation of the sustainability strategies. As noted in King (2004), questions seeking factual information are set at the very beginning of the interview guide. Of major interest will be to learn about how closely the participant is situated in relation to sustainability strategy making and if the role includes responsibilities for both strategy formation and implementation (Klettner et al., 2014).

Part B was designed to capture the type of sustainability strategy pursued by the participants' organisations. It follows Snow and Hambrick (1980) recommendation of "self-typing" to "measure" strategy (e.g. Kober et al., 2003). The researcher developed four brief statements capturing the unique aspects of each of the sustainability phased (commencing from compliance) as identified in Benn et al. (2014) phase model. Statement A was based on compliance, whereas statement B focused on efficiency gain. Statements C and D were based on sustainability strategy contributing to the overall long-term competitive advantage in general. Specifically, the points of departure for statement D from statement C was based on whether the firm actively promotes sustainability principles outside of the company and engages in regenerative practices. As instructed by Snow and Hambrick (1980), each participant was requested to:

1. Consider competitors as a frame of reference
2. Consider the organisation as a whole as the unit of analysis in this study is the organisation

3. Consider the sustainability strategy focus generally over time

Subsequently, the participants were requested to choose a statement that closely matched the type of strategy pursued by their organisation. This was accompanied by examples providing evidence to support the statement. The statements are available in Appendix 7D.

Part C sought to understand how different controls were designed and used. Majority of the conversation was based on this section in each of the interviews. The questions in this part were based on the control package framework that was developed and adapted for sustainability management as discussed in chapter 4. It consisted of a number of questions based on each of the control mechanisms as identified within the framework. For each control aspect, the guide began with a generic question to capture insights into how, if at all, the control was mobilised to support the strategic orientation. If a certain aspect of the control was not covered already or if there was a need to pursue a specific aspect of the control further, additional follow-up questions wereasked asincluded in the guide. In other words, this part consisted of questions that related to each of the controls included in the package framework, beginning with a generic question followed by questions targeting specific aspects of the control under review (Keats, 2000). For instance, with reference to the cultural controls, a generic question capturing how the control mechanism, if at all, was mobilised was included in the guide followed by specific questions relating to the provision of training, internal communication as well as cultural value fit, amongst others. As an example, please consider the following:

Generic opening question for a specific control: How would you describe the role of organisational culture as means of controlling for sustainability with examples, if possible?

Specific follow-up question: How does sustainability influence staff selection, if at all?

Appropriate questions relating to specific topics (for instance, auditing) that were not considered initially, but emerged during an interview were incorporated in the interview guide for subsequent interviews to solicit participants' views on such topics (King, 2004).Part D sought to understand the rationale behind the need to design multiple controls and remained relatively brief.

Probing questions were also used to seek clarity and rationale, wherever relevant. The structure of the interview questions closely followed the "branching structure with complex feedback loops" whereby the researcher considered a multitude of dimensions from responses from each question and went back and forth to questions and responses included both within the same section and in other sections (Keats, 2000, p. 55). Given the inherent complexity of the

approach and the need to be able to recall responses and ascertain any synergies, the researcher made notes while undertaking the interviews.

It should be noted that the final interview guide was a result of incorporating learnings from a guide that was developed for the pilot interviews undertaken with Sustainability Directors from two companies. Firstly, to understand the sustainability strategy viewpoint, the interviewees were requested to describe their approach to sustainability. However, this approach did not offer a suitable frame of reference to understand the type of strategy pursued by the sample companies. Hence for the final interview guide, the "self typing" approach was selected as this has been used elsewhere in the literature to identify strategic orientations and it proved to be effective. Secondly, the final interview guide had questions pertaining to each control mechanism. However, for the pilot interview guide, selected few aspects of each control was included (see appendix 7B). This approach did not allow the researcher to collect in-depth insights on each control as well as capture any unique aspects. Additionally, the pilot interview with a limited focus on control aspects took relatively less time than expected leaving enough time for seeking comprehensive insights. Hence, the final interview guide was relatively more comprehensive allowing capturing different in-depth insights.

7.3 Phase 1 Sampling and Participant Recruitment

In qualitative research, sampling is undertaken by considering the need to gather rich information that has the potential to address the research questions (Kuzel, 1992). As Fossey *et al.* note it is "appropriateness and adequacy" that guide the researcher to adopt a particular sampling strategy or a combination of strategies (2002, p. 726; Morse and Field, 1995). 'Appropriateness' in this context, as explained by Fossey *et al.* is the necessity for the researcher to identify and recruit 'appropriate' participants "who can best inform the study" (2002, p. 726). 'Adequacy' refers to the sufficient gathering of the sources of information (that includes events and people) necessary to satisfactorily address the research question (Fossey *et al.*, 2002).

To "enhance the appropriateness of sampling and adequacy of information gathered", a combination of sampling strategies has been adopted in this study (Fossey *et al.,* 2002, p. 726). These include *purposeful or judgemental* sampling in addition to *snowball* sampling strategy (Marshall, 1996). Judgemental sampling technique was adopted to recruit 'appropriate' participants, in this context, those individuals who are directly responsible for managing

sustainability and also situated close to the structural order where sustainability strategy is shaped.

Noting the challenges associated with gaining access to key individuals who are in charge of sustainability as documented in several studies (e.g. Lock and Seele, 2016) that have attempted to interview those in positions of responsibility, the researcher was cautious and mindful of the possible difficulties in securing interviews. Hence, the snowballing technique was also followed. However, first, an overview of how the researcher attempted to generate interests from potential participants for the interview following the purposeful sampling technique is given below.

Previously, while undertaking a qualitative interview-based research for a Masters dissertation in 2012, the researcher had relied extensively on LinkedIn to identify participants from the Philippines. The reliance on LinkedIn was partly based on the differences in geographical locations with the researcher based in the United Kingdom. Nonetheless, the approach was effective and efficient, and the researcher successfully identified the individuals for interviews.

Based on experience and the success of "searching" for potential participants on LinkedIn, the same approach was undertaken for the current project. Professional networking site, LinkedIn, provided the means to firstly identify individuals in a sustainability management capacity in some of the companies from the population, i.e. based on firms operating within the manufacturing industry (as identified in the methodology chapter 6) and secondly to contact them via InMail. Please note, that monthly contact possibility with individuals not already a 1st degree connection through LinkedIn is limited to 30. Hence, emails were also sent out but only after the relevant individual was identified from LinkedIn search. Steps are explained below.

1. A LinkedIn premium account was purchased. The LinkedIn search function with location filters was used to identify the individual in charge of sustainability. To illustrate, keywords including CSR, responsibility and sustainability alongside the name of the company was entered in the LinkedIn search function box. The location filter was used to limit results within the UK. These yielded results with names, designations and a short snippet of responsibilities. This was only relevant where individuals already had a LinkedIn profile. Individuals with designations including Director of Sustainability/ CSR, CSR/Sustainability Lead, Global CSR/Sustainability Managers were identified from as many as 47 companies that were contacted initially. Their names along with the designations were saved in the workbook. 30 potential

participants were contacted via LinkedIn using the InMail function whereas the rest were contacted by email. A specimen contact document was prepared in advance. Although this step generated some interest with as many as eight potential participants responding to the request, only 3 of them agreed to participate. One of the participants was already a 1st degree connection and agreed to contribute to the research on the very first attempt made to get in touch with the purposes of recruitment. The emails of those identified from LinkedIn search were obtained using a Boolean search pattern on google as shown on YouTube video on generating leads (Social Talent, 2013).

2. Owing to the difficulties in recruiting participants experienced in step 1, a change in strategy followed. This time an advanced search was undertaken in LinkedIn with filters including location (United Kingdom), industry (only those closely related to manufacturing), seniority (management, senior management, Director and VP), profile (English language) and interests (expertise requests) were applied. Results were matched with those listed in the excel workbook containing the names of companies included in the population, and details about name and designation of the individuals as identified from the LinkedIn search were documented. Another similar search with identical filters but with an additional criterion of School (Nottingham Trent University and/or University of Nottingham) was undertaken to identify individuals with a common past educational institution. These elaborate search processes resulted in the identification of another 63 individuals from 63 different companies. Additionally, profiles were further scrutinised for any individuals having a Doctorate so that they can be addressed appropriately when contacted (Dr as opposed to Mr/Ms). Out of the 63 identified, 13 individuals were contacted via LinkedIn and the rest by email. This activity resulted in the recruitment of another 9 participants.

Noting the challenges in accessing individuals in a sustainability management capacity, snowballing approach was also undertaken. A local MP with whom the researcher has a working relationship introduced the latter to another potential organisation. However, this approach did not result in the recruitment of any participants. In total, 110 participants were invited to take part in the interview out of which 12 participated in the research study. The profiles of these participants are given below. Pseudonyms have been used to safeguard the identity of the participants and comply with research ethics protocols.

RD1 holds dual responsibilities as the Manufacturing as well as the Sustainability Director of a medium sized food manufacturing company having both domestic as well as international

markets. RD1 has successfully led the company in gaining numerous accolades for its innovative sustainability initiatives including those with the suppliers. RD1 is a member of the board and is responsible for both sustainability strategy formulation as well as implementation and has been in this role for around twelve years.

RD2 holds dual responsibilities as the Marketing as well as the Sustainability Director of a large manufacturing company specialising in construction materials. Additionally, RD2 is also a member of the Executive Committee and hence directly represents sustainability at the Executive level. RD2 has been in the capacity as the Sustainability Director over the past fifteen years. RD2's organisation is listed in FTSE 4 Good and FTSE250 indices.

RM3 has been leading the corporate responsibility team for over two years at a very large organisation operating within the beverage sector and listed in the Dow Jones Sustainability Index. The organisation is famous for a range of branded products across the globe. RM3's responsibilities include both sustainability strategy formulation as well as implementation across the group.

RL4 is the Corporate Responsibility Lead at a very large firm operating within the food manufacturing sector and has been in this capacity for over the past fifteen months. RL4 plays a key role in both strategy formulation as well as implementation and holds explicit responsibility within the EMEA region. The firm deals with multiple food products and has a global market.

RD5 assumes a dual role, as head of both Finance and Sustainability in a medium sized firm known for its sustainable innovations operating within the beverage manufacturing and hospitality industry. RD5 has been in these capacities for almost five years. Precisely, the firm is known for its branded beverages but also operates a small group of inns and an estate of shops. RD5 brings in a unique perspective given the dual role they undertake. Additionally, RD5 is also a member of the Executive Committee and hence directly represents sustainability at the Executive level.

RD6 is the Sustainability Director of a very large multinational company belonging to the manufacturing industry. The organisation is known for its innovative products based on the use of sustainable technologies and is listed in FTSE 100. RD6 is responsible for both strategy formulation and implementation and has been in this capacity for nearly nine years.

RM7 is a senior management level employee in charge of developing and implementing sustainability strategies across the group over the past two years. RM7's organisation is a very large manufacturing firm specialising in technology and engineering related products. RM7 is a key member of the top management committee headed by the CEO responsible for overseeing sustainability. RM7 is responsible for both strategy formulation and implementation.

RH8 leads Environmental Sustainability of a very large global company operating within the food manufacturing sector and listed in sustainability-oriented indexes. RH8 is responsible for both the development as well as the implementation of sustainability strategy in the UK and Ireland and has been in this role for over five years.

RGM9 is the Global Environmental Manager of a very large cooperative organisation operating within the food industry. The company is known for its innovative approaches to product development (including packaging). RGM9 has been in this capacity for almost five years and plays a key role in both strategy formulation as well as implementation.

RM10 is the Group Sustainability Manager of a large food manufacturing company whose products are much sought after within the UK market and have been recognised through numerous awards. RM is responsible for both strategy formulation and implementation and has been in this role for the past four years.

RD11holds dual roles as the Operations as well as the Sustainability Director of a large organisation known for its quality retail solutions globally. RD11 is responsible for both sustainability strategy formulation as well as implementation and has been in this role for almost six years.

RD12 is the Global Sustainability Director of a very large drinks production company and responsible for both strategy making and implementation. The organisation is known for its commitment to Sustainable Development Goals, and its products have a global market. The organisation has been recognised for its sustainability initiatives through numerous awards. RD12 has been in this capacity for almost three years.

7.3.1Pre-Interview Stage

Prior to the interviews, all participants received a PIS detailing how ethical issues arising out of the data collection process and subsequent outputs would be considered (see appendix 7C).The PIS explained how issues including anonymity and confidentiality would be maintained. Also, the information sheet indicated a time frame within which each interview

would generally be completed. A separate consent form was also provided. Furthermore, each participant also received a truncated version of the interview guide with indications of the questions (see appendix 7D).Indications of potential questions were also requested by a majority of the participants. The pre-availability of the questions meant, as some participants explained, aided in their understanding of the nature of research so that they are in an excellent position to contribute to the overall research efficiently. It ensured the participants knew the range of topics to be discussed including the need to provide examples where possible and were not over or under communicative (King, 2004). For instance, one participant upon initial acceptance stated in the correspondence "Can you give me some further details of the questions you'd like to cover? I can review them and see if I can constructively help out."

The average duration of the interviews was 62minutes, and the length of interviews ranged from30minutes to 82minutes. Please note only one interview lasted for 30 minutes due to the participant's time constraints but useful insights were nonetheless retrieved.

7.3.2 Data Recording and Transcribing

Before the interviews, the participants were provided with the PIS (please see appendix 7C) that included details of how the data will be captured and stored. All interviews were audio recorded using a digital voice recorder. A commercial organisation provided the necessary services for transcribing the interviews for subsequent analysis. A confidentiality agreement was also obtained from the service provider (please see appendix7E).

7.4 Data Analysis

7.4.1 Key Steps and Strategy

The interviews yielded large volumes of data for analysis. Qualitative data analysis is mostly an iterative process (Fossey *et al.,* 2002). Firstly, while conducting interviews, notes were taken by the researcher to gain an overall understanding of each participant's views. This approach allowed the researcher to identify any unique aspects not reflected in the literature review such that where relevant, those aspects were incorporated in the interview guide for subsequent interviews; for instance, the first interviewee mentioned about auditing as a post hoc control mechanism, and this was noted while conducting the interview. The keywords and emphasis put on key issues by each participant were also noted. For instance, some participants used the word "embedded" to summarise their approach to control design, and an emphasis was laid on cultural controls to promote sustainable behaviour.

Secondly, upon receipt of the transcribed interviews, the transcripts were read and re-read several times in conjunction with the notes to get a broader understanding of the topic. At this point, a CAQDAS package software, NVivo (version 11) was used to facilitate further data analysis. NVivo software offers numerous options to organise, arrange, explore and analyse data. For instance, "Memos" could be used to store information about a particular interview, thoughts, reflections or any other aspects arising out of an analytical process. The initial reflections from each of the transcripts were stored in individual memos created for each of the interview transcripts in NVivo (an example is given in appendix7F).

This was followed by a third step applying the coding procedure for a detailed analysis of the interview data (NVivo coding structure is given in appendix 7G). As defined by Rossman and Rallis, the procedure entails "organising the material into chunks or segments of text before bringing meaning to information" (1998, p. 171). Texts were segregated into predetermined code categories as well as using the emerging code category, whereby codes are developed "on the basis of emerging information", the coding procedure was undertaken (Creswell, 2009, p. 187).

The pre-determined codes were developed on the basis of Malmi and Brown (2008) control package framework adapted for sustainability management as presented and discussed in chapter 4 (see table 11). For instance, the predetermined code "training" belonging to the predetermined code family "Culture" was used to organise the participants' perspectives on how, if at all, training was provided to employees to help them develop their knowledge on organisational sustainability practices. Emerging code categories captured aspects that were unique and emerged solely from the interviews, for instance, the role of sustainability professionals under the pre-determined Structure and Design coding family. In total, there were 46 different codes used, listed broadly under 7 different Predetermined coding families as indicated in Table 11. There were 29 pre-determined codes and 17 emerging codes. The strength of this approach is that it allowed the researcher to analyse large volumes of interview data in an efficient way as well as compare and contrast each participant's views belonging to a particular code. It should be noted that some chunks of information were categorised as belonging to more than one coding family.

Culture as a Pre-determined Coding Family (9)

Pre-determined Sub-Codes (5)	Emerging Sub-Codes (4)

Mission, Vision and Values – firm's mission, vision and values driving sustainability internally

So from that, you know, the mission and the value mission vision values, that drops into strategy, you know the strategy is very, very clearly err, issues of sustainability entwined into it, whether it's product development, innovation, collaboration, target markets, what are we going to do for who, when, etc., and then into our business planning process, you know, the business plans for each, err, each, err, business unit has to then clearly deliver against the strategy and the vision and the values and err, sets of objectives that we have and the objectives…they are around issues of sustainability, whether it's environmental, social or economic.

(RD2)

Training– different training mechanisms that firms rely on to promote sustainability internally.

Training is another is another thing, because the subject matter for many employees is new, sure, they… you know, they are working in a manufacturing environment they might know about energy efficiency or minimising environmental waste or whatever, but you know they don't really understand what's a carbon footprint or what does climate change really mean. So there's something about education, training and awareness and again continuing to reinforce that.

(RD6)

Yes, absolutely yes. And it would be very embarrassing if a customer came in said, oh, I really like your electric van, doesn't it look wonderful, and the employee knows nothing about it. So that is part of the induction.

(RD5)

Internal Communication – range of communication mediums used to promote sustainability internally

You know, ensure that you communicate it frequently internally and externally. So that this isn't seen just as an initiative that's passing but it is something long-term that we continue to reinforce and drive.

(RD6)

Cognition – cultural controls promoting knowledge and understanding of sustainability internally.

It is very much so because we want people to understand why we're doing it and what the benefit is to the business. (RD1)

Because our policy that we won't use any packaging that isn't affecting wood and just talk about on my intranet, or my website, that doesn't drive behaviour, what drives behaviour is making sure that the organisation all understand what our commitment to the environment is and how that fits all the way through, what their behaviour needs to be… (RD2)

…we had a huge awareness campaign about that to begin with, saying err, so from a very, very beginning, of look, this, this is what sustainability is, this is why we need to do it, these are the five areas that we are working on and these are the business benefits that we expect to get out of that. So it was creating the, the awareness around these guys and showing not only was this good from a sustainability point of view but it was also going to really impact on the performance of their company from a cost and efficiency point.

(RD11)

Benefits – the benefits arising out of sustainable practices and cultural controls promote such knowledge

So I mentioned the Southweald Arts Festival which we sponsor, I've done a social return on investment on that and I've concluded that it makes a small positive benefit around about a 5% positive impact.

(RD5)

Err, and I tend to use the financial link err, slightly gratuitously perhaps. So on the one hand it's depending on my audience, I might talk about the environmental benefit. On the other if I've got a different audience I would be talking about the financial benefit and of course I would draw the two together.

(RD5)

Everybody is updated on our performance. It's very much an ongoing conversation. Err and in addition to that everybody gets a newsletter every month that talks again, a little bit about some of the projects we're doing, some of the achievements, some of the challenges that we've got.

(RD5)

...a lot of ours has been through education, that's how we got... yeah.

(RD1)

Fit and Staff Selection – recruiting employees based on how closely they fit a firm' sustainability outlook/values and knowledge of sustainability

Yeah, it certainly does, err, on the one hand sustainability, and I mean you know environmental or social as well as financial forms part of err the description of the business when a role is advertised for example. And we are looking for a fit, cultural fit is one of the most important things you want when you're recruiting. If someone turned up and was clearly very gung-ho and very commercial all they were after was, you know, maximising the profit for the company, then we'd probably say they wouldn't fit in terribly well...

(RD5)

Yes, definitely, absolutely. If they come in for example and they know nothing about our sustainability agenda they're highly unlikely to get a job. We ask them to say, have you noticed what…in what different ways XXXX value sustainability is. …we've actually sometimes appointed people on their awareness of XXXX over people who perhaps have got the technical qualifications with they didn't have. So it's more pointed for their attitude rather than their aptitude. So people's alignment with our values is almost, almost…it's as important as their technical qualifications I would say.

(RD1)

It is very much so because we want people to understand why we're doing it and what the benefit is to the business.

(RD1)

Empowerment – if employees are encouraged to share ideas, look for sustainability related opportunities

Yes, very much so, very much so. Err, we have a number of people who are keen to vent new ideas. (RD12)

Emphasis– emphasis given to cultural controls

Without the right the culture and the behaviours, KPIs are pointless. (Emphasis Added)

(RD2)

Events – range of events to promote sustainability internally	
And also, you know, feeding in external issues that might arise throughout a year. So you know in the last twelve months we've had Cop 21 Climate Change that met in Paris. Of course we need to build that into our ongoing strategy and communication internally and externally.	
(RD6)	

Strategic Planning as a Pre-determined Family Code (5)	
Pre-determined Sub-Codes (4)	**Emerging Sub-Codes (1)**
Target Setting – firm's approach to setting sustainability related targets	***Implementation*** – the rigor and method of planning implementation
Yeah, so, you know, for example, it is, you know, we want a 30% reduction in energy usage. That's something that we've set, and that's what we set in 2012 and done it. You know, so in the last, in the last two years our production output went up by 12% and our electricity usage went down by 11%.	*Err, this is, this is changing, err one because we decided… we started integrating as I said, into the strategic planning and risk register, so what we want to try to do is drive it through the processes that way so that it really becomes business looking at the material issue and looking… you know, and understanding their stakeholders so each of the individual business units and then to write it down into their processes.*
(RD11)	
Now as I said we're a very diverse business so it might be that we might have an overall group target for err, energy use if you like, or according to your definition, but it might be that the business team might have slightly different or more appropriate targets at their divisional planning…	*(RM7)*
(RM7)	
So, having some high level corporate goals, err, without specifically telling the sites and the divisions, this is how you are going to reduce your waste to landfill or this is going how you're going to reduce your electricity consumption…So we would set a high level policy, we would set a high level goal…we leave that to them because they know their site better than we do. They know what's possible and what they can do.	
(RD6)	
A third mechanism is setting transparent, visible goals…but setting some goals, even if you're not quite sure of how you're going to achieve them, you know, you set some aspirational goals which sets on a course of direction for the organisation and ensure that you report on that internally back to employees and externally in the annual report to all the stakeholders. So I think that is also important. So without goals or targets, plans that don't really have much meaning,	

you know, because you need to know what you're aiming at.

(RD6)

Yeah, so, you know, for example, it is, you know, we want a 30% reduction in energy usage. That's something that we've set, and that's what we set in 2012 and done it. You know, so in the last, in the last two years our production output went up by 12% and our electricity usage went down by 11%. (RD11)

One of the difficulties that we have is perhaps putting a five year target on something like sustainability because it is so fast moving. (RD5)

Institutional Context Analysis – firms undertaking the institutional context analysis (legal changes, mapping etc.)

...really it's just started to formally do an annual materiality assessment. So we'll go out to stakeholders, and ask what they think are the most important issues in the broadest sense of sustainability. ...some stakeholders might say, well you know at XXXX I think your health and safety performance is number one priority, there has to be, for a health and safety category information. So we have that process where we do an materiality assessment and that will highlight what those health issues are and therefore one thing we then do is align and check that they are being addressed either by our current strategy and the goals that we set or by policy that we have set. You know if there is a gap, if there's an issue that three or four or key stakeholder groups are saying is important then you know what, we haven't either got or goal or we don't have a policy internally on that, well that's something to address that sort of gap analysis. So that's a process that we use and we do have to make sure that's better, it's a fairly light weight process at the moment, we do want to strengthen that materiality process.

(RD6)

External Stakeholder Input – external stakeholder inputs used in planning process

Yeah, we do an awful lot of that err, arranging from government involvement right to, you know, customer engagement so... We try and find how we can maximise the value in a supply chain. We engage externally so for example, you know we're family members of Caultauld 2025, I don't know if you've

heard of that. Err, it's a, it's a grocery err agreement shall we say, that is looking to reduce food waste with all things associated (40:25) like energy…but our restaurant supply chain to try and find a better way of doing things. Leading in industry forums and err also, for example, engaged in, looking further ahead, and engaging with the European Commission. **(RGEM9)** ***Functional Input*** – different functional inputs used in planning process *Yeah, we do, we, you know… and that's bit related to the materiality assessment, you know when we are trialling, and as I said earlier, we're in the process of planning the sustainable business 2025 goal strategy. That has process has some time because I had to go through some internal due diligence and consultation to ask peoples' opinions. So that it is not, err me in a darken room writing the next plan and the set of goals, you know, we've taken account of what other people in the business think are important, and other functions they think are important and build a more rounded strategy and a set of goals that will address the issues for us.* (RD6) *Yeah, so for our customers, yes, we will, they will call us in, cos we're a large supplier into them, they will call us in and say, look we're looking to err make some changes or revise or CSR plan, sustainability plan, err what do you think? …we will engage with the, err, the local community groups and the local authority just to, you know, to check in with them to make sure that we're including all of the, the considerations they would expect.* **(RM10)**	

<div align="center">**Budgets as a Pre-determined Family Code (8)**</div>

Pre-determined Sub-Codes (4)	**Emerging Sub-Codes (4)**
Budgetary Allocation/Funds – the budgetary allocation process for sustainability related projects *Except, we have… we have a capital approach, if it capital with… there's a annual budget for capital investments so typically 12 million pounds a year on capital improvements and there is a… essentially a bidding war that happens every year and it's about return on investment.* (RD2) *No what happens is as part of the business planning process and the CAPEX process for every year the business units will actually say, okay, this is what we*	***Measuring Benefits*** – benefits accrued from capital investments in sustainability projects *Err, and I tend to use the financial link err, slightly gratuitously perhaps. So on the one hand it's depending on my audience, I might talk about the environmental benefit. On the other if I've got a different audience I would be talking about the financial benefit and of course I would draw the two together.* (RD5) *Err, quite a lot because one of the things we do, we actually measure the benefits that we get, the*

need to improve our, yeah, energy and water and waste and the environmental side, this is what we need to improve our performance in this respect, can I have the money please. And that then goes up through the various different filters… (RGEM9**)**

Functional/Employee Inputs – functional inputs on sustainability within the budgeting process

Yeah, we do, we, you know… and that's bit related to the materiality assessment, you know when we are trialling, and as I said earlier, we're in the process of planning the sustainable business 2025 goal strategy. That has process has some time because I had to go through some internal due diligence and consultation to ask peoples' opinions. So that it is not, err me in a darken room writing the next plan and the set of goals, you know, we've taken account of what other people in the business think are important, and other functions they think are important and build a more rounded strategy and a set of goals that will address the issues for us.

(RD6)

Revision and Flexibility – if budgets are revisable during the course of a financial year

Investment Plans – any capital expenditure plans for sustainability projects

…there'll be CAPEX requests that will have to go in and they have to be justification documents err included within the CAPEX in order to get that spend. Err and that relies on individuals within the business units to understand how to put that justification together and what are the key metrics that they need to sort of pull together in order to make sure that, that CAPEX is signed off…And that comes back to culture and also, you know, driving a strong strategy in terms of, well what is it that we're trying to achieve. So the budget aspect of it is not perfect…

(RM10)

bottom line savings that we're achieving from our sustainability program. And so clearly the site and divisions in the businesses can see the benefits of doing this type of work. You know sustainability programs shouldn't cost you money, they should save money. So in some ways it encourages them to say, well you know what, we should… if division A has done some work on capital investment and energy efficiency and sees a real benefit then maybe divisions C and D might say, well you know what this year we're going to learn from that good practice and we're going to the same this year. So it's very much… rather than being driven from the group level and a group budget, it's very much baked into the budgeting cycle for the divisions. (RD6)

Impact Analysis – analysis of the impact that investments in sustainability projects create

Err, quite a lot because one of the things we do, we actually measure the benefits that we get, the bottom line savings that we're achieving from our sustainability program. And so clearly the site and divisions in the businesses can see the benefits of doing this type of work. You know sustainability programs shouldn't cost you money, they should save money. So in some ways it encourages them to say, well you know what, we should… if division A has done some work on capital investment and energy efficiency and sees a real benefit then maybe divisions C and D might say, well you know what this year we're going to learn from that good practice and we're going to the same this year. So it's very much… rather than being driven from the group level and a group budget, it's very much baked into the budgeting cycle for the divisions. (RD6)

Unit Budgeting Cycle – inclusion of sustainability aspects at the unit level budgeting cycle

So it was pushing targets from the corporate level down into the business units and asking them to meet it. So they… then they have to put investment and the capital costs in place to meet that.

(RM7)

	Expectations– corporate level expectation that units will plan for sustainability as reflected in the budgets
	You've educated everybody, give us an idea of the paybacks and then I'd have to look at..
	(RD1)
	So it was pushing targets from the corporate level down into the business units and asking them to meet it. So they… then they have to put investment and the capital costs in place to meet that. *(RM7)*

Performance Measurement as a Pre-determined Family Code (7)

Pre-determined Sub-Codes (6)	Emerging Sub-Codes (1)
KPI Use in Internal Decision Making – use of sustainability KPIs for internal decision making rather than external reporting	***Internal KPI review frequency*** – the frequency at which sustainability KPIs are reviewed internally
Well that's to be the operational KPIs where a measurement is used to check whether we're delivering, so are we on target, and if we're not on target what do we do about it?	*So certainly it, goals, ensure you review those goals, set policy where appropriate and we understand there is a framework within that that are working and then on at least an annual basis request a report back from every single site in terms of performance data. So they know that that will be measured, so it's not that XXXX is asking for this and then we won't him from him for five years. Every year they need to provide a report on their performance. So at a group level we can aggregate all that information…*
(RD2)	
Advanced PMS – the level of PMS sophistication (e.g. financial quantification of sustainability KPIs)	
Err, and I tend to use the financial link err, slightly gratuitously perhaps. So on the one hand it's depending on my audience, I might talk about the environmental benefit. On the other if I've got a different audience I would be talking about the financial benefit and of course I would draw the two together.	*(RD6)*
(RD5)	
Yeah, it, what it is, it helps to engage people. So if we're using the example of zero waste to landfill, we have parts of our business globally where waste isn't an issue. Landfill waste isn't an issue. They operate in countries that have, you know, far more land than they do people and landfill isn't an issue to them. So they don't understand why we would continue to progress a zero waste to landfill target. For us to be able to demonstrate the cost benefits here is like Europe where clearly there's a, there's a tax benefit and a cost benefit, it suddenly, it engages them. If we talk to them about tons of waste they just dazed, they don't understand it, it means nothing to them so	

turning it back into a currency of money that they get makes it easier for us.

(RM3)

External Stakeholder Involvement – involvement of external stakeholders in the development of sustainability KPIs

Functional Inputs– involvement of functions in the development of sustainability KPIs

…so NAME the DP and myself will come up with the target or the KPIs that we want to use, that would get, you know, passed by the CRNS committee who would then approve it so that we could then go and use that in business.

(RM7)

That's a combination of my team and the business leaders. So whoever is running the business unit. (RD2)

BSC – adaptation of BSC to control for sustainability

Not at a group level, err, but one of our division is trialling at the moment where they look at a whole range of indicators on a single score card but not at a group level. (RD6)

I don't think we are quite at that stage so whilst we have the measures I think this year is the first year of being fully in the kind of game plan for success. Err, but we're heading in that direction, so I don't think we've fully got that yet, you know but that is the direction of travel.

(RL4)

Interactive Use – TMT personal engagement with sustainability performance/KPI review

…you know we get the chief exec really, he was the one who agreed and then wanted to stand up next to Ban Ki Moon of the UN and make the declaration around ending deforestation. So, yes absolutely, the oversight and the personal interests err … and safety of employees as well as then…I mentioned at the beginning around deforestation.

(RL4)

Yes, yes. We would potentially, we would monitor high level carbon, water and ethical compliance also bribery or anti-bribery I should say. So we would monitor some of that centrally and there will be somebody in charge of it.

(RD2)	
Rewards as a Pre-determined Family Code (5)	
Pre-determined Sub-Codes (3)	**Emerging Sub-Codes (2)**
Financial Rewards – individual rewards of a financial nature for sustainability related aspects	*Issues with Rewards* – reasons why rewards may not be effective for sustainability management
...it may be err that you know, the cost benefit case in the short term is not , is not that great but if you're thinking, we want to get people to think long term, you want to get people to think about where we need to be in five years' time, so by putting that sort of stuff into their performance incentives so they can keep this on track in terms of ongoing carbon reduction the balance, you know, month to month, year to year business pressures in their investment decisions, err you can achieve that but it keeps in front of mind when it's in their performance incentive system.	*...but again there's a small part of the bonus but we don't want to make it too big because we feel it is… it ought to be part of the job if you like.*
(RD12)	(RD1)
	Temporality – the short term use of financial rewards
	… you know the senior managers are… back in 2012, 2013 because we wanted the, you know, the big impact of that we tied it then to, to it then but it's not something that is, is, is ongoing from now on because it's operationally embedded…
Non-Financial Rewards – individual rewards of non-financial nature for sustainability related aspects	(RD11)
We have what we call third choice awards err and an employee can be nominated for the at any point through the year of which CR and sustainability is one element. But there's a, there's kind of a recognition and reward…they do take the time to call out employees through things like Yammer and the intranet, if someone has done a significant piece of work in this area…	
(RM3)	
Objectivity/Subjectivity – if individual rewards either financial or non-financial are based on subjective or objective measures (linked with sustainability KPIs)	
Yeah, basically err, there's an assessment made each year in terms of salary awards and bonus awards that says, you know, have we achieved that top line score card. … I've just been through this week with my line manager who said I've made a judgement on your personal contribution for this, that templates, and as a consequence I'm pleased to say that, you know, this proportion is being awarded to you, err, but it's discretion there as to has this person contributed and how have they done it. (RL4)	
Organisational Structure and Design as a Pre-determined Family Code (5)	
Pre-determined Sub-Codes (2)	**Emerging Sub-Codes (3)**

Inter-functional Dialogue/Collaboration – if functions collaborate, engage in dialogue process on sustainability

Yeah, so err, we have corporate responsibility council. And within that council we have representatives from each of our functions.

(RM3)

Structure Type – the structure type established to control sustainability

Yeah, so err, we have corporate responsibility council. And within that council we have representatives from each of our functions.

(RM3)

Matrix Structure – a type of structural arrangement with a dotted line relationship

Yes, so it's not a hierarchical structure at all, in fact the groups sustainability function in terms of the actual individuals who work for corporate HQ, there is only two of us. But I have a matrix structure so I have a dotted line report to each of those business regional sustainability heads. I have a dotted line connection to our ethics and compliance function, to our HR function, to our EHS function, to our corporate communications and investor relations function and so that's how we work as corporate function. Err, very much collaborative rather than hierarchical using a matrix type structure.

(RD6)

Informal Structure – a type of structural arrangement (e.g. green teams, champions, ambassadors)

And then I talked early Raj, about the five divisions that we have, well within each of those divisions we have a sustainability head. Now in some them that's a full time position, for others it's a part-time role where it is split amongst other responsibilities, so we have those divisional heads...we've also got sustainable champions at that individual site.

(RD6)

Role of Sustainability Professionals – the different roles internal sustainability professionals play

So in my team I have a small team of experts but I wouldn't describe as a sustainability department because sustainability is all throughout the organisation because, you know I see lot of, lot of organisations where they have department and you know, anything to do with sustainability give it to them. And it's totally divorced from the organisation and what happens within the organisation. So we have to have some experts but you want to keep them to a minimum and you want to have as much reaction in the places where it really happens.

(RD2)

So I have a very small team of experts so I have somebody, an expert on human rights, an ethical expert, a labour right expert an environment and

	there's two environmental guys, one on carbon and one on water and bio-diversity. But all of the… they're essential experts who advise the rest of the organisation how to implement, doing the business, so in Company Name we have 2500 employees, err, sixty sites in the UK, site in Belgium, office in China, office in the USA, office in Dubai and then supply agreements and partnerships in India.
	(RL4)

Governance Structure as a Pre-determined Family Code (7)

Pre-determined Sub-Codes (5)	**Emerging Sub-Codes (2)**
TMT Involvement – TMT engagement and involvement with sustainability aspects internally	***Assurance*** – different approaches to verify if actions/processes conform to requirements
...you know we get the chief exec really, he was the one who agreed and then wanted to stand up next to Ban Ki Moon of the UN and make the declaration around ending deforestation. So, yes absolutely, the oversight and the personal interests err … and safety of employees as well as then…I mentioned at the beginning around deforestation.	*We would have a more rigorous approach, so pre-audit check list, site visit by some REHS function, check against compliance and then if there are any deficiencies, particularly serious deficiencies again those outcomes are escalated to the GPCC.*
(RL4)	(RD6)
...that the board the chief executive's committee, as we'd call it, would sit below the board, err we now call the general management committee, but you know, each of our board members and our divisional directors and the CEO and the chief finance officer all buy in and own this strategy, you know, it's not Shaun Acton's strategy, sustainability, it's got to be owned at that high level. So I think that's one thing in terms of setting the tone and if you want to call that a control mechanism, you could describe it as such. So, develop the strategy, ensure it's owned by the senior managers and communication is another thing.	*Err we have a whole program of visits and checks and audits and all sorts of stuff in our supply chains to make sure there's no child labour, there's no bonded labour, they pay proper wages, health safety is there, discrimination etc., etc., so we would do checks where virtually every… in fact every area of our commitment*
	(RD2)
(RD6)	
Yeah, so err, we have corporate responsibility council. And within that council we have representatives from each of our functions.	***Temporality*** – the short term use of committees
(RM3)	*Err we have a governance model whereby err, one on the main board is the chair of our sustainability council. Originally it was our vice-chairman and err, shared with the chief executive, err, that's now moved with the retirement of one individual at the end of last year to another person in the executive board and err… so there's a sustainability council...*
Committees – committees supporting TMT in sustainability related decisions	(RL4)
...that the board the chief executive's committee, as we'd call it, would sit below the board, err we now call the general management committee, but you know, each of our board members and our divisional directors and the CEO and the chief finance officer all buy in and own this strategy, you know, it's not Shaun	

Acton's strategy, sustainability, it's got to be owned at that high level. So I think that's one thing in terms of setting the tone and if you want to call that a control mechanism, you could describe it as such. So, develop the strategy, ensure it's owned by the senior managers and communication is another thing.

(RD6)

Err we have a governance model whereby err, one on the main board is the chair of our sustainability council. Originally it was our vice-chairman and err, shared with the chief executive, err, that's now moved with the retirement of one individual at the end of last year to another person in the executive board and err… so there's a sustainability council…

(RL4)

Policies and Codes – policies and codes based on sustainability related aspects

So it's driven by standards, codes of practice, err and err, kind of compliance.

(RM10)

Okay, the, yeah, so these, the fact that there is a policy on line is almost to… the irrelevant bit, that's just ticking a box. So if I give you an example of Modern Day Slavery Act, so what happening with the Modern Day Slavery Act is there the policies of legally we have to have one, okay so that… we have to tick boxes. That's there, that's alright, its' on the home page, within that… after that then comes the real work. So then it's about err, making sure everybody knows about it, so that's through newsletter through the noticeboards..
(RD2)

Reporting Lines – the reporting structure

And in terms of our own function we report into the EVP of HR and Comms, that's where, that's where reporting function is... Oh, okay, so you've got the CEO, you've got the EVP of HR and Comms and then you've got (01:02:29) the VP of CRNS, so it's not a director who reports to CEO it's a reporting to the general executives. Yeah, so you've got the board, general executive, our EVC sits on the general executive, my boss reports to him there's also a CRNS committee which has some people who sit on the general executive as members including the CEO.

(RM7)

Reporting Frequency– how frequently sustainability related information get reported at the TMT level

...but we also do twice a year is we're reporting to our board of directors, into them, right at the beginning of the year, February time and again in the September, so (22:40) at both ends of the year around progress and again use that (22:46) approach. In between that we reported to our executive leadership team, usually on quarterly basis. At least twice a year but it becomes more regularly depending on what's happening within the business and areas that they particularly want to (23:01). So we have a link all the way across the organisational structure. Built up on a sustainability agenda. *(RM3)*	

Table 11: Codes

Step four was undertaken to ensure coding consistency across all the code categories and add/delete data from specific codes to ensure consistency and accuracy.

Step five was conducted to explore the codes in detail and identify significant findings arising out of the data analysis. For instance, the recognition of the roles sustainability professionals play as part of the structural establishment to control sustainability; the expectations that business units will need to consider sustainability related aspects during unit level budgeting cycle; emphasis on cultural aspect and relative de-emphasis on rewards for sustainability control. At this step, key quotations were identified to support the researcher´s subjective interpretations mentioned in the interview finding´s section.

Step six involved undertaking query based activities to further "interrogate" the data. Of particular importance is the generation of queries in NVivo to identify instances where chunks of data received multiple coding classifications. This aided in the identification of the "interdependencies" between different control types. In technical terms, the query facilitated the identification of data with coding "overlaps". For instance, the query aided in extracting out data that focused on both administrative and culture coding families.

Moreover, other steps were followed to ensure the validity and accuracy of findings emerging out of the analysis. Several scholars have emphasised the significance of discussing the measures undertaken to enable the reader to assess the quality and legitimacy of research (Flick, 2002; Fossey *et al.,* 2002; Creswell, 2009). According to Creswell, qualitative validity refers to the researcher checking for the "accuracy of findings by employing certain procedures" (Creswell, 2009, p. 190). It refers to the evaluation of research based on certain criteria

developed by Lincoln and Guba (1985) including *trustworthiness, credibility and authenticity.* Furthermore, the scholars have proposed several ways of checking against the above criteria. Creswell has recommended using multiple "validity strategies" to assess the accuracy of findings (2009, p. 191). In this study, 'member checks' and the inclusion of 'thick descriptions' in addition to informing the reader of the researcher's own bias as prescribed by Lincoln and Guba (1985) have been undertaken (see Creswell, 2009; Flick, 2002). To elaborate, to check the accuracy of findings, participants were provided with a brief discussion on key findings/themes emerging from the analysis of their interview data to ensure that their perspectives have been accurately captured. This procedure was undertaken with four interviewees.

Section C Interview Findings

This section presents the findings based on the interview data analysis. Firstly, the companies included in the sample are categorised according to the strategic orientation. This is followed by exploring the key aspects emerging out of the data analysis pertaining to individual controls. In other words, key findings related to each of the controls included within the control package framework are presented. Secondly, the focus is on exploring control interdependencies. In other words, key aspects arising out of the data analysis where overlapping codes involving two different control types, are presented. Thirdly, the rationale for involving a multiple of controls to manage sustainability is briefly explored. Finally, the section concludes by presenting a brief comparative analysis of two companies pursuing two different strategic orientations.

7.5 Strategic Orientation

As stated in the previous section (section A, 7.1.2), participants were requested to identify one statement that closely relates to the type of sustainability strategy currently pursued by their companies. Furthermore, the participants were requested to provide examples as evidence to support their choice. Based on this approach, two companies were identified as belonging to the efficiency phase, a further two companies were identified as transitioning towards the proactive phase, while two companies were currently pursuing a proactive phase and the rest of the companies were identified to have transcended the proactive phase. Table 12 lists the companies according to their strategic orientations and provides a snapshot of the participant and company profiles.

Efficiency Phase

RM10 and RM11 companies were identified as pursuing an efficiency based strategy. The following quotation provides evidence substantiating the choice of statement B. The focus in these companies is primarily on waste reduction and efficient use of resources.

Err, so I would say Statement B would probably be most representative in terms of our… where we are currently at. Yeah, so err, the two areas of focus that we're really driving at the moment is err, waste reduction and energy reduction. Err, we are looking at water as well, err, and we do have system in place, err, that is a monitoring and targeting system. Err, so it captures all of our utility meter readings, to give us the visibility of where we're consuming energy and water, err, and highlight the opportunities for reduction. Err, which will then drive efficiency in terms of all parameters that appropriately...

<div align="right">(RM10)</div>

Transitioning Towards Proactive Phase

RM3 and RM7 identified their companies as currently transitioning towards the proactive phase as evidenced below. Although these companies have identified themselves as a close fit to statement B, nonetheless, their statements indicate a current push towards the proactive phase, where the intent is on gaining long-term strategic advantage through sustainability initiatives. For instance, in RM7's organisation, the current focus is on integrating sustainability within their strategic planning processes at the unit level.

And it depends a little bit on how material our risks are where, whether they fit in B or C so I'll give you a very brief example. Things like raw materials sourcing, water stewardship, alcohol responsibility probably fit very much in C, but some things like waste, energy, carbon management probably still fit in B. So I think we straddle the two depending how material the issues are to us.

<div align="right">(RM3)</div>

Interviewer

Sure, so, err does that lead onto long term competitive advantage, so that makes a difference between B and C will be based whether generically sustainability strategy leads on to long term competitive advantage.

Err; I think we would like to think that, I don't know that we're there yet.

<div align="right">(RM3)</div>

...which I think fits with this statement B which is about, you know, how do we reduce our waste costs, waste, or don't the resource if you like how do we reduce our greenhouse gas emissions and you sell that into the business for efficiency gains, through market (20:42) and cost reduction and yes, so it's the career succession and talent. Being an engineering firm, some of the people (20:55) talent is something that everyone fairly aware of and (21:00) in place and we have an apprentice and graduate scheme, it's not an investment, err, so I would certainly say we, we are in Statement B so if I look at statement C, err, which is I guess is about really focusing down on competitive lodge, well I think that's where we aiming towards now, especially when I talk about working with the business units to integrate this with (21:27) strategic planning and risk register, it's about getting it more with it…

<div align="right">(RM7)</div>

Proactive Phase

RD6 and RGEM9 identified their companies as pursuing a proactive strategy. The focus of these companies is to gain long term advantage through product based innovation and as a standard setter within their sectors. These companies while pursuing operational efficiency based measures, also proactively explore the wider marketplace to identify opportunities for innovations in their product offerings. The following quotation provides evidence to substantiate their choice.

But fundamentally what COMPANY NAME does, and this is driver 2, is looks to outside world to say, where are the needs, you know, where are the big global drivers and where can we see market opportunities and an opportunity to use our science and technology to… to help the world. There's very much this shift from an inward focus of operational efficiency to… and you go on with that of course, you continue to drive operational efficiency, but really it's about… the real impact COMPANY NAME has is in its use of its products and services and technology by our customers.

(**RD6**)

Erm, you know we've reduced the weights of plastic in our milk bottle by 20% and at the same time we've also increased the amount of recycling as milk bottles are being collected, you know for households and then you reprocess it then you clean up the plastic and we put it back into the milk bottles so we've actually increased that 30% now so we've got, you know, we're effectively, we're really trying to follow the circular economy should we say and at the same time reduce the weight of the packaging as well. Err, radically. Err because these milk bottles are already light. Now that's three fold, one is it's got an environmental benefit, it's reducing our carbon footprint, yeah, err and it's, yeah, it's promoting reuse and recycling. Err but at the same time it's also a financial benefit.

(**RGEM9**).

Beyond Proactive

The rest of the six participants identified their companies to have transcended the proactive phase. These companies not only innovate products with sustainability credentials but collaborate with the constituents of the wider society (NGOs, universities) and educate their major stakeholder groups on sustainable business practices to create a wider impact on the society.

The following quotation illustrates the point.

Okay, when we say the main driver behind our, err, our work in sustainability is around err, sustainable, long term competitive advantage. So, you know, competitive (04:45) drive it but we're doing that in a way that then maximise or minimises our environmental, benefits to our environmental activities, minimises our labour and human right impacts, maximises the value we get from those activities and the same on governance. Err, And we.. you know that's been done. We've also moved to the stage where we've tackled the easy things, so, you know, within our own supply chain that's fine. With the bigger stuff it's a problem so we had partnerships with organisation like UNICEF. They've organised... and we do lots of collaborative work through the years, the Ethical Trade Initiative. We do collaboration in other parts of the supply chain. We do a lot of work through the UN Global Compact, certainly in terms of things like the Modern Day Slavery Act, and in sharing those… sharing information and creating databases, training organisations, training suppliers, I've got a team in LOCATION who are spending about half their time at the moment

teaching the supply chain about, you know, what a mature system of industrial relations looks like and what good human relations... you know what a good HR Team would look like. So if you think about some of the environmental impacts in LOCATION, we've already been planting trees at the end of quarry life.   So, you know, we are putting things back as we move forward.

(RD2)

...we're already working on the next generation of um, err, pollution prevention, so a whole a range of business, we've been working on... we use a lot of cement, plainly that's got an environmental impact, we're already in trial with no cement paving. So, you know, that's a long term... that a ten year program. So we're... that will be ready in the market when, when, when, you know when the environmental legislation is even harder on cement batteries.

(RD2)

Participant/Role	Company Sector	Company Size	Involved in Both Strategy Formulation and Implementation	Strategy Relates to Statement
RM10/Group Sustainability Manager	Food	Large (1,001-9,999)	Yes	Efficiency
RD11/Operations and Sustainability Director	Retail Solutions	Large	Yes	Efficiency
RM3/CSR Head	Beverages	Very Large(10,000+)	Yes	Transitioning towards Proactive
RM7/Senior Manager Sustainability	Technology and Engineering	Very Large	Yes	Transitioning towards Proactive
RD6/Sustainability Director	Technologies and Chemical	Very Large	Yes	Proactive
RGEM9/Global Environmental Manager	Food	Very Large	Yes	Proactive
RD1/Manufacturing and Sustainability Director	Food	Medium (250-1000)	Yes	Beyond Proactive
RD2/Marketing and Sustainability Director	Construction	Large	Yes	Beyond Proactive
RL4/CR Lead	Food	Very Large	Yes	Beyond Proactive
RD5/Finance and Sustainability Director	Beverage/Hospitality	Medium	Yes	Beyond Proactive
RH8/Environmental Sustainability Manager	Food	Very Large	Yes	Beyond Proactive
RD12/Global Sustainability Director	Alcoholic Beverages	Very Large	Yes	Beyond Proactive

Table 12: Company Profile and Strategic Orientation

7.6 Application of Control Package Framework – Key findings

Below, the key findings from each of the control elements of the package is presented.

7.6.1 Organisational Culture as a Control Mechanism

Culture as the Fundamental Mechanism

When asked to describe the role of organisational culture as means of controlling for sustainability, some participants referred it tobe "fundamental" and "essential" (RD2).

RD2 explains the underlying reason for referring to cultural systems as fundamental by deliberating on the limitations of operational KPIs pointing out to issues related to "non reporting". Culture provides the basis to help employees understand the rationale behind the KPIs. It is essentially the cultural systems that support a change in behaviour and operational KPIs are implemented to monitor progress. Essentially, KPIs are monitoring behaviour. Without the cultural underpinning, sole reliance on KPIs may lead to "bad behaviour" and/or "non-reporting". The following statement explains such a positioning.

*Err, the easy answer is, it's, it's fundamental or essential. **The challenge with KPIs, you know, this horrible phrase that what get measured gets done.** You know, if you look at the history with something like health and safety. So if you look at health and safety there's been lots of kind of campaigns on zero accidents. **And what, what tends to happen is, it can go one of two ways. It goes either goes that everybody focus on reducing accidents because the culture has moved to a safe place or it drives it into non-reporting. because if I don't report it, I've got a report on KPI that says zero accidents. So, it doesn't matter about the KPI if the culture isn't there, supported, because you just get bad behaviour.** So what you've got to drive is the behaviour to, a. understand why we have the KPI in the first place and then what it is about the KPI, what is the behaviour with the KPI is there to drive.*

(**RD2**)

Cognitive recognition

So, in essence, cultural systems promote the reasoning or the rationale explaining the need to be sustainable with an emphasis on the benefits accrued to the business as a consequence of undertaking responsible practices. Furthermore, such systems facilitate the recognition by employees about the relationship between business goals and sustainability objectives.

The cognitive recognition of the relationship between sustainability and core organisational objectives has been fundamental in those companies that are looking to derive long-term competitive benefits from sustainable practices.

It is very much so because we want people to understand why we're doing it and what the benefit is to the

business.

<div align="right">(**RD1**)</div>

*Because our policy that we won't use any packaging that isn't affecting wood and just talk about on my intranet, or my website, that doesn't drive behaviour, **what drives behaviour is making sure that the organisation all understands what our commitment to the environment is and how that fits all the way through, what their behaviour needs to be**…*

<div align="right">(**RD2**)</div>

Additionally, cognitive recognition also plays a key aspect in those companies that are at the efficiency phase or currently transitioning towards the proactive phase, as explained by the two statements below. It allows these firms to influence behavioural change and creating expectations around sustainable practice. As such these firms find the need to promote awareness of firm related sustainability objectives and its relationship with the overall corporate purpose and goals as means of progressing along the sustainability strategy continuum.

Now, an element of that is… and one that we've understood is we need to do more around employee engagement, around these issues. And it's something that I would consider is probably not be great at all in the past…we need to engage employees move in things like behavioural change and then we will have an inkling of what divisional values are for the company and building things with their ethics training and things like that. So I think… I think that's part of the evolution we've been talking about, that we… that we understand that, that we need to more so next year…if there's better understanding of what the company stands for in terms of environment and what the expectations are and you know, what their role is, that deal…

<div align="right">(**RM7**)</div>

…we had a huge awareness campaign about that to begin with, saying err, so from a very, very beginning, of look, this, this is what sustainability is, this is why we need to do it, these are the five areas that we are working on and these are the business benefits that we expect to get out of that. So it was creating the, the awareness around these guys and showing not only was this good from a sustainability point of view but it was also going to really impact on the performance of their company from a cost and efficiency point.

<div align="right">(**RD11**)</div>

In essence, companies are focusing on the cultural systems to ensure employees "understand" the rationale behind an approach, a measure or an objective and are emphasising on the importance of employees´ cognitive recognition to facilitate the move towards longer term competitive advantage.

A number of different mechanisms are employed by organisations to promote cognitive recognition as briefly discussed below.

Internal Communications

All participants mentioned about the importance attached to internal communications as means of "educating" employees; keeping employees across all levels updated with information on internal performance, policy and legislative changes, changes in competitive environment, stakeholder inputs as well as technological breakthroughs in relation to sustainability using a number of platforms including social media such as Yammer, monthly newsletters, talks from top management teams, specialised business unit talks, themed events as well as during committee meetings and email campaigns.

You know, ensure that you communicate it frequently internally and externally. So that this isn't seen just as an initiative that's passing but it is something long-term that we continue to reinforce and drive.

(**RD6**)

Everybody is updated on our performance. It's very much an ongoing conversation. Err and in addition to that everybody gets a newsletter every month that talks again, a little bit about some of the projects we're doing, some of the achievements, some of the challenges that we've got.

(**RD5**)

…a lot of ours has been through education, that's how we got… yeah.

(**RD1**)

And the rationale behind the emphasis on internal communication for a company either at the efficiency phase or aiming to move towards strategic proactivity phase is to build employee capacity through knowledge dissemination. A great of emphasis is given to internal communications to raise initial awareness of the corporate sustainability agenda.

*…**our communication scheme is making progress in terms of trying to get the message out there...And what we're trying to do is raise awareness and capacity within the business units so that ultimately in the long-term one of the things that you might want to talk a lot is… you know, ultimately what you're trying to do is work yourself out of a job.***

(**RM7**)

It is also interesting to note that most of the participants have mentioned about an element of their role around communications.

Training

Training is an integral part of developing the cognitive capabilities in employees through annual events as well as during inductions across all organisational levels. Companies continue to enforce the behavioural change by imparting training and educating its employees so that

they are able to understand sustainability related issues better and the values espoused around sustainability as pointed out by the below participants. Training features strongly across all companies irrespective of the strategic orientation.

Training is another is another thing, because the subject matter for many employees is new, sure, they… you know, they are working in a manufacturing environment they might know about energy efficiency or minimising environmental waste or whatever, but you know they don't really understand what's a carbon footprint or what does climate change really mean. So there's something about education, training and awareness and again continuing to reinforce that.

(**RD6**)

Yes, absolutely yes. And it would be very embarrassing if a customer came in said, oh, I really like your electric van, doesn't it look wonderful, and the employee knows nothing about it. So that is part of the induction.

(**RD5**)

so we understand that err employee, err, we need to engage employees move in things like behavioural change and then we will have an inkling of what divisional values are for the company and building things with their ethics training and things like that. Because there's pockets that we're well like ethic training and things like that and there's other things that we could do better on.

(**RM7**)

Specialised training courses are designed for graduates or for those in a particular division with provisions for further development for more experienced employees. Training provides the means to promote the cognitive recognition of employees on sustainability in general, its relationship with business or respective units (finance, manufacturing etc.) and also as individuals. It may empower individuals to think and implement solutions to issues related to sustainability.

And that's for all graduates that come in and it's normally within the first year or two years of joining the company. And we have a whole series of modules and training programs, of which, one is sustainability. So I, or one of my team will deliver a module on sustainability and we start off… **there are four parts to the module, you know, one is, what is the global picture on sustainable, (13:43), then part two is what does that mean in a business context in a general sense, how does sustainability translate to business and commerce. The third is then, how does it influence jobs in XXXX and then we start talking about our goals and our strategy and then finally, the fourth part of that, is what does it mean me and you as individuals.** *But very much (14:05) it's sustainability for them.* **So if they're coming in for a job in manufacturing what does sustainability mean for them in a manufacturing role, whereas if they're coming in for a finance role, what does it mean for me? How do I relate my day to day activities, so what's**

*the agenda? So GO JM. We also then **have further development training**, you know, for people who are, you know, five, eight, ten years in the company who are moving to a slightly more senior position or our business training core, in Asia, Europe and North America and again we would have a module, a slightly more advanced module on sustainability in that. And then, you know, reaching out to the broader community, we do a simple on-line e-learning course which takes no more than 15 minutes, produced with some video clips, multi-choice questions. This is a way of again, more as a ABC of sustainability.*

(**RD6**)

Additionally, some companies may rely on ad-hoc training courses to raise awareness of and educate employees of changes in institutional contexts for instance, the introduction of modern slavery act.

So, sometimes, sometimes there are some specifics so at the moment, on the slavery is obviously new legislation, there the training scheme, the training program that every employee who is exposed to those threats or those areas is going to go through. But in general we don't have a sustainability training, it's just embedded in everything we do. *Yeah. The specific aspects of sustainability are covered, so… anti-bribery, UK Bribery Act,* ***we have an on-going annual program where everybody that is identified in the risk area has to do the refreshing training.*** *Everybody who is identified in a risk area for health and safety does a certain… so we've got different levels of health and safety awareness training. So it is as needed.*

(**RD2**)

Cultural Fit

Values and cultural fit were identified as essential by those participants that look at sustainability for its competitive advantage over the long-term i.e. have reached the proactive phase. In addition to technical skills, these participants highlighted the emphasis on "attitude" or a certain level of sustainability awareness in general and awareness specific to the business. During interviews, candidates were also required to demonstrate their understanding of the triple bottom line, a thirst merely on the financial bottom-line or "commercial" success was not enough.

Yeah, it certainly does, err, on the one hand sustainability, and I mean you know environmental or social as well as financial forms part of err the description of the business when a role is advertised for example. *And we are looking for a fit, cultural fit is one of the most important things you want when you're recruiting.* ***If someone turned up and was clearly very gung-ho and very commercial all they were after was, you know, maximising the profit for the company, then we'd probably say they wouldn't fit in terribly well***…

(**RD5**)

*Yes, definitely, absolutely. If they come in for example and they know nothing about our sustainability agenda they're highly unlikely to get a job. We ask them to say, have you noticed what…in what different ways XXXX value sustainability is. …**we've actually sometimes appointed people on their awareness of XXXX over people who perhaps have got the technical qualifications with they didn't have. So it's more pointed for their attitude rather than their aptitude. So people's alignment with our values is almost, almost…it's as important as their technical qualifications I would say.***

<div align="right">(RD1)</div>

Employee Empowerment through Engagement

The emphasis on the above mechanisms may be explained as a requirement to empower employees to think along the lines of sustainability and to enable them to look out for opportunities.

Yes, very much so, very much so. Err, we have a number of people who are keen to vent new ideas.

<div align="right">(RD12)</div>

7.6.2 Planning as a Control Mechanism

Intertwined with Planning Function

Participants whose organisations have progressed onto at least the proactive phase, pointed out that sustainability is very much incorporated within the strategic planning dimensions of the organisation. The organisational values are incorporated within the strategic framework. These are then included in the business plans of different business units to drive different aspects of sustainability including product development and innovation. However, this is only prominent in organisations that have reached the proactive phase.

So from that, you know, the mission and the value mission vision values, that drops into strategy, you know the strategy is very, very clearly err, issues of sustainability entwined into it, whether it's product development, innovation, collaboration, target markets, what are we going to do for who, when, etc., and then into our business planning process, you know, the business plans for each, err, each, err, business unit has to then clearly deliver against the strategy and the vision and the values and err, sets of objectives that we have and the objectives…they are around issues of sustainability, whether it's environmental, social or economic.

<div align="right">(RD2)</div>

And for participant **RM7** whose organisation is currently at the efficiency phase and intending to move onto the proactive phase, also pointed out the current activities undertaken to couple sustainability with strategic planning. So as a sharp contrast with the proactive companies, it seems efficiency based firms remain at the initial stage where sustainability gradually gets incorporated within the planning function.

Err, this is, this is changing, err one because we decided… we started integrating as I said, into the strategic planning and risk register, so what we want to try to do is drive it through the processes that way so that it really becomes business looking at the material issue and looking… you know, and understanding their stakeholders so each of the individual business units and then to write it down into their processes.

<div align="right">(RM7)</div>

Institutional Context Analysis

As part of the planning functions, participants whose companies have reached at least the proactive phase mentioned about qualitative assessment methods that are applied on a regular basis including undertaking annual materiality assessment, issues gap analysis as well as stakeholder mapping. To better understand the institutional context, organisations reach out and interact directly with core stakeholder groups including those that are "challenging". These processes allow the organisations to ensure that their ongoing strategies and goals consider the external issues, and if not, establishing mitigating procedures. The feedback from such processes informs and strengthens the planning process.

*…really it's just started to formally do an **annual materiality assessment**. So we'll go out **to stakeholders, and ask what they think are the most important issues in the broadest sense of sustainability.** …some stakeholders might say, well you know at XXXX I think your health and safety performance is number one priority, there has to be, for a health and safety category information. So we have that process **where we do an materiality assessment and that will highlight what those health issues are and therefore one thing we then do is align and check that they are being addressed either by our current strategy and the goals that we set or by policy that we have set.** You know if there is a gap, if there's an issue that three or four or key stakeholder groups are saying is important then you know what, we haven't either got or goal or we don't have a **policy internally on that, well that's something to address that sort of gap analysis.** So that's a process that we use and we do have to make sure that's better, it's a fairly light weight process at the moment, we do want to strengthen that materiality process.*

<div align="right">(RD6)</div>

Additionally, the processes mentioned above are used for risk and reputation management. Financial impact assessment arising out of the institutional context analysis is undertaken to understand how, if at all, identified issues will have a financial implication or a (dis)reputational impact.

*So, so we'd use the planning process…a good example is after this call at four o'clock I'm on a global call looking at **some issues mapping, and stake holder mapping, err where we err, we have a process for issues management where we sit down on a regular basis and we will look at what issues we think are in the err, you know, short, medium and long-term, and the potential impact in dollars and in terms of reputation.***

<div align="right">(RL4)</div>

The planning function also facilitates the exploration of issues and their impact on the short, medium and long-term continuity of the business.

*Okay, so as part of our business planning process, **we, we do an update to all of the, err, the mega-trends and the micro-factors that will impact our business short, medium and long-term.** And so, you know, if it's climate change, global warming leading to climate change, leading to weather, leading to either product opportunity or a site risk. So that's updated every year and that then feeds into the business plan which either product development based or resilience based. okay, so, um, stakeholders have an input in there in terms of framing the challenges, so we go out to set of stakeholders, err, but err, whether it be somebody like, err Oxfam, on living wages, or GALICIE information and that frames the challenges we face.*

<div align="right">(RD2)</div>

Furthermore, the stakeholder mapping process informs stakeholder engagement and enables organisations to formulate engagement plans. Engagement is not seen as a static process but forms a natural part of "conversation" on an ongoing basis.

*Yes, **well part of the reason for doing that stakeholder mapping to go along side is so we can form our stakeholder engagement plans err, which in reality is they are ongoing you know, activities,** you know, I… the moment I joined XXXX I started talking to a range of NGOs to understand the issues, to forward thinking, to do a plan and then to go back out and talk to them. **So it's kind of… it's not like we'll talk to them once a year then we'll go away and get on with work for a year, you know there's an ongoing process.** Err, Greenpeace has been one of our most harshest critics publicly, err, **when we talk to them on a regular basis privately and, err, whilst they are no less challenging, err it bears a lot more resemblance to a normal and regular conversation about two people**, you know, working through some issues, err and what needs to be done, err then maybe it gets put in the press. **So, yeah there's an ongoing process.***

<div align="right">(RL4)</div>

And as a direct contrast, **RM7** firm transitioning towards the proactive phase, has only began to incorporate sustainability with the strategic planning and risk register function with a focus on identifying and assessing material issues.

*…**what I'm doing at the moment which is the project around integrating environmental issues unto the company strategic planning and risk register.***

<div align="right">(RM7)</div>

While the above findings reflect the intensity of the engagement process within those firms that have atleast reached the strategic proactivity phase, the engagement with stakeholders remain informal and less frequent in those pursuing an efficiency based approach towards sustainability.

*Err, yes in pockets, it's not, it's not, **it's not formalised like that**…we've kind of done it, rather than a formalised way, we've done it just as part of the conversation.*

<div align="right">(RM10)</div>

This becomes a formal and more frequent process in those companies that are transitioning towards the proactive phase while in those that have reached the proactive phase, the

engagement becomes a regular business. The following two quotations present a comparative perspective.

*Yeah, we do…we have a stakeholder engagement program which we would **probably run about every, sort of, nearly three to four years**. Err, the last one we ran was in 2014, we're actually planning to look at it again in 2017… as I say, not very regularly, once every sort of, you know maybe three years but very, err, open and two-way when we have that conversation…*

<div align="right">(RM3)</div>

In contrast,

*Yeah, we do an awful lot of that err, arranging from **government involvement** right to, you know, **customer engagement** so... We try and find how we can maximise the value in a **supply chain**. We engage externally so for example, you know we're family members of **Caultauld 2025**, I don't know if you've heard of that. Err, it's a, it's a grocery err agreement shall we say, that is looking to reduce food waste with all things associated (40:25) like energy…but our **restaurant supply chain** to try and find a better way of doing things. Leading in industry forums and err also, for example, engaged in, looking further ahead, and engaging with the **European Commission**.*

<div align="right">(RGEM9)</div>

Moreover, the focus on stakeholders remain limited to customers and legislative bodies in efficiency based firms, whereas RL4 quote indicated a wide range of stakeholders including NGOs.

*So, if you, if you look at the recycling business and if you were to take the, let's do a pest analysis, on it. So, so if, if, if you take that then there's absolutely impacted on the **changes in the legislation**.*

<div align="right">(RD11)</div>

*Yeah, so for our **customers**, yes, we will, they will call us in, cos we're a large supplier into them, they will call us in and say, look we're looking to err make some changes or revise or CSR plan, sustainability plan, err what do you think? …we will engage with the, err, the local community groups and the **local authority just to, you know**, to check in with them to make sure that we're including all of the, the considerations they would expect.*

<div align="right">(RM10)</div>

Multifunctional Input

And the planning is done in consultation with other functional areas. Attempts are made to understand their views, consider the perspectives of the different functional areas by soliciting inputs from different functional heads. This is done to ensure that the functional departments are not operating in isolation from one another, or in other words, the organisation is planning holistically to address issues that are significant to the different functional areas. This practice remains consistent across different organisations irrespective of the strategic orientation.

Yeah, we do, we, you know… and that's bit related to the materiality assessment, you know when we are **trialling, and as I said earlier, we're in the process of planning the sustainable business 2025 goal strategy. That has process has some time because I had to go through some internal due diligence and consultation to ask peoples' opinions.** *So that it is not, err me in a darken room writing the next plan and the set of goals, you know,* **we've taken account of what other people in the business think are important, and other functions they think are important and build a more rounded strategy and a set of goals that will address the issues for us.**

<div align="right">(RD6)</div>

Employees, it depends, you know, we don't go to the shop floor to engage in a business plan level but certainly the, **the leaders of each business unit will be involved in the business plan**, *their operational business plan.*

<div align="right">(RD2)</div>

Establishing Targets

RD6 quote corroborates with Malmi and Brown (2008) emphasis on translating strategy into targets or goals to set a direction for employees. Nearly all participants irrespective of the strategic orientation, mentioned about the role of targets in controlling for sustainability.

A third mechanism is setting transparent, visible goals…but setting some goals, even if you're not quite sure of how you're going to achieve them, you know, **you set some aspirational goals which sets on a course of direction for the organisation** *and ensure that you report on that internally back to employees and externally in the annual report to all the stakeholders. So I think that is also important. So without goals or targets, plans that don't really have much meaning, you know, because you need to know what you're aiming at.*

<div align="right">(RD6)</div>

Yeah, so, you know, for example, it is, you know, we want a 30% reduction in energy usage. That's something that we've set, and that's what we set in 2012 and done it. You know, so in the last, in the last two years our production output went up by 12% and our electricity usage went down by 11%.

<div align="right">(RD11)</div>

When it comes down to target setting, two different approaches seem to exist. **RD5** does not set any targets in terms of how much needs to be achieved by a certain time frame in sharp contrast to **RD1** and **RL4** whose organisations set long-term targets. Nonetheless, both these approaches set some direction for employees to follow.

For **RD5**, continuous improvement is part of their philosophy and the "goal" remains qualitative in nature.

We have, err, **we have sort of fundamental target or plan, which is continuous improvement and that is always our objective. We tend not to be too specific because of this sort of ballooning point,** *if I can use that phrase. No, we will simply say that our carbon emissions in the distribution division or our carbon in the retail division are this,* **this year and we expect that to be better next year. We will strive as best as we can.**

The reason given for such an approach is that it is difficult to formulate a long-term target as sustainability is "fast moving".

One of the difficulties that we have is perhaps putting a five year target on something like sustainability because it is so fast moving.

<div align="right">(RD5)</div>

In sharp contrast, long-term targets ranging manifold times longer targets are established by certain proactive organisations in the sample.

*So if you take carbon, so, no we have a, we have a, err a group wide carbon target which is got… **there's a 2020 target, 2030 target and a 2050 target.** Err, and then every site has a target for carbon reduction for the year.*

<div align="right">(RL4)</div>

Functional Autonomy

Although the plans are established at the corporate or organisational level in collaboration with both stakeholder and functional inputs, functions are however given the freedom to decide how they wish to operationalise the plans. This is because individual sites or functional areas are better informed of their site or function specific contexts and hence are able to effectively plan how to deliver the set organisational targets, goals or business plans.

Now as I said we're a very diverse business so it might be that we might have an overall group target for err, energy use if you like, or according to your definition, but it might be that the business team might have slightly different or more appropriate targets at their divisional planning…

<div align="right">(RM7)</div>

*So, having some high level corporate goals, err**, without specifically telling the sites and the divisions, this is how you are going to reduce your waste to landfill or this is going how you're going to reduce your electricity consumption** …So we would set a high level policy, we would set a high level goal…we leave that to them because **they know their site better than we do**. They know what's possible and what they can do.*

<div align="right">(RD6)</div>

7.6.3 Performance Measurement Systems as a Control Mechanism

Beyond External Reporting –KPIs for Internal Decision-making

The use of KPIs have transcended their application beyond external reporting to fulfil the informational needs of different external stakeholder groups and are used internally for different purposes. For instance, KPIs are used diagnostically to evaluate performance and take corrective measures, if necessary; understand whether set targets are achievable or need changing; for future planning as well as impact assessment and benchmarking purposes.

However, the advanced use of KPIs, i.e. for benchmarking and impact assessment are only observable from those firms that have reached at least the proactive phase.

*Well that's to be the operational KPIs where a measurement is used to check **whether we're delivering,** so are we on target, and if we're not on target what do we do about it?*

<div align="right">(RD2)</div>

*So certainly it, goals, ensure you review those goals, set policy where appropriate and we understand there is a framework within that that are working and then **on at least an annual basis request a report back from every single site in terms of performance data. So they know that that will be measured,** so it's not that XXXX is asking for this and then we won't him from him for five years. Every years they need to provide a report on their performance. So at a group level we can aggregate all that information…*

<div align="right">(RD6)</div>

KPI data also aids to understand the set targets better and to appraise if targets are achievable or need revising.

*We have a target for warden stewardship of water efficiency across our breweries, we know that we are struggling with that target, err, and so there's no like decision being made internally about **whether w eactually need to increase our long-term goal** in order to ramp up our annual KPIs, so they are addressed, they are considered, they are challenged.*

<div align="right">(RM3)</div>

KPI data is used to drive internal decision-making by benchmarking and ranking different divisions and sites according to their respective performance data to better understand issues and if the need be, intervene to investigate and improve divisional performance.

So clearly they're used to allow us to benchmark different divisions and different sites…*we do a manual Prieto analysis where we look **at the ranking of all of our sites, worldwide on energy, waste, water and other criteria,** So inter-divisionally no but within a division yes, because the technologies are the same and again that helps them **to see where the hotspots are in terms of, you know, well site A is for some reason consuming twice as much water as an equivalent B which is the same capacity, same operations, right we need to look at that, what's going on there?** So it is used in that sense.*

<div align="right">(RD6)</div>

Also, only one participant mentioned about having KPIs to measure social "impact".

*So I mentioned the Southweald Arts Festival which we sponsor, I've done a social return on investment on that and I've concluded that it makes a **small positive benefit around about a 5% positive impact**.*

<div align="right">(RD5)</div>

Financial Quantification

Whereas KPIs in the sample firms generate environmental and social performance data of a non-financial nature, interestingly, some KPIs related to sustainability are also financially quantified. This practice is prominent in most of the companies irrespective of the strategic

orientation. The financial quantification aids in raising awareness of the financial benefits of sustainable practices, promotes the significance of internal policies and contributes towards engaging employees internally.

Err, and I tend to use the financial link err, slightly gratuitously perhaps. So on the one hand it's depending on my audience, I might talk about the environmental benefit. **On the other if I've got a different audience I would be talking about the financial benefit** *and of course I would draw the two together.*

<div align="right">(RD5)</div>

Yeah, it, what it is, **it helps to engage people**. **So if we're using the example of zero waste to landfill, we have parts of our business globally where waste isn't an issue.** *Landfill waste isn't an issue. They operate in countries that have, you know, far more land than they do people and landfill isn't an issue to them.* **So they don't understand why we would continue to progress a zero waste to landfill target.** *For us to be* **able to demonstrate the cost benefits here is like Europe where clearly there's a, there's a tax benefit and a cost benefit, it suddenly, it engages them.** *If we talk to them about tons of waste they just dazed, they don't understand it,* **it means nothing to them so turning it back into a currency of money that they get makes it easier for us.**

<div align="right">(RM3)</div>

Functional Input in KPI Design

The interview data indicates a prominent practice of co-developing KPIs along with functional units or with those whose behaviour needs to be influenced in those companies that have reached at least the proactive stage. Whereas, in other companies, the process remains top down, for instance, in **RM7's** organisation, it is centrally designed and pushed down to the unit levels implying those who are yet to enter the proactive phase, may rely on more centralised approach to KPI design.

...so NAME the DP and myself will come up with the target or the KPIs that we want to use, that would get, you know, passed by the CRNS committee who would then approve it so that we could then go and use that in business.

<div align="right">(RM7)</div>

Contrastingly, in RD2, the functional inputs are solicited when developing the KPIs.

That's a combination of my team and the business leaders. So whoever is running the business unit.

<div align="right">(RD2)</div>

Interactive Use/KPI Review

There was strong evidence of the top management personally monitoring certain KPIs on a continuous basis. For instance, **RL4´s** organisation has publicly declared a commitment to end deforestation and hence the top management team monitors the bio-diversity based KPIs. In

other words, the KPIs that are amongst the high priority areas are personally monitored by TMT.

…you know we get the chief exec really, he was the one who agreed and then wanted to stand up next to Ban Ki Moon of the UN and make the declaration around ending deforestation. So, yes absolutely, the oversight and the personal interests err … and safety of employees as well as then…I mentioned at the beginning around deforestation.

<div align="right">(RL4)</div>

*Yes, yes. We would potentially, we would monitor **high level carbon, water and ethical compliance** also bribery or anti-bribery I should say. So we would monitor some of that centrally and there will be somebody in charge of it.*

<div align="right">(RD2)</div>

Formal reporting lines to TMT with varying frequencies as well as the departmental/functional/divisional review of sustainability KPIs are observable from the interview data. Some companies report their sustainability KPIs four times a year to TMT whereas in others a higher frequency of reporting is noticeable (e.g. twice annually). However, function or unit level review of KPIs are reportedly more frequent (e.g. monthly basis).

Balanced Score Card

Sample organisations who are currently transitioning towards the proactive phase or have reached proactive phase, report to either be trialling with the concept of BSC or moving towards implementing it organisational wide.

*Not at a group level, err, but **one of our division is trialling at the moment** where they look at a whole range of indicators on a single score card but not at a group level.*

<div align="right">(RD6)</div>

*I don't think we are quite at that stage so whilst we have the measures I think this year is the first year of being fully in the kind of game plan for success. **Err, but we're heading in that direction**, so I don't think we've fully got that yet, you know but that is the direction of travel.*

<div align="right">(RL4)</div>

7.6.4 Budgets as a Control Mechanism

When asked about budgets, majority of participants discussed about capital investment and paybacks pointing to the fact that there is no such thing as a CSR/Sustainability budget as also found by Arjaliès and Mundy (2013). Two distinctive approaches are observable. Firstly, where units are required to incorporate financial plans as part of their own budgeting cycle; and secondly, where units need to apply for capital investments from a group level fund.

Divisional Budgeting Cycle

So once the targets are set and each business unit receives the organisational plans, they need to factor in budgets within their own budgeting cycles on how they wish to proceed in order to meet the targets. This requires considerations for capital investments. The rationality behind such an approach was explained through the discourse on "benefits" accrued by the investing unit. So, the capital investment process is very much driven by the benefits to be received by divisions or units. Furthermore, **RD6** stated that it also allows other units or divisions to learn from the investment benefits accrued by other divisions encouraging them to invest in similar projects. The emphasis is thus on developing the competencies of business units so that they consider sustainability issues within their divisional budgeting cycle. Furthermore, it could be argued that the emphasis on divisional budgeting cycle also contributes towards the double loop learning process as divisions/units will be interacting about sustainability aspects (identifying areas that require capital investment) thereby also learning from the budgetary preparation process. In **RD5's** organisation that has reached proactive stage already, this is the approach undertaken where divisional/unit managers include extra-financial aspects during budgetary preparation. **RM7** also mentioned about this intent and hence their current focus is on developing the internal capabilities and capacities of divisions/units. So that in the future these units are able to prepare sustainability inclusive budgets.

*Yeah, what again we do actually, **we don't have a corporate budget for that.** What we say to each of the divisions and then within those division their business units and their site is to say, **during your normal budget planning cycle you need to be building in sufficient scope for projects that will deliver benefits to you.** That's very much left to them; the sustainability group doesn't set a corporate budget. It's part of the individual divisions planning and budget process.*

<div align="right">(RD6)</div>

*Err, quite a lot because one of the things we do, **we actually measure the benefits that we get, the bottom line savings that we're achieving from our sustainability program.** And so clearly the site and divisions in the businesses can see the benefits of doing this type of work. You know sustainability programs shouldn't cost you money, they should save money. **So in some ways it encourages them to say, well you know what, we should… if division A has done some work on capital investment and energy efficiency and sees a real benefit then maybe divisions C and D might say, well you know what this year we're going to learn from that good practice and we're going to the same this year. So it's very much… rather than being driven from the group level and a group budget, it's very much baked into the budgeting cycle for the divisions.***

<div align="right">(RD6)</div>

*So it was pushing targets from the corporate level down into the business units and asking them to meet it. So they… **then they have to put investment and the capital costs in place to meet that**.*

<div align="right">(RM7)</div>

*The interesting part is when you get out into the business, so, err, clearly I could have the budgeting process for the commercial divisions, and we integrate all of these divisions, **so if we wanted to make investment on our vehicle fleet for example, it's the fleet manager budget that would be affected, he will pay for that***

investment and invariably I'd get a question, well why am I paying for it and the answer is, well because you're going to get the benefit…

<div align="right">(RD5)</div>

Capital Investment through Group Budgets

Contrastingly, **RD2 and RGEM9** also mentioned about the capital investment approach but made through a capital investment fund where units have to bid for investing in sustainability projects.

*Except, we have… we have a capital approach, if it capital with… **there's a annual budget for capital investments so typically 12 million pounds a year on capital improvements and there is a… essentially a bidding war that happens every year and it's about return on investment.***

<div align="right">(RD2)</div>

No what happens is as part of the business planning process and the CAPEX process for every year the business units will actually say, okay, this is what we need to improve our, yeah, energy and water and waste and the environmental side, this is what we need to improve our performance in this respect, can I have the money please. And that then goes up through the various different filters…

<div align="right">(RGEM9)</div>

Contrastingly, whereas in the above companies, budgets are used to allocate funds for improving efficiency or to secure other long term benefits, however, in **RM10**'s firm (at efficiency phase), budgets for sustainability are allocated primarily for meeting regulatory requirements and for environmental communications. Interestingly, in **RD11**'s firm that is also at the efficiency phase, budgets play a significant role as a control mechanism. Capital investments in RD11 is for efficiency gains and to enhance recycling rather than solely for meeting compliance requirements. Additionally, due to the significance attached to budgets, an advanced budgetary feature in the form of itemised budgeting technique is observable. For instance, landfill costs are itemised to identify opportunities for recycling.

*Err, where there's those **regulatory aspects then there's budget allocated**. Err, but while there's, err, kind of ongoing **smaller projects for environmental communications**, err I suppose, improvements from an environmental perspective, it's less formalised in terms of budget.*

<div align="right">(RM10)</div>

*...we'll be setting budgets at things like how much, err, in our factor and production costs, our variable production overhead cost, **things like your landfill costs**, how **much your waste management is going to cost you. How much your… you are able to, to recycle a**nd we, you know, we capture, we capture those, they're a financial numbers on a, on a, on a regular basis… **Plan and Capex, so for example, you know, err we need to spend money on equipment, we need to spend money on improvements, then we have to have a budget for it. So that, that's in there and we have innovation fund of £100,000 Euros per annum to allow funding, sort of Plan M projects…***

<div align="right">(RD11)</div>

Paybacks

When it comes to capital investments for sustainability projects, the emphasis is on conducting cost benefit analysis to learn about the savings and the time needed to accrue the benefits. The emphasis is on short-term paybacks in majority of the companies interviewed. Projects with a short-term payback will be generally preferred over those requiring a longer-term period to accrue benefits.

Sadly we're quite a short-term business so if my cost benefit analysis comes it at five or seven or ten years the chance to start a program won't get implemented. ***So really we're looking at a two year payback buy, so if we can something, you know… depending what the program is we may be able to sit longer than that, but invariably it's a two year cycle***

(**RM3**)

Yeah, so I'd say… I'd say, err, ***up to five years would be prioritised over the ten years payback****.*

(**RM7**)

So somethings, something comes up, a brand new idea, pay back in less a year, we almost always guarantee, *you know unless something drastic happens, we can always, you know see they will all be done.*

(**RD1**)

It is mainly short I would say. Err it's probably 90% short in terms of *… it's just off the top of my head, it would be something like that.*

(**RD1**)

7.6.5 Rewards and Compensation as a Controlling Mechanism

It would seem from the participants´ perspectives that there is no one approach when it comes to rewards and compensation. Different viewpoints are observable and it also seems that the strategic orientation does not have an influence on the ways rewards are designed.

Different Perspectives on Rewards

Some companies regard financial rewards for sustainability as part of the total financial pay package as relatively less important whereas in others financial rewards have played a critical role in affecting change. For instance, **RD11** mentioned about the temporal importance of financial rewards when the company was first implementing its sustainability plans. Once the plans were implemented and the objectives achieved, financial rewards were no longer in place. In other words, rewards in this context, played a temporal role in instigating change.

*... you know the senior managers are... **back in 2012, 2013 because we wanted the, you know, the big impact of that we tied it then to**, to it then but it's **not something that is, is, is ongoing** from now on because it's operationally embedded...*

(**RD11**)

However, a contrasting perspective emerges from **RD12**, where the firm is deliberating on financially rewarding key decision-makers to compensate them for making decisions of a strategic, long term nature.

*...it may be err that you know, the cost benefit case in the short term is not , is not that great but if you're thinking, **we want to get people to think long term**, you want to get people to think about where we need to be in five years' time, **so by putting that sort of stuff into their performance incentives** so they can keep this on track in terms of ongoing carbon reduction the balance, you know, month to month, year to year business **pressures in their investment decisions**, err you can achieve that but **it keeps in front of mindwhen it's in their performance incentive system***

(**RD12**)

Whereas, others have mentioned about issues with financial rewards promoting wrong behaviour and hence it's limited importance as a controlling mechanism for sustainability.

For **RD1**, it is about embedding sustainability as part of a daily job routine, hence the final pay has a minor element of sustainability focus in it.

*...but again there's a small part of the bonus but we don't want to make it too big because we feel it is... it **ought to be part of the job if you like**.*

(**RD1**)

For **RD6** and **RD2**, financial rewards are not a significant part of the control framework because it may give rise to wrong behaviour as pointed out below. It stems from the understanding that to make sustainability work internally, controls should largely promote the right kind of behaviour, in some companies this tantamount to behavioural change championing sustainability through cultural controls and hence financial rewards are seen as not contributing to the positive behavioural change/reinforcement.

*...well there is historical evidence that says, if you link health safety performance, you know, directly as major contributor to bonus structures, **if you're not careful it will drive the wrong behaviour** because you might get people under reporting it as an incident.*

(**RD6**)

So it's enough that everybody sees I'd better not let if fall but it's not so financially important to somebody that they will fiddle the figures. So it's a signal more than the actual number.

Function and Level

Where such financial rewards are present, whether delivering sustainability objectives would have an impact on the final pay is very much dependant on the individual´s designation, level and role as pointed out by **RL4.** It was eminent from the interviews that in some organisations TMT namely the CEO's bonus is linked with the KPI that measures reputation as pointed out by **RM3**. Here reputation represents a holistic measure encompassing the sustainability context. It also appears that some companies reward employees at all levels, whilst in some it is limited to TMT and middle management where non-managerial employees are eligible for non-monetary rewards in the form of recognition and promotions. However, financial performance is the predominant determinant of total pay in all companies interviewed.

So, you know if you've got people working in sustainability then that's where their targets are. If you 've got the chief exec once of those 8 key areas is sustainability and he will be judged, as will his board, on whether they hit those measures, so it really depends on what role people are playing. If you have an accountant who has day-to-day nothing to do with any of our work on sustainability but they have a specialist role then sustainability will not feature in their work, their incentives or whatever.

(**RL4**)

*Oh yes, **It's very bias towards the financials** but each line manager I've just been through this week with my line manager who said I've made a judgement on your personal contribution for this, that templates, and as a consequence I'm pleased to say that, you know, this proportion is being awarded to you, err, but it's discretion there as to has this person contributed and how have they done it. Have they done in line with guiding principles as well.*

(**RL4**)

No, it's only middle and top management that would be rewarded in that way.

(**RD2**)

And then movement up to our CEO, CEOs, (39:37) of all then is an amalgamation of everyone else's, I guess performance metrics across the business but one of his err, one his KPIs is really about recognition of the business and reputation of the business, so we see our corporate responsibility and our sustainability initiative feeding into that reputation piece of the business.

(**RM3**)

RM3's organisation also rewards their executive team based on sustainability oriented external indexes including Dow Jones Sustainability Index in addition to efficiency based measures. However, managers directly responsible for sustainability projects are rewarded based on efficiency based measures, for instance, reduction of water identified as a key resource within the organisation.

Contrastingly, in **RD1**´s organisation there is a flat 2% bonus reserved for sustainability related performance irrespective of the level or designation. This bonus will be withheld if objectives are not met indicating the prevalence of negative rewards.

So we understand, we do have… they are extensive, if you like, there as well because, you know, the company bonus scheme. We reserve 2% of that, well 2% of the calculation for it up to sustainability performance.

(**RD1**)

Whereas **RD1** points out a financial reward reserved for sustainability performance across levels, **RM3** and **RGEM9** both pointed out that employees not in a specific sustainability role would only be eligible for non-financial rewards and recognition.

We have what we call third choice awards err and an employee can be nominated for the at any point through the year of which CR and sustainability is one element. But there's a, there's kind of a recognition and reward…they do take the time to call out employees through things like Yammer and the intranet, if someone has done a significant piece of work in this area…

(**RM3**)

Additionally, the interview data reveals that majority of firms in the sample offer rewards of a non-financial nature that includes awards, recognitions and promotions.

Subjectivity or Objectivity

When it comes to how the final financial pay based on sustainability performance is decided, subjective assessment is also evident in some firms, in addition to KPI linked objective assessment. For instance, when it comes to top management pay, KPIs are used to measure performance and pay decided accordingly. For other employees, a subjective approach is also observable as noted by RL4.

*Yeah, basically err, there's an assessment made each year in terms of salary awards and bonus awards that says, you know, have we achieved that top line score card. … I've just been through this week with my line manager who said I've **made a judgement on your personal contribution for this, that templates**, and as a consequence I'm pleased to say that, you know**, this proportion is being awarded to you**, err, but it's discretion there as to has this person contributed and how have they done it.* (**RL4**)

7.6.6 Organisational Design and Structure
Issues with Sustainability as a Separate Function

When it comes to organisational design, the interviewees expressed their concerns about the perceived de-couplement of sustainability function, assumed to take independent charge of disseminating sustainability within the organisation. The concerns of sustainability remaining divorced from the rest of the organisation if a "department" was enacted was reflected by a number of interviewees.

(Laughs), this is a bit of a problem actually. Err, when we appointed an environmental manager there was a very real risk, and I did see a few little examples of this, where people said, oh that's his problem now, I don't need to worry about it…So we fought quite hard to prevent that sort of abdication. And it is very clear that it is everybody's responsibility …

<div align="right">(RD5)</div>

The reason we wanted to do that was to integrate it right across the piece, so we don't want it being just one person's responsibility or one team. We want it across the entire business.

<div align="right">(RD1)</div>

Structural Arrangements

Four interviewees commented on the specific structural configuration for sustainability based on the matrix arrangement. The sustainability "team" or "department" as traditionally reflected in the extant literature is in fact very lean with a handful of employees. These professionals play a distinctive role as internal consultants bringing in their expertise and supporting different business units embed sustainability in their daily functioning and decision-making. So, in essence, these professionals help coordinate and offer advice on sustainability and the structural design helps promote a holistic implementation of sustainability rather than remaining the sole prerogative of a specific department or teams implementing sustainability.

*So in my team I have a small team of experts but I wouldn't describe as a sustainability department because sustainability is all throughout the organisation because, you know I see lot of, lot of organisations where they have department and you know, anything to do with sustainability give it to them. **And it's totally divorced from the organisation and what happens within the organisation. So we have to have some experts but you want to keep them to a minimum and you want to have as much reaction in the places where it really happens.***

<div align="right">(RD2)</div>

***So I have a very small team of experts** so I have somebody, **an expert on human rights, an ethical expert, a labour right expert an environment and there's two environmental guys, one on carbon and one on water and bio-diversity.** But all of the… they're essential experts who advise the rest of the organisation how to implement, doing the business, so in Company Name we have 2500 employees, err, sixty sites in the UK, site in Belgium, office in China, office in the USA, office in Dubai and then supply agreements and partnerships in India.*

<div align="right">(RL4)</div>

***Yes, so it's not a hierarchical structure at all, in fact the groups sustainability function in terms of the actual individuals who work for corporate HQ, there is only two of us**. But I have a matrix structure so I have a dotted line report to each of those business regional sustainability heads. I have a dotted line connection to our ethics and compliance function, to hour HR function, to our EHS function, to our corporate communications and investor relations function and so that's how we work as corporate function. Err, very **much collaborative rather than hierarchical using a matrix type structure**.*

<div align="right">(RD6)</div>

While some organisations follow a lean structure, where a group of experts work with other business units, in others, the "sustainability" function actually rests within two separate teams, one focussing on sustainability whilst the other on supply chain.

*...but we have **a sustainability team and a corporate responsibility team**. Our sustainability team are very supply chain focused looking at risks and issues and opportunities in the supply chain whether its energy, (05:18) carbon, raw materials sourcing etc., ...it's within our core... well there are two elements, so sustainability sits within the supply chain, corporate responsibility sits within corporate affairs.*

<div align="right">(RM3)</div>

So yes, we are working... going into the individual sectors and individual business team and help them do that. Cos I think in the longer term we hope to have built the capacity and capabilities for them to do that themselves.

<div align="right">(RM7)</div>

Some organisations also follow a network structure whereby other than having a small team at a central level, positions are created at the unit levels for sustainability function either as a standalone basis or through positions with multiple responsibilities. An informal structure in the form of champions/ambassadors are also observable as part of the network. In other words, the network consists of individuals placed at different units/sites/divisions either as full time members or as part of another job role. The network structure is prominent in those companies that have reached at least the proactive phase whereas in others a more departmental or functional approach is observable.

And then I talked early Raj, about the five divisions that we have, well within each of those divisions we have a sustainability head. Now in some them that's a full time position, for others it's a part-time role where it is split amongst other responsibilities, so we have those divisional heads...we've also got sustainable champions at that individual site.

<div align="right">(RD6)</div>

In contrast,

*So in terms of a structure, err, how it works for us within our business, **is I sit under our group technical function. So, err, and the group technical functional** will be in most food manufacturing business, is the err, the interface with the customer. ...what I'm trying to develop at the moment is a number of champions within the businesses..*

<div align="right">(RM10)</div>

A Note on Functional Integration

The organisational design plays an integrating role and facilitates the coordination between different organisational units and functions. The role of sustainability "function" deserves a special mention. It has been noted in literature sceptically and warnings given about

sustainability "departments or functions" distancing other functions away from the sustainability agenda. However, the data suggests strongly otherwise. The structure is said to provide the mechanisms to weave together different functional units and unite them under a common organisational wide sustainability agenda. For instance, the dotted line structure with reporting responsibilities stretching out to different functional units proves the efficacy of organisational structural design in promoting interlinkages between multiple functions to ensure sustainability is not undertaken in silos. Furthermore, the establishment of formal and informal roles for sustainability as noted earlier within different functional units help promote a holistic understanding of corporate aims and objectives for sustainability. Additionally, some interviewees mentioned about the establishment of sustainability or CSR councils that serve as an integrative device. These councils are composed of leaders of different organisational functions and issues, opportunities, threats and concerns are discussed and effective plans formulated. In other words, these councils provide the platform for a holistic discussion of sustainability where different functions have a voice to contribute towards sustainable development goals. What appears to be is that structural arrangements are designed in a way that actually promote holistic approach to sustainability negating concerns that sustainability is the prerogative of a solo function or department.

Yeah, so err, we have corporate responsibility council. And within that council we have representatives from each of our functions.

(**RM3**)

Moreover, the role played by sustainability professionals as part of the internal structural mechanism is significant. As the following quotations indicate, varying roles played by sustainability professionals are observable. Additionally, the certain role types are more prominent/significant in companies with different strategic orientations. For instance, typically, in those companies that have reached at least the proactive stage, the role could be described as that of an integrator, to ensure the different units are not operating in silos. While in those companies that are yet to reach the proactive phase, the role primarily focuses on disseminating knowledge across the organisation, ensure learning takes place as well as "handhold" units to help them understand material issues and opportunities.

For instance, within **RM7's** organisation, it was apparent that the sustainability professionals were in fact playing the role of facilitators of internal learning, acting as advisors and consultants. Given that the organisation is still at the efficiency stage transitioning towards the proactive level, the professionals were transferring knowledge of sustainability to develop the

internal knowledge base similar to **RM10's** organisation. In contrast, sustainability professionals in organisations that have reached the proactive stage, the role as functional integrators received more prominence. It could be argued that in the former case, the organisation was still developing its internal capabilities and hence the professionals played a prominent role but in a different capacity whereas in the latter case, the objective was to ensure functions do not operate in silos as the units arguably had reached a certain stage of internal competence to act on proactive sustainable principles.

*...obviously **devise mechanisms that we think each of the sectors and the business units should be using around, you know, the stakeholder mapping** and then working out what their issues are. So you know that materiality process if you like, so they can understand what their core issues are and then they can start, you know, managing them if they understand the risks, **being able to understand the opportunities** but just widening the processes, the systems isn't enough **because they don't necessarily have the expertise in the business or the knowledge around this area or the capacity**. So what we planned is that we've had to take that raw hands-on sort of approach if you like and **we've had to do an awful lot more of the initial research and materiality processes for them so that we can engage them on the issues and validate that with them and go through the prioritisation process with them. And what we're trying to do is raise awareness and capacity within the business units so that ultimately in the long-term one of the things that you might want to talk a lot is... Cos I think in the longer term we hope to have built the capacity and capabilities for them to do that themselves.**

(**RM7**)

Similarly, in **RM10's** organisation,

*Err so resources are limited and err **and we're on an education journey into us trying to up skill individuals err, and teams. But that takes time and the functional shift takes time as well...**quite a good way doing it actually, internal consultant I would say.*

(**RM10**)

In contrast, in **RL4's** organisation,

*...so my role is to look at corporate issues, **the common issues and to link them together**...play a role in **either joining the dots up, sharing best practice or facilitating them as a work group.***

7.6.7 Governance Mechanisms as a Controlling Mechanism

While structural arrangements are in place, governance mechanisms also play a key role in controlling for sustainability and as such formal governance structures are installed whereby the top tier team monitors sustainability activities. In some of the organisations interviewed, sustainability is represented only at the Executive Level or to the CEO team while in some others it is more comprehensive with representations at two top tier levels including the Board of Directors. In some organisations, it is the executive director who manages sustainability directly whilst in others it remains indirectly represented with the sustainability director or manager having no direct presence at the executive level.

Yes, yeah, so I'm on the exec and I represent sustainability as well as finance.

<div align="right">(**RD5**)</div>

Err we have a governance model whereby err, one on the main board is the chair of our sustainability council. Originally it was our vice-chairman and err, shared with the chief executive, err, that's now moved with the retirement of one individual at the end of last year to another person in the executive board and err… so there's a sustainability council…

<div align="right">(**RL4**)</div>

The Vice President of Corporate Responsibility and Sustainability (CRS) is responsible for developing and implementing our responsible and sustainable business strategy.

<div align="right">(**RM7**)</div>

Whereas in other executive level directors remain aware of sustainability aspects by leading sustainability councils.

We have two of our executive leadership team champion the council

<div align="right">(**RD6**)</div>

Reporting Responsibilities

The governance mechanisms do not end with the incorporation of formal structural arrangements either directly or indirectly at the top tier level. It is further enhanced by formal reporting responsibilities to either the board or the executive committee or both with notable differences in reporting frequencies.

And in terms of our own function we report into the EVP of HR and Comms, that's where, that's where reporting function is… Oh, okay, so you've got the CEO, you've got the EVP of HR and Comms and then you've got (01:02:29) the VP of CRNS, so it's not a director who reports to CEO it's a reporting to the general executives. Yeah, so you've got the board, general executive, our EVC sits on the general executive, my boss reports to him there's also a CRNS committee which has some people who sit on the general executive as members including the CEO.

<div align="right">(**RM7**)</div>

*…but we also do **twice a year is we're reporting to our board of directors**, into them, right at the beginning of the year, February time and again in the September, so (22:40) at both ends of the year around progress and again use that (22:46) approach. In between that we **reported to our executive leadership team**, usually **on quarterly basis**. At least twice a year but it becomes more regularly depending on what's happening within the business and areas that they particularly want to (23:01). So we have a link all the way across the organisational structure. Built up on a sustainability agenda.*

<div align="right">(**RM3**)</div>

The following diagrams illustrate the differences in structural and reporting responsibilities in different organisations. It could be argued although structural arrangements exist that link

sustainability with the top tier, yet variability could be observed in terms of structural designs and reporting arrangements.

In RD6 organisation:

Executive Level		Reporting to the CEO/Executive Committee
Intermediary Level		Sustainability Director working with a team of cross-functional representation
Unit Level		Sustainability Manager/Position in each division/unit

In RM7 organisation:

CSR Team	BoD	Lower Frequency
Supply Chain Team	Executive	Higher Frequency

In RM3 organisation:

HR and Communications — VP CSR → EVP HR and Communications → Executive Committee ← Sub Committee Chaired by CEO

Executive Committee → Board of Directors

Figure 4: Different Structural and Reporting Arrangements

Assurance

As part of the overall governance, mechanisms are built in[...]measures are adhered to and implemented. These include both pre-action review audits as well as post action audits. The objective is to ensure both unit level as well as supply chains comply with both externally imposed and internally implemented policies. In case of non-compliance, triggers are put in place to ensure matters are escalated to top management teams for swift actions.

We would have a more rigorous approach, so pre-audit check list, site visit by some REHS function, check against compliance and then if there are any deficiencies, particularly serious deficiencies again those outcomes are escalated to the GPCC.

(**RD6**)

*Err we have a whole program of visits and checks and audits and all sorts of stuff in **our supply chains** to make sure there's no child labour, there's no bonded labour, they pay proper wages, health safety is there, discrimination etc., etc., so we would do checks where virtually every… in fact every area of our commitment*

(**RD2**)

Whereas auditing suppliers and factories were prominent in those firms that are at the beyond proactive phase, there was either on group level auditing process in place or limited to health and safety and data audit at the efficiency based firms.

*Not from a group level at the moment, no. It's in, it's in my mind **that we need to be moving towards that, just to keep us on track and to maintain standards and consistency**. Err, but it's something that has to be discussed err delicately. **Because it requires resource, it would mean err costs associated with that which would fall on the sites and I'm very conscious I don't want to create cost for the business without adding value**. Err, so I just need to have the… **you know, a very strong argument as to why our audit would add value.***

(**RM10**)

Reliance on Policies and Codes

In terms of the reliance on policies and codes, RM10's firm currently attaches great deal of significance in policies driving the sustainability agenda, in sharp contrast to RD5's firm where policies do not play a key role in driving sustainability.

So it's driven by standards, codes of practice, err and err, kind of compliance.

(**RM10**)

In contrast,

No, and this is something that we debate frequently. Err, because a policy is very much something… it's very much a (01:10:54), it's something write down, put on the website for people to see and that's the end of it.

(**RD5**)

7.7 Control Interdependencies

The interview data also revealed interdependencies existing between different controls. For instance, cultural and PMS based controls complementing one another.

7.7.1 Culture and PMS - Complementarity

Earlier an example was provided to explain why cultural control has been described as fundamental and essential and **RD2** pointed towards the limitations of KPIs to drive behaviour.

RD2 emphasises on control interdependency between PMS and culture in that culture provides the anchoring point on which PMS can effectively function and bring about the necessary behavioural change or drive the behaviour required to meet the end objectives.

…you know, the government has this thing called the carbon reduction commitment, CRC. And that was designed specifically in its original sense, was designed to err, encourage and then reward companies for

reducing their carbon footprint, but actually turned into a tax. **So it didn't drive the behaviour at all.** *So there was a KPI that said you must year on year reduce your carbon.* **actually, all people did was offset it or move their production somewhere else, or find a different way of reporting.** *so instead of me manufacturing i'd just get somebody else to manufacture and therefore it's not in my supply, it's not in my business therefore it's not my carbon.* **so what, you know, the behaviour was divorced from the original kpi so whenever kpi has to have the behaviour well defined to merge together.**

In the above example, the focus of KPIs is on reporting rather than driving change or to come out with means of actually reducing carbon. The KPIs remain decoupled from the underlying objective of carbon reduction. Hence it is the cultural aspects that enable employees to focus on the task in hand and drive progress.

> *WITHOUT THE RIGHT THE CULTURE AND THE BEHAVIOURS, KPIS ARE POINTLESS. (EMPHASIS ADDED)*

> **(RD2)**

The following statement from **RD1** further reinforces the point made by **RD2**. Hence simply establishing KPIs without the cognitive recognition is not going to change behaviour.

...whether people were really, understood that the relationship of sustainability to business before. So we, we, established quite a number of key performance indicators for making measurements of utilities, gas and electricity and water on site. We had a number of err very visual displays to how much water was being used and how much was being saved etc., and we have for a number of years published this in an annual sustainability statement. And we. **It's alright doing that but one of the things we wanted to make sure, we know that you're not going to drive change if your team doesn't really understand why they're doing it for...**

Furthermore, in **RM7's** organisation where the initial focus has been on PMS driven controls for sustainability, the current emphasis however has been on driving cultural change and raise the internal awareness of sustainable practice. This provides further evidence, that cultural controls and PMS complement each other for the effective management of sustainable practices.

On the other hand, PMS also complements cultural systems by facilitating the employee cognitive recognition of the relevance of sustainability.

For instance, **RM3** mentioned about the use of financially quantified sustainability KPIs to demonstrate the relevance of zero landfill in sites/units located in countries where landfill was not deemed to be an issue and its relationship with the overall organisational goals.

7.7.2 Culture and Administrative Controls

Several administrative procedures are put in place to assess employee cognitive recognition of sustainability. Since organisations in the sample emphasise on cultural systems, they also rely on administrative controls to ensure employee behavioural congruence.

Employee Performance Appraisal

Internally, employee cognition of sustainability is assessed at the time of performance appraisal as evidenced by **RL4** statement. Other methods included internal surveys been sent out to employees to assess their understanding of sustainability and a reliance upon internal auditors to assess factory owners´ understanding of their commitments to sustainable and responsible practices.

*...**there is a random sample each year who then have to go through a, an assessment that checks the understanding of those principles and, you known, invites judgement on different scenarios to see whether it's truly understood** and then that's signed off again and that's kept on the employee file. So that's ongoing live process.*

(**RL4**)

External Verification

Some of the sample organisations have also relied on external verification processes to ensure that employees really understand what sustainability is and why it is important to the organisation and to ensure that their cultural controls are delivering the necessary objectives.

*Very much so, they err, when we…. Interesting, when we've had, err, **other audits, like the CEDEX order**, C E D E X, I don't know if you've come that, the Client Ethical Data Exchange, one of the things they have promised is particularly is on our sustainability agenda, **they have said, you know really, they say to us that there is a tremendous alignment between the management view and they've conducted interviews with up to 40% of our staff, you know they pick them, they talk to them completely anonymously,** we've no idea, you know, what is spoken about and we just take that granted and they say no you really shouldn't, you know, this is not something that we see normally. Err, lots of companies, there is not an alignment, you know, the staff have got lots of questions, they don't understand it. So we've been really pleased with that sort of thing. **Err, because I think it says lots of that, that's working internally.***

(**RD1**)

Policy, Communication and Training

Cultural controls also complement administrative procedures of policy enactment.

Although policies have been regarded as means "to formalise what we do" by **RD2,** nonetheless companies rely extensively on internal communications to raise awareness of such policies or in other words to raise the cultural awareness of the restrictions or boundaries that are put in place.

*Okay, the, yeah, so these, the fact that there is a policy on line is almost to… **the irrelevant bit, that's just ticking a box.** So if I give you an example of Modern Day Slavery Act, so what happening with the Modern Day Slavery Act is there the policies of legally we have to have one, okay so that… we have to tick boxes. That's there, that's alright, its' on the home page, within that… **after that then comes the real work. So then it's about err, making sure everybody knows about it, so that's through newsletter** through the noticeboards...*

7.7.3 Culture and Budget

Creating Expectations

The statement below highlights the fact that where the cultural control has already established the cognitive underpinning, it might give rise to expectations of business units coming up with investment plans themselves, pointing towards a bottom up prerogative.

You've educated everybody, give us an idea of the paybacks and then I'd have to look at..

(**RD1**)

In contrast, in **RM10's** organisation that is currently at the efficiency phase, the reliance is on cultural controls to facilitate the unit level cognition of the organisation's sustainability agenda for units to apply for CAPEX requests. It appears from the statement below, that cognitive underpinning acts as a pre-requisite to effective use budgetary controls.

*...there'll be CAPEX requests that will have to go in **and they have to be justification documents err included within the CAPEX in order to get that spend. Err and that relies on individuals within the business units to understand how to put that justification together and what are the key metrics that they need to sort of pull together in order to make sure that, that CAPEX is signed off...And that comes back to culture and also, you know, driving a strong strategy in terms of, well what is it that we're trying to achieve. So the budget aspect of it is not perfect…***

(**RM10**)

7.7.4 Budgets and Planning

Delivering Outcomes

Without investments or planned capital expenditure, planned activities may not be realised and hence there needs to be an interaction between budgetary and planning functions or activities. The following excerpts demonstrate the level of interconnectedness between these two functions present in these organisations, besides signifying the integrating role organisational design and structure play in bridging budgetary considerations with strategically planned activities. The sustainability professionals play an intermediary role ensuring strategic plans could be actionable with financial resources.

The goals were set in 2007 to 2017, so that's our first ten year strategy. So they're the high level corporate goals and then within that again, we've given some latitude to the sites for them to then set specific, either annual, or three year goals if they want within that. So we have annual budget planning process which has, as the name suggests, is more around financial planning and capital investment and so on. But we also started that annual budget review each February, we ask the sites to provide us with a summary of the, you know, maybe achievement in their division and then also under the key milestones for the next year, and what are the… not all a high level detail, but what are the top two, three, four, five major projects that they are going to be done which is going to drive further improved performance. So that annual cycle again is part of that process, that budget cycle.

So it was pushing targets from the corporate level down into the business units and asking them to meet it. So they… then they have to put investment and the capital costs in place to meet that.

(**RM7**)

7.7.5 PMS and Planning

Delivering Outcomes

Whereas budgets provide the financial resources to action plans, there is a reliance on KPIs to monitor if objectives and targets have been achieved, review the planning implementation in progress and also to ensure business units have considered relevant KPIs within their plans. Moreover, the role of structural arrangements is once again highlighted.

And I think the final part is, you know, it's closing the loop. Coming back to the end of each year and saying well here were goals that we've set, how are we performing, you need to feedback to the sites that are performing well and those that are not encourage them to do better. And reporting back up to the board so that they understand, you know, at least once a year, this is how, at a corporate level we're performing against these issues. And also, you know, feeding in external issues that might arise throughout a year. So you know in the last twelve months we've had Cop 21 Climate Change that met in Paris. Of course we need to build that into our ongoing strategy and communication internally and externally.

(**RD6**)

7.7.6 PMS and Administrative

Efficacy of Structural Arrangements – Collective Accountability

Previously the integrative role that sustainability professionals play internally was highlighted. The comments below highlight that sustainability KPIs are not only designed for external reporting purposes, but the internal structural arrangements ensure that KPIs are reported and used internally for driving decisions. The administrative system play a vital role in overseeing and ensuring the relevant KPIs are designed by business units providing guidance where necessary. It also highlights the fact that sustainability function does not take away the overall responsibilities from business units for sustainability but ensures that the units receive proper guidance and remain the primary driver for sustainable business practices. In other words, the sustainability function exists for the provision of internal consulting and coordination and knowledge dissemination.

Err, I've got board levels of responsibility for providing sustainability and that is both in terms of the metrics internally, that's the way in which we market sustainability externally.

(**RD1**)

Yes, so we would pick it up in the corporate responsibility council and we would monitor it that way but ultimately the accountability lies within the functional area. What we may do is review after an explanation, see if there's other support we could provide. You know, err, validate whether the metrics are appropriate

for us but… so it's very much guidance advice, steering group but the functionality… the function itself would take accountability.

<div align="right">(**RM3**)</div>

7.7.7 Planning and Administrative

Efficacy of Structural Arrangements-Strategy Ownership

The structural arrangements are designed in a way that reflect the commitment of top tier management indicating the explicit responsibilities undertaken at the prime level for sustainability. The ownership and sponsorship of strategic plans and goals at the highest level denotes the significance attached to sustainability and generates the expectations that these goals are going to be accomplished alongside financial commitments. Furthermore, such arrangements provide a visibility internally of the deliberate directions that top management intends to follow, thereby strengthening the cause of sustainability internally.

…there's a set of priority projects that each of the executive directors sponsor so, I'm sponsoring a project on err, climate mitigation and on talent at the moment. I've got colleagues who are also sponsoring projects around resource utilisation, raw material utilisation. I've got another colleague who is looking at a digital upgrade that will bring… you know, automate and remove inefficiency, so taking all of those they feed into that business plan.

<div align="right">(**RD2**)</div>

…that the board the chief executive's committee, as we'd call it, would sit below the board, err we now call the general management committee, but you know, each of our board members and our divisional directors and the CEO and the chief finance officer all buy in and own this strategy, you know, it's not Shaun Acton's strategy, sustainability, it's got to be owned at that high level. So I think that's one thing in terms of setting the tone and if you want to call that a control mechanism, you could describe it as such. So, develop the strategy, ensure it's owned by the senior managers and communication is another thing.

<div align="right">(**RD6**)</div>

Efficacy of Structural Arrangements-Ensuring Progress

Besides setting the direction, structural arrangements facilitate the incorporation of changes in the external institutional environment by raising awareness internally thereby allowing business units to adapt accordingly with a view to remaining competitive.

And also, you know, feeding in external issues that might arise throughout a year. So you know in the last twelve months we've had Cop 21 Climate Change that met in Paris. Of course we need to build that into our ongoing strategy and communication internally and externally.

<div align="right">(**RD6**)</div>

Efficacy of Structural Arrangements-Ensuring Progress – Target Settings

The role of sustainability as a function in setting strategic directions through the use of analytical techniques and engaging business units identify potential risks and opportunities is

paramount specifically where such internal competences and capabilities are lacking in companies still at the efficiency stage.

*...obviously devise mechanisms that we think each of the sectors and the business units should be using around, you know, **the stakeholder mapping and then working out what their issues are.** So you know that materiality process if you like, **so they can understand what their core issues** are and then they can start, you know, managing them if they understand the risks, being able to understand the opportunities but just widening the processes, **the systems isn't enough because they don't necessarily have the expertise in the business or the knowledge around this area or the capacity**. So what we planned is that we've had to take that raw hands-on sort of approach if you like and we've had to do an awful lot more of the initial research and materiality processes for them so that we can engage them on the issues and validate that with them and go through the prioritisation process with them. And what we're trying to do is raise awareness and capacity within the business units so that ultimately in the long-term one of the things that you might want to talk a lot is...*

(**RM7**)

7.8 Control Multiplicity Rationale

7.8.1 Embeddedness and Interdependency

Participants pointed out several reasons why they have chosen multiple controls as part of their framework to manage sustainability. Multiple forms of controls act together to embed sustainability as part of the daily activities and in achieving organisational goals and objectives. The controls are also dependent on one another to promote behavioural congruence. In fact, the range of controls do not act in isolation, but form part of a "broader management system", coupled with one another either loosely or tightly. The following statements provide evidence for such an understanding of control multiplicity.

*Err, that is a great question. I think really because err, a complex organisation like ours operating in multiple territories where legislation may be different, err, we need to ensure that there is consistency of approach, you know, so we set the policy, it's not just a policy for the UK, obviously for all our operations. If we set a standard... so that's one thing, **to ensure harmonisation consistency**, **that's why you want that multiplicity of control.** Err, you need it in order to set these issues in a local cultural context as well and what sustainability means in China versus India, versus Europe the Americas, there's part of that as well. Err, and really I think that the final part is we need to ensure that it actually gets proper transaction, **gets really embedded in the organisation. This is not an initiative, it's not (52:53) as a fad, this is fundamentally how we want to run our business going forward.** I'd say that's... that's really what's behind it.*

(**RD6**)

*Err, well I think, I don't know what the original, you know the intent and organisational design was but the sustainability control in the wider organisation and from wider learning that I would recognise we've got a **mixture of formal and informal controls, you know, some documented, some values based and it plays to what I would kind of think as systems, thinking that kind of loosely systems being, what says, all these things play together and they're complimentary and at times they are not complimentary**...*

(**RL4**)

Such an understanding is not only a feature in companies that have embraced strategic proactivity but prominent in **RL7**´s organisation too.

*Why do we have so many? I think because the issues are quite varied, err and **I think corporations themselves are quite complicated systems** .... Err and I think you have to, you have to take multiple routes as well because err, **because you are really trying to embed this into the business, it has to be part of it they say**. **Err, but I'm not thoroughly see them as independent, you know, controls that are just acting on themselves, they're part of a bigger management system**. So, if you think about very basic management system of sort of (01:07:04) you know you, So, if you think about very basic management system of sort of (01:07:04)you know you, you have do the planning, you have to the, the license to unders… you have (01:07:14) and, and understand you know what you need to working on, you have to put your action plans in place and then you have measure what you're doing. So for me it's more of a, of a, cyclical process as opposed to individual controls …*

7.9 Resources and Controls for Sustainability: A Tale of Two Companies

RM7 and RD5 present an interesting perspective on controls for sustainability. RM7 is currently at the level of "picking out the low hanging fruit" and benefit from efficiency gains over the short-term. However, the interviewee also revealed that currently the push is moving towards deriving competitive advantage and hence currently transitioning towards a proactive stance towards sustainability. RM7 shared the sustainability evolution towards the competitive advantage currently been pursued, with the journey having begun nearly eight years ago by putting different policies and technical standards together to ensure compliance with different health and safety legislative requirements. The data reveals a deliberate attempt currently been made to facilitate the transition as reflected in how the controls are also simultaneously evolving to match the change in sustainability trajectory. For instance, the interviewee emphasised on the top driven approach using KPIs to make business units operate in an efficient manner. However, currently the focus is on departing from a sole reliance on PMS, with an emphasis given to what RM7 considers "a more softer approach" through cultural controls aiming for behavioural change, greater understanding of sustainability issues as well as more employee engagement. To achieve these, the focus is on imparting training and communicating about the relationship between corporate objectives and sustainability. The interviewee stressed on "behaviour" on two different aspects, first that a KPI led approach may not "drive right behaviours" and secondly, acknowledging that a proactive stance requires behavioural changes to ensure organisational participation. Other than increasingly relying on cultural controls, the intent is relying upon strategic planning as means of integrating sustainability that had till date remained uncoupled from the overall strategic vision and mission, to incorporate plans and manage risk. The changes in controls reflect the long-term

strategic intent, no longer remaining confined with short-term efficiency goals but as part of a concerted effort to *embed* sustainability as part of "everyday risk and opportunities, managing". On the other hand, RD5 noted that the cultural underpinning was already existing as reflected in the ways the business was undertaken, however, the intent was to implement formal controls. Hence, the focus was on rolling out performance measurement systems and undertaking visible structural changes.

Few useful insights could be observed. Firstly, RM7 interview data reveal the proactive role controls play in driving strategic change, in this context influencing the departure from the efficiency stage towards a proactive stance. The interviewee recognises the need to undertake a softer approach in order to make sustainability a longer-term commitment internally that may not be driven entirely through reliance on formal controls. So fundamentally the case highlights the need to also consider controls from an active perspective driving sustainability rather than as a passive ingredient to implement sustainability. Secondly, the contrasting cases demonstrate the fact that different organisations may rely on different controls to begin their sustainability journey. In RD5's organisation, formal controls were lacking but the cultural impetus drove the sustainability agenda internally. However, the organisation recognised the need for formal controls including the need to make visible structural changes with the enactment of specific positions for sustaining the proactive phase. The efficacy of structural arrangements as integrative mechanisms was noted earlier. In other words, each control promotes a specific internal capability or capacity to sustain or progress to a higher level of sustainable practice and that is reflected in the way organisations design controls for sustainability.

Section C Discussion

This section discusses the findings from the interviews. Firstly, the relevance of the frameworks on the basis of their application for empirical research (as undertaken in this study) is briefly presented. This is followed by a detailed discussion on the study findings for each control constituent forming the control package framework. Next, the section focuses on presenting the emerging patterns of control design and use informed by different strategic orientations.

7.10 Relevance of the Frameworks

With the limitations of reviewed literature and advancements in management control literature at the backdrop, the current study sought to understand how control design and use may be influenced by different strategic orientations. First and foremost, it relied on a control design package framework put forward by Malmi and Brown (2008) with a view to systematically exploring multiplicity of controls for sustainability for different strategic orientations. Secondly, the interviews were undertaken in twelve organisations with hard to access senior managers/directors providing rich and insightful data. Thirdly, Benn et al. (2014) multiphase sustainability model was used to capture the strategic directions pursued by each of the organisations within the interview sample. The focus on multiple organisations been subjected systematically through the use of these two frameworks, one capturing the strategic orientation and the other capturing control multiplicity in a structured approach paved the way for a systematic analysis of interview data. It facilitated the understanding of how companies at different stages design controls and recognize any similarities and differences in approaches.

7.10.1 The Sustainability Phase Model

Benn et al. (2014) model provided the underlying basis for identifying the strategic phase each of the participating companies were currently at. Benn et al. model encompasses some of the advanced concepts reflected in sustainability strategy literature including the shared value concept (Porter and Kramer, 2006), besides considering both social and environmental dimensions of sustainability in its quest to capture "full sustainability". As such, the model was found to be very useful when arriving at the phase that best matched a firm's approach to sustainability. The relevance of Benn et al. (2014) model is that it is not a static model recognizing that sustainability is a gradual process and that certain organisations will be at different phases as has been captured from the interviews. It places organisations into distinct phases that are easily identifiable through the use of strategic descriptors and follow up questions as has been followed in this study.

For instance, the companies that have reached the final stage of sustainable advancement where the focus is not only on deriving long-term sustainable competitive advantage but also educating the extant society on sustainability practices by forming partnerships and other means. For instance, RD2's organisation not only benefits from innovation led sustainability that focuses on developing the products of the future by considering their environmental impact and enhanced value added, but also focuses on the social aspect of sustainability by imparting training to its supply chain (up to 3 tiers) in collaboration with Not for Profit organisations. Likewise, RD5's organisation focuses on training its customers on their environmental footprint and are an industry leader in sustainability introducing the lightest beverage bottles, a product of investment in technology and innovation. Whereas, RD6 and RGEM9's organisations are focusing on innovation led long-term competitive advantage having moved on from the phase prior to this, that is the efficiency stage. These organisations are attempting to create shared value through innovative products, and by engaging with stakeholders externally to augment the relational capital. The model also allowed to capture two organisations that are intending to progress towards the proactive phase. For instance, RM7's organisation is at the efficiency stage where the emphasis is on benefiting from efficiency gains through cost reductions and on talent management through apprenticeship schemes. For instance, the sustainability professionals in this organisation systematically liaise with the HR function to build an inclusive and diversified workplace as well as ensure that sustainability gets integrated with the unit level strategic planning function. By ensuring sustainability gets integrated with the strategic planning function, the company is gearing towards a move to the subsequent proactive phase. The following statement is included here to reflect the strength of the model to identify where a firm could be currently positioned at. For instance, RD6 acknowledged the relevance of the model in capturing the phases through which a company might go through in terms of its sustainable development.

So say it's really interesting, the model that you have describing A, B, C and D. And I would say that err, in some ways it's a good description of maturity of sustainability in companies.

(**RD6**)

7.10.2 The Control Package Framework

On the other hand, the control package framework provided a structured approach to capture how, if at all, each of the control mechanisms included in the package were part of the control mechanism to manage sustainability strategies in each of the participating firms. In previous research, such systematic approach was missing. It enabled the identification of advanced control designs that were part of the control arsenal of those companies that were in advanced

phases of sustainability. For instance, seeking assurance on whether a collective understanding of sustainability existed throughout the organisation was identified in those organisations championing sustainability, whereas, those organisations that were intending to pursue a proactive sustainability strategy had a strong inclination towards affecting cultural change internally. For instance, in RM3's firm currently intending to transcend the efficiency phase, the emphasis has been on promoting the cultural cognition and recognition of the importance and relevance of sustainable practice within the company whereas in RD1's firm that has reached the beyond proactive phase, the focus is on seeking assurance through the involvement of external agents on the sustainability related cognitive capabilities of its workforce. This indicates the variability in control design and points towards the interdependencies amongst different controls. Other than facilitating the recognition that different controls could have different significance to control sustainability based on the strategic direction pursued, the framework additionally aided in the understanding that different strategic orientations may influence the control design varyingly. This was evident from RM7 inclination towards the need of promoting a shared understanding of sustainability through cultural controls to proceed to the proactive phase. The current emphasis is on the formal PMS to control for the efficiency strategy.

Considering the exploratory nature of the research, the framework provided a parsimonious and easy means of learning about how multiple controls are designed in organizational settings to cater for different sustainability strategies in a structured and systematic way. As a direct comparison between other control packages such as the one based on objects of control advanced by Merchant and Stede (2007), the appropriateness and relevance of Malmi and Brown's framework lie in its simplistic nature and ease of implementation. The latter advances several control mechanisms based on those found in practice and simultaneously attracted major theoretical advancements within the extant literature. The research provides evidence of its relevance and appropriateness in exploring control multiplicity for sustainability as discussed below. Given the aim of the research is to explore and understand what controls are included in the package and how these are designed and used for managing sustainability amidst the emergent nature of the field, it could be argued that Merchant and Stede (2007) model has the potential to contribute to the emerging field of literature, once an in-depth understanding of controls for sustainability from practice has been obtained. Moreover, the research is undertaken at the organizational level. The object of control framework is suitable where the aim is to understand the purpose the controls, for instance, the purpose controls serve

to stimulate motivation in employees or regulate their behavior. It requires a prior understanding of what these controls are and if these are implemented in practice for sustainability. For instance, results based control focus on rewards and PMS, but there is a mixed understanding of the role of rewards for controlling for sustainability as evident from the interview data although conceptually the role of rewards have received some attention (Lothe and and Myrtveit, 2003). In the same vein, action controls focus on seeking assurance as part of post action reviews, and the interview data pertain to organisations using action oriented controls as part of the overall framework. The argument of using Malmi and Brown (2008) framework over objects of control framework is that the former aids in the easy identification of controls put in practice at the organizational level whereas the latter model may be more effective to ascertain the effectiveness of the controls at the individual level to determine if the controls serve the purpose they were meant to. In other words, its suitability is to evaluate the effectiveness of each of these controls in efficiently controlling employee behavior, the intended results as well as the employee motivation for sustainability rather than to obtain an in-depth understanding of how firms are designing multiple controls to manage sustainability at the initial exploratory level of research. For instance, firms were found to be reluctant to link financial rewards with sustainability performance due to a variety of reasons including the potential that this may drive immoral behavior, from an employee perspective, object of control framework could be deemed suitable to understand the perspective of the employee. However, it raises questions about how controls could be classified in terms of emphasis. For instance, if rewards are not part of overall control mechanism for sustainability even though a firm may employ sophisticated PMS (Perego and Hartmann, 2009), does it imply that the firm is putting less emphasis on results controls for sustainability? For instance, in RD12's firm financial rewards are not currently in place but RD12 employs a sophisticated PMS. Hence, by focusing on each of the control mechanisms as distinct mechanisms as part of an overall package framework, Malmi and Brown (2008) provide a more effective approach to studying controls for sustainability strategies as each of the controls are studied distinctively without the need to be grouped together. Its usefulness in the context of sustainability is further explained as it caters for the typical control constructs found in practice as well as the "theoretical categories" of controls advanced in the literature (Bedford and Malmi, 2015, p.6). Riccaboni and Leone (2009) noted that significant overhauling of existing controls is unnecessary and that controls existing in practice already are adapted to control for sustainability. Malmi and Brown (2008) model refers to those typical controls already implemented in practice and available for adaptations according to the strategic needs for

sustainability. The interview data supports this view, as companies in the sample adapted their already existing controls to manage sustainability.

The simple and parsimonious framework provided the opportunity to study a multiple of control systems in different organizational settings. In other words, the framework indicated its universal applicability in diverse contextual settings characterised by different strategic contexts. It allowed the same set of controls to be subjected to twelve organisations at different levels of sustainable development. This approach allowed the systematic exploration of how the same range of controls are shaped by different strategic orientations. From a simple control framework, indications of control interdependencies could also be deduced. For instance, RD2 pointed out the significance of cultural controls to make KPIs effective in nature. Further interdependencies in the form of Governance and Cultural controls could be observed from the data.

Having established the relevance and appropriateness of Malmi and Brown (2008) framework for research on sustainability control through empirically derived data, the subsequent sections discuss the key observations from the findings.

7.11 Relevance of Each Control Mechanism

Commitment to sustainability is gradually evolving from been a mere tick box mechanistic process to becoming an organic approach if the sample companies were assumed to be indicators of this progressive significance attached to sustainable business practices. To make it organic, companies within the sample have recognized the need to embed sustainability within its traditional control systems so that it no longer remains decoupled from daily interactions in the workplace. The application of Malmi and Brown (2008) control package framework demonstrates and corroborates with prior research findings that sustainability could be managed by adapting the existing conventional control mechanisms (Riccaboni and Leone, 2010).

The cultural control is used as a power construct or as an intangible force that binds organizational actors together to unite for the common goal of becoming sustainable (Dent, 1991). As opposed to Slack et al. (2015) findings where the cognitive understanding of sustainability was still lacking within the workforce, the findings from the interviews indicated that even firms that are at the efficiency stage are recognizing the significance of cultural controls to develop the knowledge base of its employees and thereby promote double loop learning at the organizational level. For instance, RD11's firm first established the cognitive

understanding of sustainability within its workforce by mobilizing a range of cultural controls. This made budgetary controls more effective as the knowledge underpinning was already established. Such practice relates to Popper and Lipshitz (2000) assertion that culture must promote an environment that brings together members to actively learn and transform the latter into "actionable knowledge" (p. 181). In the context of RD11's example, "actionable knowledge" may relate to the ability of workforce to apply for CAPEX for sustainability projects as sustainability knowledge has already been established.

The journey towards an "organic" approach to sustainability begins with the emphasis on establishing the right behaviors internally, conducive of a sustainable business practice (Chenhall, 2003). At the core of this attempt by the sample companies, lies the cultural control. The control is mobilized by considering the longer-term aspect of sustainability and reaching out to employees and making them understand the link between financial and non-financial objectives such that non-financial objectives become a driver of the financial bottom line. For instance, in RD11's firm, the cultural underpinning promotes the understanding of how sustainable practice contributes to the bottom-line. In this instance, cultural controls in the sample companies act as the "knowledge systems" shaping employee perception of value multiplicities like Epstein et al. (2015) case study findings where employees understood the financial implications of stakeholder reactions. It follows the need to reshape internal knowledge systems to be attuned to the premise of sustainability to facilitate the institutionalization of sustainable practice. It could be assumed that such a stance is taken to embed integrated thinking and focus on long-term corporate survival as means of managing risks (Welford, 1995; Chung and Parker, 2008). The organic approach requires employees to be empowered and without the cognitive understanding such empowerment is not possible (Chenhall, 2003). It resonates with Benn et al., (2014), Hart (1995) and Chalmeta and Palomero (2011) assertion that strategic pursuit of sustainability based on higher order efficiencies rely on the path dependent approach of instigating changes in business philosophies and values – which calls for a cultural transformation. And this transformation is either sustained or brought about in the sample organisations through the provisions of internal knowledge management and learning processes, through the provisions of training and a plethora of internal communication techniques (Katsoulakos and Katsoulacos, 2007; Shrivastava, 1995; Norris and O'Dwyer, 2004). Hence through the provisions of internal communications and training events (i.e. socialisation controls), the focus remains on knowledge dissemination and capacity and capability development (Banerjee, 1998; Masanet-Llodra, 2006; Maxwell et al., 1997). The

objective in the studied companies is to thus create and sustain a collective consciousness or a collaborative approach towards sustainability. It was evident from the interviews that companies are increasingly relying on employee prerogatives to drive sustainability forward by proactively encouraging them to look out for new opportunities and ideas. Additionally, the findings provide evidence of the need to go beyond merely aligning sustainability values in value statements.

Moreover, there was emphasis on selection controls and cultural value alignment for new recruits and this was found to take prominence in those companies that have reached the proactive phase and beyond (Merchant and Stede, 2007). There was a tendency in these firms to ensure candidates possessed some understanding of sustainability indicating the emphasis given to culturally embedding the sustainability agenda. Perhaps the dependency on selection controls in those firms yet to reach the proactive phase is deemphasized due to the reliance on the provisions of training as well as other formal controls.

The emphasis on cultural control is further illuminated by the amount of significance attached to it by those companies that are progressing towards a proactive stage. It further demonstrates the proactive role cultural controls play in strategic progression. Without the cognitive underpinning, such strategic progression may not be feasible as sustainability needs to be promoted within the organization holistically without remaining the responsibility of a few and hence the focus has been on a softer approach driven by employee engagement. And this very essence is evidenced by the emphases given to cultural controls by all the participants within the sample irrespective of the strategic phase their organisations are at currently.

However, none of the sampled firms relied solely on cultural controls as means of managing sustainability unlike those observed in Crutzen et al. (2017) irrespective of the strategic focus. Also, contrary to Norris and O'Dwyer observations (2004), there was a departure from a sole focus on informal controls. Similarly compared to Durden (2008) findings, none of the firms included in the sample kept sustainability values and intent decoupled from the planning process (Hamel and Prahalad, 1994; Williams, 2002). In other words, the focus was also on mobilizing the strategic planning mechanism to translate the values and intent promoted by the informal controls into collective action (Hart, 1995). This practice also reflects control inter-reliance.

However, the key finding is that the strategic orientation shapes the way some aspects of the planning function is designed. For instance, in firms that are yet to reach the proactive stage,

efforts are currently been undertaken to incorporate sustainability related aspects into the planning function. For instance, RM7's firm is currently integrating sustainability aspects into the risk register. As a direct comparison, companies at the proactive or beyond proactive phase have already incorporated these with the planning mechanism within both business and operational plans.

All participants reported some sort of institutional context analysis, but the intensity, frequency and the level of formalization vary according to the strategic orientation. In those companies that have reached at least the proactive phase, a plethora of qualitative analytical processes including materiality, gap and issues analytical techniques are applied to learn about the institutional context in which the firms operate (Galbreath, 2010). The firms also rely on stakeholder mapping techniques and dialogue to identify and rank issues so that appropriate "responses" could be undertaken (O'Riordan and Fairbrass, 2008). The feedback received from different stakeholder groups ensures that the firms understand the institutional context and if the need be mitigating procedures and policies are put in place. That is there is a steady learning process occurring whereby knowledge gathered from external sources are internalized through formally constituted processes (written statements, policies etc.). The proactive nature of firms seeking to establish and understand contextual factors demonstrate that the sample firms understand how non-responsiveness may erode value (Benn et al., 2014). This is evident from the fact that some proactive firms in the sample even undertake financial implication analysis to study the impact of certain critical issues drawn in from the institutional context analysis indicating that management recognizes the financial value of stakeholder reactions (Epstein et al., 2015) and that non-responsiveness may erode financial value. Furthermore, the issues are further analysed to explore the impact on long-term business continuity and to identify any associated risks and/or opportunities that the issues may represent (Arjaliès and Mundy, 2013). On the contrary, in companies that are yet to reach the proactive phase, institutional context analysis including stakeholder engagement is infrequent and less intensive and less formalised. Moreover, the focus is on understanding the viewpoints of customers and legal authorities whereas in the proactive companies, the focus extends to include NGOs, suppliers etc.

However, although the engagement with external stakeholders varied according to the strategic orientation, majority of the participants mentioned about processes that are put in place to ensure different functional inputs are considered. This is done to ensure sustainability plans are developed holistically rather than in silos (Moon et al., 2011; Prahalad and Hamel, 1990). It reflects the practice of "openness" based on collaborative approach to drive the sustainability

agenda forward simultaneously stimulating organizational learning, missing in Durden's case organisation (Williams, 2002, p. 219; Durden, 2008; Banerjee, 1998). The planning process hence takes a holistic perspective in deriving at how sustainability is to be driven informed by both internal and external stakeholders, although some differences exist when soliciting inputs from external stakeholder groups. Additionally, it could be argued that such comprehensive measures in driving sustainability plans may contribute towards double loop organizational learning process thereby facilitating the creation and augmentation of firm specific capabilities (Banerjee, 1998; Judge and Douglas, 1998; Marks and Spencer, 2008; Prahalad and Hamel, 1990).

What differs however in proactive companies, in order to ensure organizational level plans are implemented uniformly across the firm, some proactive firms in the sample have adopted innovative techniques (for instance, use of templates) to ensure plans are cascaded down into different sites and units for implementation. The cascading approach could be argued to ensure that employees remain motivated in driving the sustainability agenda as these are included in their individual as well as unit/site plans unlike what was observed by Slack (2015). Some companies in the sample also mentioned about the importance of top management taking ownership of the strategy and as such formal processes are put in place. For instance, in one of the sample companies, executive directors sponsor certain sustainability initiatives enhancing the legitimacy attached to sustainability. Moreover, the plans are often quantified into tangible targets, both over long-term and short-term temporal dimensions and this practice is consistent across all companies except one. The quantified targets provide the means of guiding sustainability through tangible aims and setting a course of direction. Only one firm relied on qualitative criteria of continuous improvement where no long or short-term quantifiable targets are established. This finding however validates Neugebauer et al. (2016) concerns about sustainability issues been wicked and planned actions may not always be feasible whereby some firms may realise that quantifying sustainability targets may be challenging because of its unpredictable and dynamic nature. However, the focus on employee engagement and empowerment promoting an organic approach to managing sustainability in the sampled firm, ensured employees drove continuous improvement by proactively identifying risks and opportunities and sharing/implementing ideas to benefit the firm. This practice further lends to the support of control interdependencies where a qualitative approach to planning for sustainability is made possible through empowered employees and the emphasis given to strengthening the organizational knowledgebase.

Whilst setting targets provide a direction or a goal to be achieved, but without the adequate allocation or consideration for financial resources, it is questionable how such targets could be achieved (Burritt and Schaltegger, 2001). Consistent with the views of Burke and Logsdon (1996) and Roth (2008), the empirical data provides evidence of considerations attached to monetary allocations for driving sustainability goals. Specifically, the sample companies consider/initiated consideration for financial planning for sustainability projects within their investment plans (Henri and Journeault, 2010).Two approaches are observable when it comes to capital investment plans. The first approach is for units to consider sustainability related aspects as part of the budgeting cycle. Under this approach, units are responsible or expected to identify suitable opportunities for capital investment as part of the unit/divisional budgeting cycle. In other words, units/divisions ought to identify suitable opportunities that are likely to provide sustainable benefits. The other approach includes bidding wars internally whereby, different units are expected to consider financial resources for sustainability projects and submit capital investment bids at the corporate level for the release of funds. In this context, budgets could also be argued to play a communicative role as highlighted by Roth (2008). It could be argued that the need to consider financial plans for sustainability stimulates interactions at different levels within the organisation, signaling the importance attached to sustainability internally. Furthermore, it could be argued that budgetary allocations remaining the responsibility of units may lead to a greater commitment to sustainability goals and objectives (Parker and Kyj, 2006) where units play a participative role within the organisational sustainability agenda. Budgets thereby help to "embed" sustainability within the management routine and as part of a "continuous cycle of actions" (Mass and Reniers, 2014, p. 108) without having to rely on corporate management for directions at all times. Sustainability becomes part of the discussion and decision-making process driven at unit levels (Mass and Reniers, 2014).

Unarguably, both approaches demonstrate the role of knowledge management systems (training etc.) that facilitate the dissemination of the rationale to engage in sustainable practices. It could be argued that without the informal controls in place, or where such knowledge is not developed (e.g. benefits of sustainable practice to the organisation), units/divisions may not be effectively able to make decisions on financial allocation for sustainability projects. The role of sustainability professionals as knowledge disseminators and trainers, could be highlighted as these individuals assist units helping them recognise suitable opportunities for sustainability related investments. The role of sustainability professionals in infusing knowledge as well as the role of informal controls in promoting cognitive recognition to enable units plan for

financial resources for sustainability projects, by either of the two ways, is amplified in companies where such cognitive recognition is still developing (e.g. RD10, where budgets play a less formalised role).

All the sample companies included sustainability related KPIs as part of its PMS as has been advocated in the literature on the need to broaden the coverage of performance measures beyond the financial aspects (Perego and Hartmann, 2009; Adams and Frost, 2008). Unlike what Adams and Frost (2008) had observed, the KPIs in the sample companies irrespective of the strategic orientation were part of a structured measurement process and not undertaken on an ad-hoc basis. The interviewed companies have highlighted the necessity of measuring sustainability performance as means of driving the sustainability agenda within their organisations. For some companies, the initial focus to control and drive sustainability has been through the measurement approach. To ensure the accomplishment of goals established at the corporate level, KPIs were the basis of guaranteeing their implementation at the lower levels of the organisation. However, a key distinction was also made by some interviewees on the differences between a KPI led relative to a culture led approach to sustainability. The narrative pointed to the need to promote behavioral change which was possible only through the cultural mechanisms. In other words, there is an explicit recognition that reliance on KPIs solely may not lead to behavioral change and may even undermine responsible behavior. Hence, the approach has been on organic means of controlling for sustainability with PMS forming part of the formal mechanism facilitating the assessment of target delivery and monitoring of the implementation of strategic outcomes (Morsing and Oswald, 2009; Riccaboni and Leone, 2010).

The KPI informed performance reviews formed the basis of identifying areas that needed improvement and monitoring performance over time (Palme and Tillman, 2008). The performance appraisal then informs financial or budgetary planning and specifically for capital expenditure projects. One key aspect that was apparent from the interviews was that the motivation to measure sustainability KPIs was not solely for external reporting purposes (Adams and Frost, 2008; Henri and Journeault, 2010). But a larger number of KPIs are measured than reporting requirements mandate and are used for internal decision-making purposes. Besides the typical use of KPIs for performance evaluation, the sample companies stated other uses including target appraisals, future planning and taking corrective measures. The use of KPIs for benchmarking and social impact analysis was however observable only in those companies that have reached at least the proactive level. Furthermore, irrespective of the

strategic orientation, the sample companies have also mentioned about the financial quantification of sustainability KPIs that are not externally reported but internally used for decision-making purposes (Azzone and Noci, 1998). The financially quantified measures facilitate the organizational learning process in terms of enhancing workforce engagement and understanding of the core issues (Banerjee, 2002). The translation of core issues into relevant costs contributing to the learning process by ensuring employees understand the tax benefits of becoming sustainable in relevant areas as well as the opportunities it represents in terms of lowering operational expenses. Besides the use of operational KPIs for internal decision-making, the proactive companies have advanced PMS in place that informs product development through the application of LCA based techniques informing eco-design. However, the use of a BSC for sustainability in facilitating organizational decision-making in the sample companies has not been prominent unlike Adam and Frost (2008) findings of a BSC led approach to controlling sustainability. BSCs were either in trail or slowly emerging. The lack of prominence of the BSC use however indicates the conceptual nature of BSC promoted within the literature (Hansen and Schaltegger, 2016) and it's disconnect from practical application.

The importance attached to KPIs for internal decision-making, whether through financial quantification, for benchmarking and continuous improvement, monitoring the delivery of planned targets, product design or for budgetary planning needs signify the commitment of the sample companies in transcending beyond the need to portray an outward looking commitment through the provisions of reporting but to internalize sustainable benefits through a structured and systematic approach (Searcy, 2012; Staniskis and Arbaciauskas, 2009). This is further illustrated through the interactive use of a small number of sustainability KPIs that are personally monitored by the TMT (Simons, 1995). Often these KPIs are those identified as of immense strategic importance informed by the strategic value of the natural resources that are closely monitored (for instance, ending deforestation, ethical compliance, and high level carbon). Besides, there is also a tendency within the sample firms to follow a structured process of reviewing operational performance data monthly, if not more frequently. This practice further demonstrates the efforts put in by companies for continuous improvement and organizational learning.

Besides, there is also evidence of a participatory approach to developing the KPIs (Adams and Frost, 2008). Often, the joint development of KPIs along with unit/functional leads have been emphasized to illustrate the need to develop KPIs in a manner that is understandable by those

whose performance would inform the measurements. Additionally, another reason for a participatory approach is because unit/divisional leads need to take ownership for the targets and hence got to drive performance. This practice further evidences the sincere efforts put in by companies to better their sustainability performance but evident only in those companies that have reached at least the proactive phase. While in others, KPI design is essentially top down and enforced on the units/functions to follow.

When it comes to rewarding employees to control sustainability, a mixed picture emerges. Whereas the down-side of rewards has been identified by the reviewed sample in stimulating wrong behavior resulting in potential under-reporting, rewards have also been identified as a temporal control mechanism in sustainability management. For instance, one of the companies that is currently at the efficiency stage revealed that rewards were used during the roll out of the sustainability agenda, but only for directors. The motivation was to ensure the agenda was implemented and hence incentivized to ensure its steady implementation. Once sustainability was embedded with the operations, the rewards mechanism was withdrawn. The same motivation was revealed by another company pursuing an efficiency based strategy that have KPI linked rewards in place, implemented recently at the TMT level to ensure sustainability agenda becomes part of the core TMT activities. Here the role of the reward mechanism could be identified as a short-term measure which is withdrawn once the objectives have been achieved. This provides empirical evidence against the established literature that ongoing rewards are important to ensure both financial and non-financial objectives are implemented (Cordeiro and Sarkis, 2008; Lothe et al., 1999).

Additionally, not all companies in the sample resort to the use of financial rewards as a controlling mechanism. One key reason cited is the lack of TMT endorsement. While some have reported the use of both financial and non-financial recognition based rewards, others have reported the use of non-financial rewards only, similar to Adams and Frost (2008) findings. However, this shows that rewards can be used subjectively to incentivize employees based on their performance. The level of strategic progression does not reveal any specific approach to rewards as means of controlling for sustainability. For instance, while some companies that have transcended the efficiency stage, have H&S KPIs linked to the total pay of the TMT, others resort to only non-financial rewards as a controlling mechanism. Interestingly, only one company that is currently progressing towards the proactive stage has financial rewards linked to lower level employees (e.g. Sales team) in addition to financially rewarding the sustainability professionals as well as TMT. Overall, it can be deduced that

overall strategic progression may have limited role to play on the design of rewards as different motivations seem to exist.

Finally, differences in approaches when it comes to organizational design and structure and governance mechanisms become prominent when different strategic approaches are considered. What is noticeable is the tendency of proactive companies to have matrix based structures in place, which are very lean and composed of only a handful of employees responsible for the delivery of sustainability objectives, with dotted line relationship that goes across different organizational levels both vertically and horizontally (Hunt and Auster, 1990). These companies also install a network based structure in place spanning the entire organisation across different businesses/units composed of individuals who have sustainability built in as part of their job roles as well as a champions network that take on more informal roles. This approach ensures that sustainability strategies and objectives are systematically implemented and facilitates the diffusion of core sustainability themes and initiatives. The proactive companies follow an embedded approach when it comes to implementing sustainability, making it a holistic responsibility rather than driven by some particular function or dedicated personnel. Such that it could be argued that the focus on a network design supplemented by matrix structures ensures that sustainability does not become compartmentalized, an issue observed in Slack et al. (2016) and raised by Larrinaga-Gonzalez and Bebbington (2001). The role of sustainability professionals becomes that of monitoring as well as ensuring that the units are not operating in silos. In these organisations, the sustainability professionals act as integrative liaisons ensuring sustainability is implemented holistically across the organisation. Literature has noted the need for integrative liaison mechanisms to be put in place ensuring holistic implementation of strategies. Besides, the presence of cross-functional collaborations, the role of sustainability professionals as integrative liaisons serves the purpose. It could be argued that these professionals help maintain "spontaneous contacts" with other functional representatives within the network structure on strategic progress (Abernethy and Lillis, 1995, p. 244). Additionally, they function as knowledge brokers, transferring best practices across the organisation (Ghosh and Herzig, 2013). On the contrary, in those companies that are still at the efficiency stage, the concept of sustainability been driven by dedicated departments arise, where sustainability professionals undertake key roles to firstly promote organizational learning across different units and work with functional heads to *encourage* responsible actions. Their role is primarily not of integrative liaisons as with proactive companies but more as those who develop internal capacities and capabilities that would allow functional units to

assume responsibilities for delivery in the future. Typically, also the extensive reliance on champion network as prominent in the proactive companies is missing. Irrespective of the strategic orientation, the sample indicates the tendency of organisations to modify their existing structural arrangements either through a network driven approach or through a functional approach supporting Riccaboni and Leone (2009) observations, where sustainability professionals assume diverse roles. This study reinforces Atkinson et al. (2000) findings of different types of organisational structures for sustainability existing in practice as observed in this study (namely, central structures, functional and divisional structures) but also adds the presence of matrix-type as well as network structures composed of informal and formal roles spanning across the organisation.

The role of sustainability professionals could be argued to be a distinctive finding in this research and the implications of their role as part of the extant organizational design and structure. Previous studies have focused on the roles of accountants and external consultants (Ghosh and Herzig, 2013; Mistry et al., 2014; Schaltegger and Zvezdov, 2015) while ignoring how internal sustainability professionals may put normative isomorphic pressures on organisations, specifically at the earlier phases of sustainability development (Moon and Matten, 2008). The findings, as discussed above, highlights the different roles these professionals play informed by differences in the strategic pursuits of the organisations. Based on the novelty of the findings, the study argues that exploring strategic implications on organizational structural arrangement will remain inadequate if the role of the professionals is not considered.

Additionally, in line with Ghosh and Herzig (2014) observations, the sample indicates the presence of a number of governance mechanisms in the advancement of corporate sustainability in UK companies, chief amongst these is TMT involvement. For instance, irrespective of the strategic orientation, the sample companies reported governance mechanisms and the proactive involvement of TMT in sustainability management. This phenomenon directly negates Kakabadse and Kakabadse (2007) argument that sustainability is yet to enter board rooms. On the contrary, irrespective of the strategic orientation, clear, structured and formalised reporting arrangements are observable in the sample companies. However, only a minority of the sampled companies had a direct reporting relationship with the Board of Directors and that the strategic orientation does not seem to influence the BoD reporting as both companies, those pursuing a proactive as well as efficiency based strategies, reportedly keep their BoDs updated through formalised reporting structures. However, what

would be interesting to observe is the reporting content and if strategic differences influence the content of the reports.

The literature has alluded to the role of committees at both BoD and Executive level (e.g. Klettner et al., 2014). Bearing three, none of the sampled companies had a committee in place to support top management level decision-making. However, few companies had made structural changes to facilitate the governance mechanism by installing sustainability councils. These councils are composed of senior management representatives of different functions/businesses within an organisation, thereby serving as integrative liaison device, functioning under the direct supervision of the TMT. It could be reasonably argued that the active participation of TMT in the Council meetings, negates the need of any further committees to support TMT decision-making. However, the TMT of only one proactive company goes further to include external expert feedback/consultation as means of making sustainable decisions. An interesting insight that emerged from the observation of committees in two of the companies both of which are at the efficiency stage is the temporality of the existence of such committees. In one of the efficiency based organisations, the committee existed only for a period of one year. Its purpose was to aid TMT initially roll out its sustainability vision and initial goals and objectives. The significance of the committee in the other efficiency based organisation is to aid TMT decision-making during the transition period leading to the proactive phase. It seems that committees may play a decisive role at certain temporal periods (e.g. transition, initial roll out) as opposed to during periods of stability (Berrone and Gomez-Mejia, 2009).

Another notable observation about the governance mechanism is the reliance on Sustainability Directors/Managers (Strand, 2014). Of specific interest is the emergence of Dual responsibilities whereby an individual directs two different areas (e.g. finance or marketing and sustainability). In the proactive companies, the dual role included Finance and Sustainability while at the efficiency stage the dual roles of Operations and Sustainability was observed. It is argued that dual roles of finance and sustainability reflects the strategic intent of the organisations designing such positions where by those with operations and sustainability clearly indicates the thrust towards cost reduction through responsible business practices as opposed to a strategic approach to sustainability.

Other governance mechanisms included the use of policies and codes as well as auditing. Proactive companies tend to put less reliance on policies relative to the one at the efficiency

phase. The proactive companies tend to go beyond seeking assurance on reported data and information meant for both internal and external audiences to assuring whether policies are adhered to as well as factory operators/owners understand the key process requirements, cultural underpinnings as well as the required behavioral standards. Supply chain audit is also undertaken. In other words, the proactive companies transcend the basic assurance seeking for reporting towards evaluating whether different actors understand the cultural underpinning behind the adoption of sustainable business practices.

7.12 Towards a Taxonomy of Controls for Sustainability Strategies: The Emerging Patterns

Based on the strategic orientations, two organisations were identified as belonging to the efficiency stage, another two currently transitioning towards the proactive phase, and another two at the proactive phase while the rest have transcended the proactive stage. Since the sustaining corporation phase (beyond proactive) as depicted in Benn et al. (2014) is based on how it could be in the future conceptualized by an understanding of how firms are currently positioning themselves with regards to sustainability, it was deemed premature to classify any of the firms as having reached the highest epitome of sustainability. Rather, those firms that have exhibited characteristics as going beyond the proactive stage are classified as transcending the proactive phase. For instance, by engaging in regenerative practices and/or educating the extant society.

Distinctive patterns in control design are observable. Typically, for organisations at the efficiency level, the controls are designed in a way that limits units or functions a choice or their independent voice when it comes to sustainability matters. The approach is essentially top-down where the top management enforces the goals as well as KPIs upon the units/functions to follow. At this phase, controls could be policy and objectives driven. Cultural controls are relied upon to infuse knowledge about sustainability with a view to making workforce understand its significance through training and communication. Sustainability is yet to be fully integrated with the planning function with stakeholder consultations undertaken on an ad-hoc basis and institutional context analysis undertaken informally. Stakeholder engagement is restricted to regulatory and customer based stakeholders. Rewards of financial nature may be mobilized on a temporary basis to ensure top management focuses on sustainability implementation as a core activity. Top management also has a vested interest in personally monitoring KPIs. KPI use for internal decision-making is restricted to identifying future opportunities. Auditing processes may not be undertaken due to

the financial outlay. Sustainability professionals play a significant role as facilitators of organizational learning by disseminating essential know-how on sustainable business practices and raising awareness of responsible business internally. Sustainability may remain infused within other established functional areas (e.g. operations).

On the other hand, those organisations transitioning from an efficiency based approach towards a proactive approach display some unique control features. The most striking differences from the above phase are related to PMS and Planning controls. For instance, within the planning function, a systematic approach to stakeholder engagement is observable although the frequency of such engagement remains low (e.g. every two to four years). The institutional context analysis is formalized and structured with materiality analysis undertaken to understand issues' significance and implications on corporate performance. KPIs are used to identify opportunities requiring investments. There is an increasing expectation that units will make plans for financial allocations for sustainability projects during their own budgeting cycle and/or make capital expenditure requests centrally. Sustainability professionals continue to play the role of knowledge disseminators contributing towards the development of internal capabilities and capacities. The "function" may still remain within a prominent functional area (e.g. HR/Supply Chain) although gradual development of informal networks made of champions may start emerging. Lesser reliance is paid to policies and codes to drive sustainability with an increased focus on cultural embeddedness and integration with the strategic planning mechanism.

As a sharp distinction from the organisations at the efficiency phase, there is a gradual movement towards greater autonomy granted to units/sites in organisations at the proactive phase. There is also an expectation that units/sites will be developing their own plans to direct responsible practices. Additionally, units/functions are expected to plan for financial resources (budgets) as part of their budgeting cycle. Stakeholder management becomes extensive and carefully planned and a continuous process. KPIs are used internally for benchmarking purposes or to inform new product attributes. Assurance is taken on process congruence with required policies as well as to assess workforce knowledge on sustainable practices. Staff appraisal may include their knowledge and understanding of sustainability plans and policies. A gradual expansion in structural arrangements may be noticeable with the inclusion of sustainability incorporated at unit/site level functions or with the installation of divisional/unit level sustainability heads (in large organisations). Informal structures continue to evolve and expand. Centrally located sustainability professionals continue to play their role as knowledge

disseminators as well as knowledge brokers sharing best practices. Additionally, as a departure from a sole reliance on technical and academic qualifications, sustainability begins to play a role in staff recruitment where sustainability value congruence is examined and sought.

Those organisations that have transcended the proactive phase, keep the wheel spinning in a number of ways. Firstly, the focus is on empowering workforce/units to plan for sustainability proactively, generate ideas and allocate financial resources without the need for central enforcement. Governance mechanisms are strengthened to ensure staff understands the benefits of sustainable practices and various appraisal methods may be undertaken including workforce "know-how" audit by independent auditors as well as internal surveys. Stakeholder engagement is structured in a way that promotes shared values and benefits (for instance, industry level partnerships as well as public-sector organisations to deliver greater good and value). The role of sustainability professionals now also includes ensuring sustainable development happens holistically throughout the organisation and not in silos.

Although the above paragraphs gave prominence to the dissimilarities in the ways controls are designed at different stages of sustainability progression, nonetheless, there are similarities across the phases too. For instance, as has been noted previously, top management plays a critical role as a key motivational agent for sustainability uptake in the UK business (Ghosh and Herzig, 2014). The interview data suggests the trend continues to be the same. Across all the phases, there has been evidence of top management endorsement and enforcement for sustainability actions, that formalized and structured reporting lines are established with the CEO or a CEO led committee. Sustainability councils are also a steady feature in these organisations not largely informed by the type of strategy pursued. These councils function as integrative liaison mechanisms chaired by either an Executive or the CEO, composed of representatives from different units and functions.

Only rewards as a mechanism is unpredictable when it comes to its mobilization. Although financial rewards have been mobilized during initial phases of strategy implementation only at the top management level, yet there are organisations in the sample that have financial rewards in place for commercial sales team in addition to those at the TMT position while in other organisations no such mechanisms exist (even in those at the latter stages of proactivity). However, the use of non-financial rewards either on an ad-hoc basis or on a more structured basis remains prominent across the sample. Moreover, when it comes to cultural controls, there

is a trend that as companies progress towards the more proactive phases, greater the reliance on cultural controls.

The graph below illustrates the control design approach across the different phases on a continuum from early phases of efficiency towards the more proactive phases.

Graph 1: Strategy-Control Continuum

Mechanistic, PMS, Rules	Learning Organisation, Cultural Controls	Organic, Empowerment, Embedded, Driven

Early efficiency	Advanced Planning, PMS, Autonomy and Expectations	Advanced Proactive
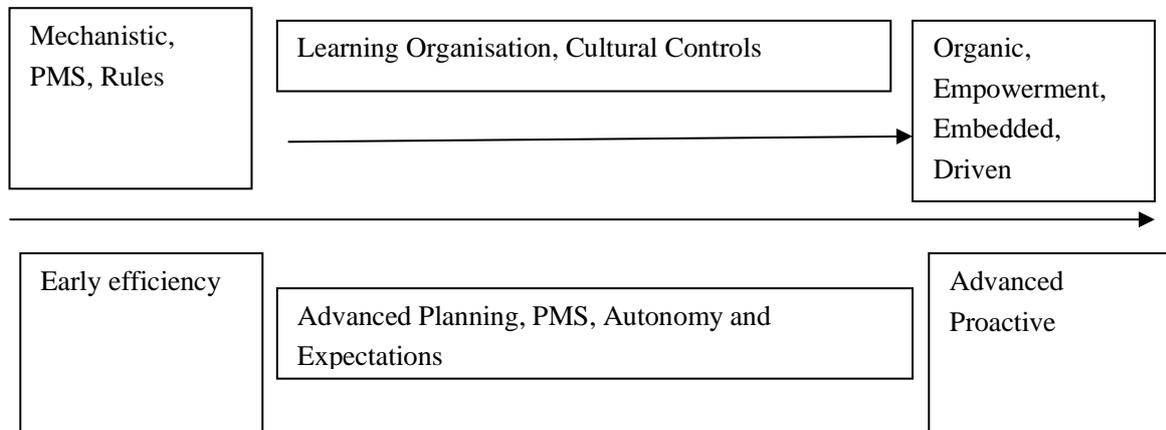
7.13 Towards a Resource-Contingency Theoretical Framework for Sustainability

The findings add on to the strength of contingency theory that suggest that contextual settings influence the way controls are designed. Although this aspect is relevant to explain the differences in control design from a package concept perspective, the findings also indicate the key role MCS play in strategic evolutions. To elaborate, MCS also affect strategic directions (Kober et al., 2007). In this context, MCS may lead onto strategic phase progression by acting through augmenting the internal capabilities and capacities. For instance, RM7 referred to the need to engage employees through cultural control systems with an end objective of developing their knowledge bases through training provisions and engagement. RM7's firm is intending to progress towards the strategic proactivity stage and is putting emphasis on cultural controls to facilitate the move towards the intended strategic phase. Based on this premise, it can be convincingly argued that cultural controls play an enabler role, in this context by augmenting the capacity development of employees. This highlights the need to go beyond contingency theory based studies to understand the relationship between sustainability strategy and controls for sustainability. The focus should be on recognising that sustainability is a path dependent process and that certain capabilities and capacities are required to embed sustainable practices (Hart, 1995). Without these internal resources, sustainable progress is not possible as has been highlighted in the strategy literature (Shrivastava, 1995; Hart, 1995, Banerjee, 1998). The literature pointed to the need to develop several competences including knowledge capital through double loop learning and relational capital and provided means of how these could be achieved (Banerjee, 1998).

Controls on the other hand, facilitate the development of these internal resources that stimulate sustainable progress as has been evident from RM7 findings. The extant literature has also provided evidence of control practices that inform the development of internal competences including the role of functional integration. A dominant control design and use logic seems to exist that supports the generation and the development of core competences required for a strategic approach.

The approach undertaken by the sample firms and the indications of the underlying interdependencies amongst the controls inform the development of such organisational competencies that are unique, scarce, valuable and not easily imitable and hard to sustain.

Hence, controls for sustainability could be effectively understood by their abilities to contribute to the development of internal competencies that inform sustainable development. The relationship between the capacity augmentation ability of controls and resource development cannot be ignored and hence need to be explored further.

The resource-contingency theoretical underpinning assumes controls to be playing dominant and active role, either individually or operating as part of a control package that gives rise to a certain strategic context. It reverses the typical assumption that controls play a passive role and remain influenced by the strategic context (Langfield-Smith, 1997). Graph 2 exhibits this understanding.

```
┌─────────────┐        ┌─────────────┐        ┌─────────────┐
│ Management  │───────▶│ Development │───────▶│  Strategic  │
│  Controls   │        │ of Internal │        │ Advancement │
│             │        │ Capabilities│        │             │
└─────────────┘        └─────────────┘        └─────────────┘
```
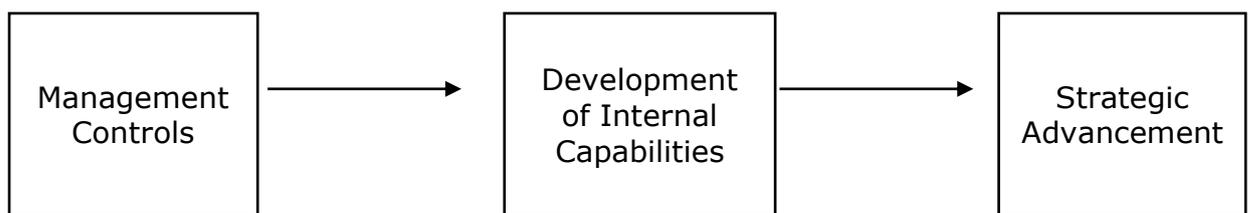
Graph 2: Proactive Nature of Controls

It strives to explain how resource intensive competencies are developed internally to inform a given sustainability strategic positioning and explores the role controls play in informing resources required for the development of such capabilities.

MCS --------➔ Capability and Capacity --------➔strategic evolution

H1: MCS acts through capability and capacity building influencing sustainability strategic orientation

H2: Sustainability strategic orientation influences MCS design indirectly by acting through capacity and capability requirements

7.14 A Logic Dominant Approach towards Sustainability Control

A logic dominant approach towards designing and using controls for sustainability was also evident. It shows that organisations consider a well-articulated logical perspective when it comes to designing and using controls for sustainability. Previous research examining organizational commitment towards sustainability has focused extensively on external reporting. The findings indicate that organizational commitment may also be examined through how the controls are designed and used and/or how organisations are logically deciding on what controls are suited for sustainability. The very focus on cultural controls by RM7's

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organisation shows that the firms are in a position where they are able to recognize the importance attached to certain controls, in RM7's context to progress onto the next phase of sustainability the emphasis was on cultural controls. It indicates the type of thinking that is prevailing within organisations. For instance, the de-emphasis on rewards by some of the interviewed firms demonstrate that firms are interested in promoting sustainability practices effectively and have considered potential drawbacks of certain controls. The firms are also aware of the need to combine certain controls to effectively promote sustainable thinking internally. For instance, the limitations of solely relying on PMS were acknowledged and the focus was on cultural controls to act in combination with PMS so that desired behavior could be achieved was noted. Furthermore, RD5 noted that sustainability performance was made part of the employee appraisal when the Environmental Manager was recruited to ensure sustainability remains embedded as part of the employees' everyday routine. Arguably, these examples indicate that firms are becoming more knowledgeable on how to manage sustainability internally and the existence and application of such knowledge may imply the commitment firms are increasingly attaching to sustainable practice. In other words, the firms are overcoming the cognitive barriers as pointed out in Gond et al. (2012). From the configurational-congruence view of fit that has been adopted in this study, the interview data extends support to the managerialist assumption that typically rests on the basis that management possess sufficient know-how on how to design controls to manage sustainability (Drazin and van de Ven, 1985). From the preceding discussion, it is apparent that management may be credited in their ability to implement controls efficiently in a manner that supports the kind of strategy pursued or the intended strategic progression. For instance, the temporal use of committees as well as rewards clearly exhibits this view. Additionally, the acknowledgement that cultural controls are pivotal for strategic progress too sheds light on the ability of management to design controls appropriately. Moreover, the knowledge that certain controls may only operate efficiently in combinations, for instance, culture and PMS, bears testimony to this observation.

In this context, however, the role of sustainability professionals may also be noted, specifically in those companies that are at the pre-proactive phases. It could be argued that the knowledge transfer and the effective dissemination of sustainability principles could be partly driven by the role played by the professionals in varying capacities as have been noted. It could be argued that such dissemination is enabled through normative isomorphic pressures and driven by the knowledge and expertise of this professional group. As more and more companies are

acknowledging the significance of sustainability to remain competitive, the focus is on embedding sustainability within the already existing management controls (Riccaboni and Leone, 2010) so that sustainability ultimately becomes intertwined with everyday decision-making processes. And as part of the embedding mechanism, it appears that companies are eager to expand their knowledge base of how to control sustainability and employ the services of experts who can drive the agenda forward.

7.15 Examining Control Package Concepts

The interview findings point to certain key aspects. Firstly, the findings highlight the tendency of firms included in the sample to rely on both formal and informal controls to manage sustainability, contradicting the views of Slack et al. (2015) and Norris and O'Dwyer (2004). Secondly, there is a variation in how controls are designed. For those pursuing efficiency based strategy, structural arrangements seem to differ from those firms employing proactive strategies where a lean matrix structure is followed. Within PMS, differences are also identifiable. A proactive strategy towards sustainability is found to make PMS more sophisticated in terms of its capacity to generate financial implications of sustainability performance. Also, those pursuing a proactive strategy tend to rely on seeking assurance on the organizational cultural cognition of sustainability as well as the adherence of internal policies. Other differences in control design is also noticeable both amongst firms pursuing the same strategy or different strategies. For instance, financial rewards tend to play some role in some firms pursuing a proactive strategy whilst in others financial rewards for sustainability are not warranted. Thirdly, all firms, irrespective of their strategic approach emphasized the role of cultural controls. Fourthly, the findings provide anecdotal evidence of the underlying interdependencies amongst different control mechanisms. And finally, a given strategic orientation dictates whether a firm is pursuing a mechanistic approach to sustainability or otherwise. This was evident from both organisations that are currently at the efficiency stage relying on a centrally enforced sustainability agenda controlled largely through planning and PMS mechanisms but attempting to proactively mobilise cultural controls to ensure organizational participation towards sustainable practices.

On light of these findings, it is beneficial to survey a larger number of organisations to explore how strategic orientations give rise to control clusters (Bedford et al., 2016). There is an observable tendency from the interview findings that certain control mechanisms systematically operate as a cluster based on certain contextual approaches (Chenhall and Langfield-Smith, 1998; Bedford and Malmi, 2015). Referring to the logic of internal

consistency, a statistical analysis will provide deeper insights into how internal consistency is achieved within control clusters. Do control clusters achieve internal consistency based on a control primacy (Sandelin, 2008) or do loosely coupled control elements come together to promote sustainability outcomes? (Abernethy and Chua, 1996). The interviews provide evidence of the primacy of cultural controls over other formal controls as well as the interdependencies amongst different control types. Several such questions arising out of the package perspective of controls may be answered by employing statistical measures. For instance, a control configuration study will facilitate the understanding of how control clusters are formed indicating whether the controls remain loosely coupled or otherwise and any interdependencies thereof. The configurational approach to studying the relationship between controls for sustainability strategy will also provide evidence of how different formal controls combine with informal controls for certain strategic orientations and whether strategic orientations influence a mechanistic or organic approach to controlling for sustainability. On light of these possibilities, a survey instrument needs to be developed which is the second aim of this research. Additionally, the findings from the qualitative phase is not generalizable beyond the interviewed samples. As Flick (2002) explains, the term 'generalisation' in research refers to the extent to which the findings are valid or applicable beyond the context of the study. In qualitative research, the discussions made, and the inferences reached through the analysis of data, are context-specific and based on the subjective perspectives of the participants. As Flick notes, "this attachment to contexts often allows qualitative research as specific expressiveness" (2002, p. 230). As Creswell emphasises, "the value of qualitative research lies in…*particularity rather than generalizability"* i.e. "on the particular descriptions and themes developed in context" of the study (2009, p. 193). The purpose of the interviews as the initial phase of the mixed methods study was to obtain context-specific, rich and meaningful insights from organisational settings to understand *how* controls are designed and used. These insights inform the subsequent development of the survey instrument which is the focus of the penultimate chapter.

7.16 Conclusion

This chapter primarily focused on answering the first research aim which is to explore how sustainability strategies shape management controls for sustainability and facilitated the fulfilment of the second research aim, i.e. to aid in the development of a survey based on the insights from the interviews. The chapter began by providing an overview of the data collection

method adopted for this phase of the project. It also focused on the role of the researcher as well as the process by which the questions for the interview guide was developed. Next, there was a discussion on the approach to analyzing the data and how NVivo facilitated the process. The findings were presented next. Firstly, the type of strategies pursued by the sampled organisations were identified, followed by the presentation of the key findings pertaining to each of the control mechanisms that inform the control package framework. This was followed by the presentation of key findings exploring control interdependencies and the rationale for companies to adopt a multiple of controls. A discussion based on the findings ensued. The discussion explored how strategic contexts may shape management controls in terms of its design while also looking at its influence on control use of PMS. The discussion led on to the identification of a pattern emerging from the findings on how specific strategic orientations may give rise to particular configurations in which management controls may exist. The chapter concluded by providing a critique of the contingency theory and its appropriateness to study management controls for sustainability strategies amongst other aspects.

CHAPTER 8

PHASE 2 – Questionnaire Analysis

8.0 Introduction

On the basis of the core insights emerging out of the interviews as well as key insights from the literature, the primary aim of this chapter is to develop a survey instrument on the basis of these aspects. In essence, Chapter 8 fulfils the second research aim. This chapter focuses on explaining the process undertaken to develop the survey and to validate it with key experts from within the fields of management controls and sustainability. Furthermore, the chapter focuses on the data collection strategies to collect survey results. The chapter concludes by providing a brief discussion from insights emerging from a two-cluster analysis.

8.1 Scale Development and Questionnaire Design

8.1.1 Scale Measurement Development

The survey development phase (see Graph 3) followed a structured approach that began by defining the construct and its domain(s), followed by collecting items and associated measurement scales from as many as thirty-one articles spanning across sustainability control, sustainability strategy as well as management control literature (see appendix9a).A spreadsheet was used to collect and identify suitable items for direct use or adaptation. To aid in the instrument development process, the key aspects of each control system were revisited and mapped. For instance, for cultural controls, key highlights from each of the reviewed literature, theframework as well as findings were mapped to derive at different dimensions that capturedthe relevant aspects of cultural controls for sustainability (see Appendix9b for the final model). The process was repeated for each control mechanism. Thiswas followed by revisiting the items pool to identify any suitable items from already available survey instruments. Wherever appropriate, the items were directly used as identified or modified to suit the purpose of the current study. New items were also createdwhere necessary. Interview statements were adapted in these instances to inform the development of each of the new items used in this survey, wherever relevant.This stage was followed by item editing and retention (Churchill, 1979; Hardesty and Bearden, 2004). The overall scale development process closely followed Churchill (1979) guidelines for instrument development. The objective was to develop a comprehensive survey that considers different domain areas (where appropriate) to study a given control construct.
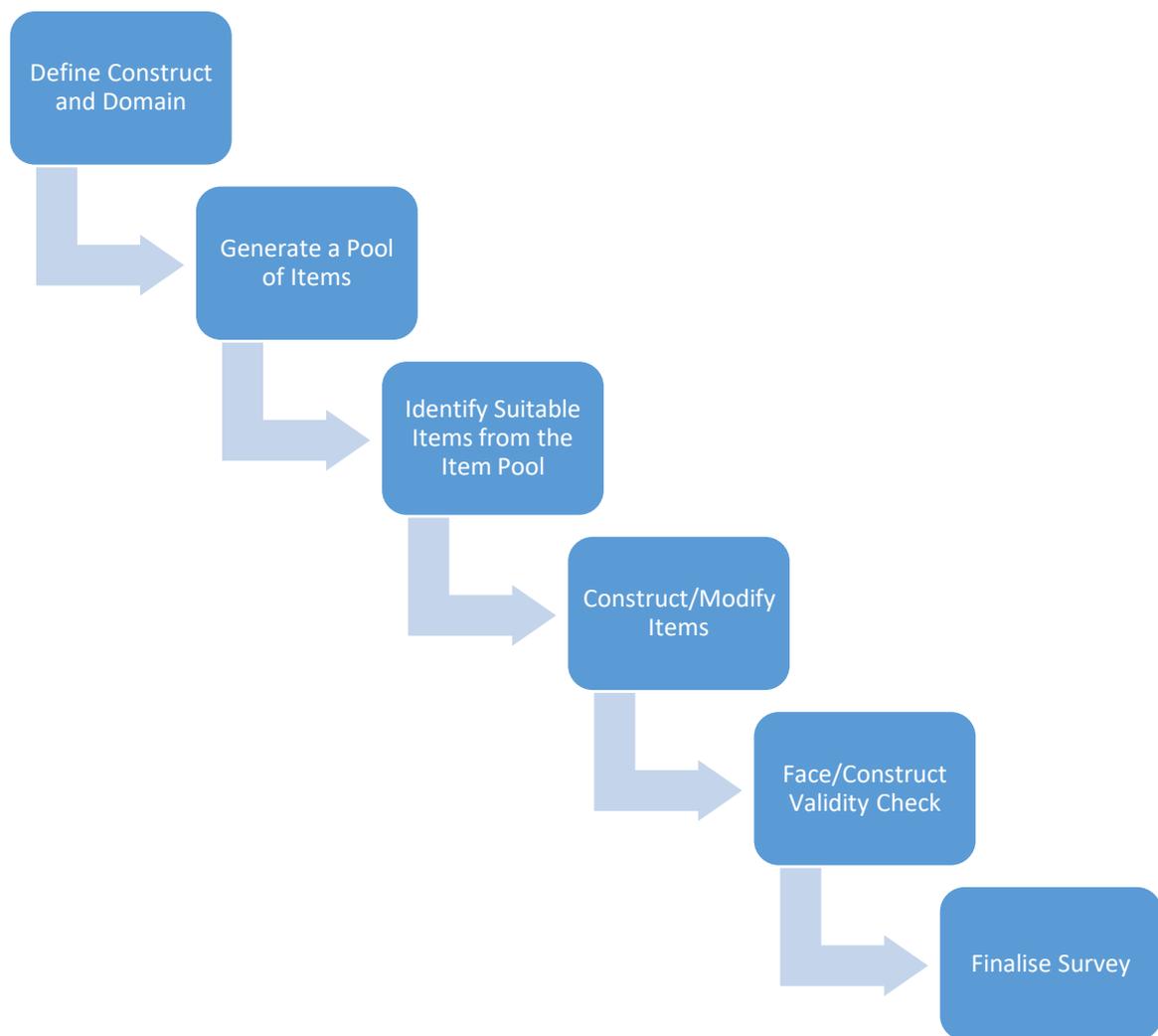
Graph 3: Survey Development Process

Once the initial list of suitable items was generated, the content validity of these items were undertaken. Both practitioners, as well as academics who are experts in the fields of management controls and sustainability,were recruited for this purpose. In other words, these experts acted as judges to assess how closely the items defined the theoretically derived domain areas of each construct (Hardesty and Bearden, 2004) and to ensure a group of items measure the same content (Rubio et al., 2003).This is an essential step in the scale development process as it ensures that the items reflect and truly measure a given theoretical construct (including each domain area) as these would be used in statistical analysis to draw final inferences based on sample data (Hardesty and Bearden, 2004). The table 13 below indicates the designation of each of the participants validating the items. Overall, nine individuals took part in the content validity process.

Practitioner 1	Finance and Sustainability Director
Practitioner 2	Director, A Top Sustainability Consultancy Firm
Practitioner 3	Sustainability Expert, Speaker and Consultant
Academic 1	Sustainability Expert
Academic 2	Sustainability Expert
Academic 3	Sustainability Expert
Academic 4	Management Control Expert
Academic 5	Management Control Expert
Academic 6	Management Control Expert

Table 13: Construct Validity Participants

Based on Rubio et al. (2003) recommended guidelines, objective measures were used in the validation process. Each expert was contacted by email and received a copy of the model, a project brief, the draft survey instrument as well as a feedback form (see appendix9c). The draft survey instrument that the experts received is available in appendix 9d.

The content validity was assessed on the following aspects:

I.Representatives measured how each survey item clearly represents the theoretical definition or the domain area within each construct that is measured.

1= item is not representative

2= items need major revisions to be representative

3=items need minor revisions to be representative

4=item is representative

II.Clarity measured how clearly each survey item is worded and if it is easily understandable.

1= item is not clear

2= item needs major revision to be clear

3= item needs minor revision to be clear

4= item is clear

Experts were asked to rate each item based on the above criteria. Experts were also requested

to comment on the comprehensiveness of the items measuring a theoretical domain area as well as the appropriateness of the scale measurement.

III. Comprehensiveness –Experts were asked to evaluate the comprehensiveness of the items measuring a theoretical domain area by indicating if any items need to be deleted and added.

IV. Scale Measurement - Experts were asked to provide any feedback on whether the questions and the measurement labels are adequate and relevant.

Based on the validity feedback, several changes were made. Except for a few questions as listed in appendix 9e, no other items scored 3 or less on clarity and representativeness. With regards to comprehensiveness, experts advised on adding several other questions as detailed below. How the feedback was incorporated is stated within the sections below, about each control mechanism. A summary of the critical feedback is available in appendix9f. With regards to the overall layout and design, the feedback was overall positive as evidenced by the following statements. "I would reiterate that the overall layout of the survey is good and the questions are relevant and clear" (Practitioner Expert). "All the questions are very clear – well done; that's often not easy to achieve!" (Practitioner Expert).

8.1.2 Developing Construct Scales

8.1.2.1 Measuring cultural construct: This study proposes cultural control to be measured as a multi-dimensional construct. In prior studies, the measurement was limited to quantifying cultural control through its belief and socialisationbased dimensions (for instance, Henri and Journeault, 2010). However, it was also apparent from the interviews that additional dimensions are also required to measure the concept holistically. It was apparent from the interviews that the focus is to drive sustainability making it everyone's responsibility. Consequently, the additional dimensions of workforce empowerment (measuring whether the workforce is currently encouraged to look out for and share new ideas and opportunities for sustainable business practice); shared value (measuring the extent to which sustainability is practiced as a collective approach internally) as well as selection controls (extent to which candidates are recruited on their knowledge of sustainability) are included as part of the multidimensional approach to measuring cultural controls for sustainability. To measure organisational level practice towards selection/personnel based controls (Merchant and Stede, 2007), the appropriate items are adapted from Bedford and Malmi (2016) and Jose and Jabbour (2011) survey instruments. To measure the belief based, socialisation as well as shared value

dimensions,the survey items aretaken from Widener (2007), Bedford and Malmi (2016) and Jose and Jabbour (2011). New items are developed for measuring workforce empowerment. The new items measured the extent to which the workforce is encouraged to explore opportunities and share ideas for sustainable business practices. Relevant interview statements informed the development of these new items. Based on expert feedback, some words in particular statements were either changed or put in bold to give more clarity or emphasis. For instance, for items under question 5 that measured selection/personnel based controls, based on expert advice, the word "select" was replaced by "recruit". To make the domain shared value more comprehensive, one expert advised adding a question to identify if there are barriers to exercising stated company values on sustainability. Although this item adds value and makes the measure more comprehensive, yet, due to the open nature of the question, this was not included. Similarly, a recommended open-ended question to solicit responses on examples of ideas emerging from the workforce was not added to measure the domain area of workforce empowerment. Open-ended questions have been deliberately excluded from the questionnaire to limit the overall number of questions as well as ensuring that participants do not leave the questionnaire without completing in full.

Question/Items	Domain Areas for Culture	Definition
1a-1d	Belief	Measures the extent to which sustainability values/beliefs are relied upon and incorporated in mission, vision or value statements.
2a-2d	Socialisation	Measures the extent to which the organisation relies upon different means (for instance training, communication etc.) to ensure workforce alignment with organisation's sustainability value, goals and objectives
3a-3d	Shared Values	measures the extent to which there is a collective understanding of sustainability goals, values amongst the workforce
4a-4b	Workforce Empowerment	Measures the extent to which workforce is given the freedom to look out for opportunities and share ideas

5a-5b	Workforce Recruitment/Value Alignment – Selection Controls	measures the level of emphasis placed on recruiting candidates on their sustainability credentials

Table 14: Culture Construct

*8.1.2.2 Measuring strategic planning construct:*Similar to the approach for cultural construct, strategic planningconstruct was also developed as a multi-dimensional construct. The first domain area consisted of items that measures how comprehensive the approach to planning for sustainability is, or in other words, the extent to which sustainability is integrated with the planning mechanism. This domain area has featured extensively in prior survey instruments (Judge and Douglas, 1998). Secondly, the nature of sustainability goals is measured in relation to whether the goals are quantitative or qualitative in nature. The literature has alluded to the fact that companies use quantitative goals and targets to plan for sustainability (Lee, 2012) whereas one of the sample companies mentioned about the use of qualitative targets rather than explicit quantitative goals. Hence, it was deemed necessary to capture both approaches. Thirdly, based on both the literature as well as the interview data on institutional context analysis to better understand the circumstanceswithin which the company operates, a three-item measure is adopted. These items typically measure, the extent to which analytical techniques are used as well as the extent to which the company assesses its internal capabilities and capacities. This domain area broadly mimics Galbreath (2010) instrument. Fourthly, the extent to which a company adopts a participatory style when planning for sustainabilityis also measured. Specifically, this area of the domain measures the extent to which external inputs from stakeholders as well as internal inputs are solicited in the planning mechanism. Soliciting inputs from external as well as internal stakeholders has featured steadily in past research instruments (Galbreath, 2010; Walker, 2015). Additionally, one other question was initially included within the planning construct that measured the rigour of planning implementation as it was strongly evident from the interviews that proactive companies had measures in place (e.g. templates) to ensure sustainability plans were duly rolled out and implemented. However, based on expert feedback this item was removed from the final survey document owing to possible bias in response. A number of feedback was received from experts that ranged from enhancing the clarity of a given question (by changing a word or a phrase or truncating a question). Additionally, the ordering of some questions within the first domain area was made to improve readability. There was also a comment on the validity of the question that measured organisational reliance on "written plans" to drive sustainability goals and targets. However,

the question was retained because arguably, some companies will have written plans for sustainability while some others may not.

Question/Items	Domain Areas for Planning	Definition
6a-6g	Planning Depth	Measures the depth of planning for sustainability or how comprehensive is the approach to planning for sustainability
7a-e	Nature of Goals	Measures whether goals for sustainability arising out of the planning process are quantitative and/or qualitative in nature. Also identifies the temporal dimension of the goals.
8a-8c	Institutional Context Analysis	Measures if (the extent) the organisation undertakes an analysis of the external and internal context within which it operates to plan for sustainability
9a-9d	Participatory Approach	Measures the extent to which the organisation relies on inputs from different stakeholders as well as functions/units to plan for sustainability

Table 15: Culture Construct

*8.1.2.3 Measuring Budget construct:*As indicated earlier, research into the role of budgets for sustainability is still emerging informed primarily through conceptual advancements (Roth, 2008). For this study, budgetary controls for sustainability is measured through three different dimensions. It was apparent from the interview data that organisations are increasingly considering sustainability within their investment plans and business units are expected to plan for financial resources as part of their budgeting cycle. To measure the participatory approach, four self-developed items are used. These items relate to the role business units and non-management workforce play in the development of budgets for sustainability. Interview statements were adapted to inform the development of these new items. Additionally, the level of integration with budgetary practice was measured using items adapted from Henri and Journeault (2010) and Christ and Burritt (2013). A single item measure was developed to measure how reliant sustainability funding is on financial performance. This dimension was influenced by the fact that those companies that are proactive in nature may not limit funding

for sustainability in times of financial duress as sustainability is "embedded" within management controls. Furthermore, prior research has indicated that financial performance has an influence on budgetary considerations for sustainability (Virakul et al., 2009). However, previous research (survey instruments) have extensively focussed on the single dimension of how integrated sustainability is with budgetary controls (Henri and Journeault, 2010; Christ and Burritt, 2013), overlooking considerations for financial performance implication as well as the participatory aspect of budgetary controls. The findings have provided evidence of the strategic implications of unit level participation and hence is deemed significant as a measure of budgetary controls holistically. Based on expert feedback on content validity, some words were changed to enhance clarity.

Question/Items	Domain Areas for Budget	Definition
10a-d	Integration with Budgetary Practice	Measures if sustainability related aspects are integrated/incorporated within budgetary practices (e.g. importance attached to sustainability related criteria for capital investment decisions etc.)
11a-d	Participatory Approach	measures the level of unit level and non-management participation in the budgetary planning process
12	Financial Performance Implication	Measures the extent to which sustainability budgetary allocation is immune from financial crisis/shock

Table 16: Budget Construct

8.1.2.4Measuring Performance Measurement construct:The performance measurement construct is composed of five domain areas. Firstly, the level of PMS sophistication is measured by four self-developed items that captures whether the PMS routinely generates information related to compliance, resource-efficiency, product development as well as financially quantifiable aspects of sustainability performance (e.g. cost of wastage). The second domain area relates to the use of KPIs in internal decision-making as opposed to KPI use solely for the purposes of reporting as has been discussed in the literature (Adams and Frost, 2008; Staniskis and Arbaciauskas, 2009). The domain is measured by 8 items that capture whether the KPIs are used for internal decision-making purposes (for e.g. in aiding continuous development, evaluate unit level performance in relation to other units etc.). Two items were adapted from Perego and Hartmann (2009) while the remaining were self-developed. A single item measure was adopted to measure the extent to which integrated performance measurement

systems (BSC) is used to monitor sustainability performance. The remaining two domain areas capture the extent to which sustainability KPIs are jointly developed in association with stakeholder groups, both internal and external as well as the use of KPIs by the TMT. The literature has highlighted that participatory approach to developing KPIs aids in designing contextually informed KPIs that possess greater informative properties(Adams and Frost, 2008). The ultimate domain area measures interactive use of KPIs, i.e. whether top management directly monitors key sustainability KPIs. The items were taken from Abernethy and Brownell (1999). Based on expert feedback on content validity, some words were changed to enhance clarity.

Table 17: PMS Construct

Question/Items	Domain Areas for PMS	Definition
13a-d	PMS Sophistication	Measures the depth and sophistication of PMS to measure sustainability related KPIs
14a-h	Use of Sustainability KPIs for Internal Decision Making	Measures the extent to which sustainability KPIs are used for internal decision making purposes
15	Reliance on BSC	Reliance on BSC/tabloids
16 A-b	Participatory Approach	Measures the extent to which the organisation develops sustainability KPIs with inputs from stakeholders and units
17 a-f	Interactive use of KPIs	Measures the extent to which top management uses PMS in an interactive manner or in other words, if top management personally monitors sustainability performance

*8.1.2.5 Measuring Rewards and Compensation construct:*Several different domain areas are used to measure the rewards and compensation construct. Firstly, scholarly and empirical reviews have indicated the possibility of rewards existing at different organisational levels, from TMT to non-management employees (Epstein and Wisner, 2005; Masanet-Llodra, 2006). Secondly, the literature as well as empirical data from the interviews have pointed out the prevalence of both financial and non-financial forms of rewards. Thirdly, both objective and subjective determination of rewards were noticeable from the interviews. Fourthly, the literature has distinguished between short-term and long-term pay (Berrone and Gomez-Mejia, 2009). However, the study on rewards as a controlling mechanism through surveys has been rare and typically measured whether managers were assessed on their ability to deal with external stakeholder issues as well as if environmental factors were considered as part of the remuneration package (Morris, 1997; Henri and Journeault, 2010). In other words, prior studies did not measure if rewards for sustainability are associated at different organisational levels or the type of reward that is on offer. This study considers four broad domain areas. The reliance on financial incentives across four organisational levels (top, middle and lower management as well as non-management employees) are measured using a single item. Likewise, the use of non-financial incentives across the aforementioned organisational levels are measured using a single item. To determine the extent to which organisations rely on a. objective assessment and b. subjective assessment to reward employees using any of the modes,two items are used that measure, for instance, whether sustainability KPIs are used for determining rewards either financial or non-financial in nature.This study also measures whether sustainability affects the long-term pay of top and middle management. All the items are self-developed. Based on expert feedback on content validity, some words were changed to enhance clarity.

Question/Items	Domain Areas for Rewards and Compensation	Definition
18a-d	Financial Compensation at Different Organisational Levels	Measures the reliance attached to financial compensatory practices to manage sustainability
19a-c	Non-Financial Rewards at Different Organisational Levels	Measures the reliance attached to non-financial reward practices (e.g. Recognition based, awards, promotions, tokens) to manage sustainability
20	Sustainability Performance Affecting Long Term Pay	Measures if (the extent) sustainability performance affects the long term pay of top and middle management

21	Individual Compensation/Reward Assessment Approach	Measures the approach undertaken to assess individual performance based on sustainability performance (if objective, subjective or both)

Table 18: Reward Construct

*8.1.2.6 Measuring Governance construct:*Overall five different domain areas are explored for this construct. Although from the interviews, it was apparent that committees did not play any role in the sampled companies, nonetheless the first domain area measures the extent to which TMT and BoD relied on committees and expert groups for sustainability related decision-making purposes. Several studies have found the existence of such committees with varying reports on their effectiveness (Spitzeck, 2009; Klettner et al., 2014). Additionally, Klettner et al. (2014) reported that it was more probable that strategic matters related to sustainability are more likely to be discussed by TMT/BoD as opposed to a sole focus on compliance in companies pursuing a proactive strategy. A two-item measure was created to capture the importance attached to discussing compliance and strategic matters. Thirdly, based on the interview evidence that all companies had an established reporting relationship on sustainability matters with Executives while with BoDs in some instances, the third domain measured the frequency of reporting captured by a two-item measure adapted from Ittner and Larcker (1998) instrument. The final two domain areas measures the significance attached to policies and codes as means of controlling for sustainability as well as the nature of assurance seeking activities undertaken. The items for the former was adopted from Journeault et al. (2016) while the items for the latter was self-developed. The only change that followed expert advice was made to provide clarity on the "level" of management (e.g. top management v/s BoD).

Question/Items	Domain Areas for Governance	Definition
22a-c	Role of Experts/Committee/Decision Support	Measures the level of support top management receives to make decisions on sustainability
23a-b	Topic of Discussion at TMT Level	Measures whether the top management discusses only compliance related aspects or otherwise i.e. aspects of strategic importance

24a-b	Reporting Frequency	Measures how frequently the top management receives reports on sustainability related aspects
25a-b	Reliance on Codes/Policies	Measures the extent to which the organisation relies on codes and policies to drive the sustainability strategy
26A-E	Assurance/Verification	Measures the extent to which the organisation undertakes a range of audit/verification practices to manage sustainability

Table 19: Governance Construct

*8.1.2.7 Measuring Organisational Design and Structure construct:*This construct is designed to be measured by three domain areas. Firstly, a list of five different structural forms was generated that included reliance on a matrix approach, functional approach (includes separate departments for sustainability as well as embedded with other functions), divisional approach, as well as an informal structural approach. It is measured by nominal variables (Yes/No questions). Secondly, the other dimension measures the extent of reliance on cross-functional activities to manage sustainability as has been captured in the literature (for instance, reliance on cross-functional meetings, dialogue, collaborations etc., Epstein and Wisner, 2005; Hunt and Auster, 1990). The third domain is formed of four items measuring the types of roles played by sustainability professionals as identified from the interviews. All the items remain self-developed. Previous studies have focussed on measuring importance of cross-functional activities (e.g. Fairfield et al., 2011) while the other two domain areas remained outside of the purview. Following expert feedback, a N/A option was added to the third domain based on the understanding that not all organisations may have sustainability professionals.

Question/Items	Domain Areas for Organisational Structure and Design	Definition
27a-e	Structure Type	Identifies the structural arrangement for sustainability management – 5 different arrangements are identified.
28a-c	Cross-functional/Collaborative Activities/Approach	Measures the extent to which the organisation undertakes a collaborative approach to managing sustainability
29a-d	Role of Sustainability Professional Dynamism	Measures the role of sustainability professionals internally – how dynamic their role is within the organisation

Table 20: Organisational Design and Structure Construct

8.1.2.8 Measuring Sustainability Strategy construct: No prior studies were identified that have develop a sustainability strategy scale to measure the strategic orientations in Benn et al. (2014). 16 items were self-developed on the basis of Benn et al. (2014) descriptors of each of the compliance, efficiency, proactive and beyond proactive phases. In other words, there were four items that were developed to capture the compliance-based strategy, with statements related to this phase adapted from Benn et al.(2014); 5 items to capture efficiency based strategy; another 5 to capture proactive strategy and the remaining 4 to capture beyond proactive approach.

Question/Items	Domain Areas for Organisational Structure and Design	Definition
30a-d	Compliance	Measures compliance based approach to managing sustainability (e.g. adhering to workplace and environmental laws).
30e-i	Efficiency	Measures efficiency based approach to managing sustainability (e.g. resource use optimisation, reduction in wastage etc.)
30j-n	Proactive	Measures proactive based approach to managing sustainability (e.g. engaging with stakeholders, innovation, products based on sustainable principles).
30o-r	Beyond Proactive	Measures beyond proactive based approach to managing sustainability (e.g. promoting sustainability externally, educating, collaborate).

Table 21: Sustainability Strategy Construct

All of the items except for questions 24 and 27a-e are measured as ordinal variables on a Likert scale ranging from 1 to 7 to allow for capturing variability in observation. Question 24 looks at reporting frequency and considers four possible reporting frequencies including no reporting, on an annual basis, twice annually or on a more frequent basis. Questions 27 a-e are measured using Yes/No type check boxes.

*8.1.2.9Control variables:*The study primarily used two control variables. Pondeville et al. (2013) study finds a negative relationship between perceived ecological uncertainty and the development of a proactive sustainability strategy as well as management control systems for sustainability. Pondeville et al. (2013) found manufacturing organisations are reluctant to invest in management control systems for sustainability due to the uncertainties imposed by changes in legislations, and customer preferences of sustainable products. Their study also found that companies are likely to adapt a "wait and watch" strategy than adopt proactive policies for sustainability when perceived ecological uncertainty is high. A three-item measure taken directly from Pondeville et al. (2013) was used to measure perceived uncertainty with the aim of identifying whether perceived uncertainty may have an impact on the ways controls are designed and used. The other control variable used in the study was size captured by the number of employees as well as the total turnover. It has been generally accepted in the literature that medium to large companies will possess sufficient resources to support sustainable practices (e.g. a sustainability department) (Perego and Hartmann, 2009). Hence, capturing the variability in size and its impact on management control was deemed logical. The survey is available in appendix 9g.

8.2 Phase 2 Participant Recruitment

8.2.1 Sample Target

For the first part of the data collection process, Sustainability Directors/Managers were interviewed to explore the control mechanism for sustainability. Although the interview data yielded rich insights and provided the platform to understand controlling for sustainability from first-hand accounts of those responsible for both strategy formulation and implementation, however, given the constraints placed by the lack of databases offering contact data about Sustainability Directors/Managers and the difficulties encountered in the initial search process identifying individuals in such capacities and their contact details, a different approach with new target participants but from the same population was deemed essential for conducting the survey.A close review of survey-based studies exploring controls for sustainability as well as sustainability strategies indicate the prevalence of surveying the TMT (Pondeville et al., 2013; Journeault et al., 2016; Galbreath, 2010; Tan and Tan, 2005; Perego and Hartmann, 2009; Aaragon-Correa, 1998; Christmann, 2004). The rationale for selecting TMT (for instance CEOs, Directors) for research about sustainability has been primarily because of their holistic knowledge of the organisation as well as the strategic approach and information accessibility

(Galbreath, 2010; Aaragon-Correa, 1998; Tan and Tan, 2005). Additionally, other considerations for surveying TMT also demand reflection. For instance, not every organisation from the population may have a formal position for sustainability that is easily identifiable. Non-inclusion of such companies in the survey may lead to issues associated with sample bias, sampling as well as coverage errors (Dillman et al., 2014). For instance, in such organisations, a more informal approach primarily led by TMT may be more observable and significant. As the current research strives to explore how a range of different control mechanisms support sustainability strategies, the non-inclusion of such organisations would present a biased result. Furthermore, based on the UK context, prior research has also identified TM as one of the primary drivers of sustainable practice, making them an equally suitable choice for completing the survey questionnaire (Ghosh and Herzig, 2014). Considering the aspects, surveying the TM was deemed appropriate.

As table 22 summarises, the sample frame consisted of 800 companies with the names, emails, addresses of CEO, FD, MD and other top level directors drawn from FAME and also obtained from Experian. The contact details of any one of the TMT per company was obtained. These 800 companies were included in the initial list of the target population of 1700 medium to large sized UK manufacturing firms. Please note, the researcher had emailed the company names of 1700 firms included in the list to the Account Manager at Experian for them to draw a match for available details.

Target Population
1700 medium to large sized UK based manufacturing firms
Topic
Management controls design and use for sustainability strategies
Sample Frame
List of names, emails, addresses of CEO/Sustainability Director/Manager drawn from FAME and provided by Experian of 800 companies.
Budget
£1800 approximate (Seed Corn Funded)
Timeline for survey data collection
3 months

Table 22: Survey Characteristics: Adapted from Dillman et al. (2014)

8.2.2 Response Rates and Inducement Factor

Prior research has described surveying TMT as a "risky" strategy (Bednar and Westphal, 2006, p. 37) associated with the lowest response rate amongst the institutional informants participating in surveys (Baruch and Holtom, 2008; Fan and Yan, 2010; Bednar and Westphal, 2006; Anseel et al., 2010).However, as Baruch and Holtom (2008) observe, research with TMT respondents with the low response is still acceptable because of the understanding within the academic community of the challenges associated with data collection (Bednar and Westphal, 2006).

In the context of sustainability research, previous studies indicate a tendency of a response rate as low as 10% (Galbreath, 2010; Pondeville et al., 2013). It appears that for recent studies within the sustainability field eliciting survey based responses from top management level participants, the response rate has ranged between 10% to 18% (Steyn, 2014; Varenova et al., 2013) with a response rate of 10% considered adequate (Galbreath, 2010; Widener, 2007). Various reasons have also been noted for non-participation resulting in low response rates including the failure to reach out to the target population, general reluctance for participation (Baruch and Westphal, 2006), over-surveying (Weiner and Dalessio, 2006), company policy against surveys as well as lack of interest in the topic surveyed, the unavailability of return address (Fenton-O'Creevy, 1996) and request for issues that are considered sensitive (e.g. environmental performance) (Pondeville et al., 2013; Bednar and Westphal, 2006). Hence, to ensure adequate participation and generate a high response rate, different response inducement factors were considered. Higher response rates yield better statistical power informing credible research outcomes reflective of population characteristics whileminimizing the bias inherent in analysis undertaken with lower responses (Shih and Fan, 2009; Baruch and Holtom, 2008). Additionally, a more substantially completed sample size would permit the detailed examination of subsets and their characteristics about different variables that are central to the study (Cohen, 1992). However, Rogelberg and Stanton (2007) note the lack of clarity over what constitutes a high degree of non-response rate. Some response inducement factors, as well as response inducement strategies, have been investigated including pre-notification, follow-ups, topic saliency, incentives, free-to-post return envelopes, sponsorship as well as personalization.

The use of such response inducement factors and strategies are deeply grounded in different theoretical bases and as such these theories have received extensive attention from research methods scholars. For instance, the tailored survey design method covering all aspects of

surveying from its inception to implementation is deeply grounded in the social exchange theory that looks to minimising the costs to participants while maximising the perceived rewards and trust (Dillman et al., 2014; Bednar and Westphal, 2006). Moreover, as such the method has found increasing application by sustainability researchers (Norheim-Hansen, 2016). As the name suggests, the method is based on customising the survey process by relating it to different aspects including the resource constraints within which the survey is undertaken, the overall goal of the survey and the targeted population. The objective is to minimise the total survey errors and to elicit a high response rate thereby also reducing non-response bias. The method is based on creating a synergy between individual aspects of developing and implementing the survey with a view of making it work holistically to achieve the end objective of generating a large quality response in a planned fashion by customising it to the nature of survey undertaken. In general, the method considers the interests of participants and the design reflects this as the questionnaire thus developed informed by participant concerns are "respondent-friendly" (Dillman et al., 2014, p. 21).

A number of response inducement factors were adopted as means to reduce the costs, enhance rewards and build trust and to elicit a high response rate from a demography that is considered hard to reach. Similar to Cycyota and Harrison (2006) findings, Anseel et al. (2010) emphasise the significance attached to communicating the topicality of the area studied as topic saliency is identified as a major response inducement factor that results in increasing the benefits to the TMT informant. It is hoped considering the increasing interest in sustainable business practices and the increased attention personally given to sustainability by top management especially in the UK business context, the current survey will appeal to the targeted TMT respondents. It is also worthy to note that management controls for sustainability have featured prominently in practitioner focused conferences (e.g. Ethical Corp, London, 2017). Greer et al. (2000) found topic saliency as the primary inducement factor followed by the study sponsorship. Sponsorship is grounded in the legitimacy theory of social exchange whereby there is a need to develop trust between the researcher and the participant. Sponsorship by a relevant institution signals the significance and validity of the research thus undertaken and enhances the assurance that ethical and professional standards will be upheld (Bednar and Westphal, 2006). Fan and Yan (2009) pointed out that university sponsorship is a better driver of legitimacy than commercial sponsorships. And as such NTU branded stationary was used in the survey. Additionally, Sauermann and Roach (2013) found that personalisation enhances the response rates. Dillman et al. (2009) note that a personalised approach was effective in

conveying to the informants of the importance attached to their participation as well as facilitate developing a relationship between the participant and the researcher to break the barrier. Although, personalisation increases the cost (time) of undertaking the survey, nonetheless, efforts were made to address the targeted participants using their surnames with appropriate salutations and hand signed letters. Greer et al. (2000) also pointed out to the need to include postage paid return envelopes to minimise the cost to the respondents and as such this has been ranked the third most significant inducement factor. Guided by thetheoretical premise of social proof, Bednar and Westphal (2006) also recommend emphasizing prior participation by others in a similar position as the respondents as means of enhancing the credibility and significance of the research. This inducement factor was found be a significant driver with some 40% increased chances of eliciting a response from top management (Bednar and Westphal, 2006). Emphasis was given to the fact that several Sustainability Directors have already participated in the survey in communications with targeted participants to signal the credibility of the study and enhance the legitimacy. Several studies have found contradicting the evidence of the use of follow-ups as an inducement factor (Shih and Fan, 2009; Greer et al., 2000). Moreover, precisely where TMT is the targeted respondents, both Baruch and Holtom (2008) and Anseel et al. (2010) found that the use of follow-ups resulted in lower response rates while Cycyota and Harrison (2006) found no evidence of the use of follow-ups as an inducement factor at the TM level. Considering the costs associated with personalised follow-ups, only three follow up notifications (by email) towards the end of the survey cycle was planned. The use of incentives is also a very well documented practice (Greer et al., 2000; Baruch and Holtom, 2008; Bednar and Westphal, 2006). While financial incentives are not possible due to the budgetary constraints, non-financial incentives in the form of sharing of the findings report was provided. Bednar and Westphal (2006) point out that an unconditional promise of sharing findings, i.e. non-contingent on completion resulted in 96% increase in response rate amongst the TM echelon (Baruch and Holtom, 2008; Millar and Dillman, 2011). Simultaneously, the researchers found that the quality of response was significantly enhanced where non-contingent promises were made possibly due to the need to reciprocate and extra effort was devoted to the completion of the survey.

Regarding how the survey was administered, the study followed the arguments put forward by several prominent methodologists promoting the mixed modes (that include both paper and web based) approach (Millar et al., 2009; Smyth et al., 2009; Tarnai and Paxon, 2004). The benefits arising out of offering a choice to the respondents have been significantly noted. For

instance, some respondents may have a preference for certain type of data collection technique (e.g. web-based or paper-based). Prior studies have also found that a web-only survey typically associated with a lower response rate relative to a mail survey (Manfreda et al., 2008). Also, the increasing use of spam filters may block the delivery of invitation emails with links to the survey resulting in coverage error (Fan and Yan, 2010). By undertaking a mixed modes survey (where both online and paper based surveys are used), the response rates may be improved as the choice might appeal to a larger number of targeted respondents and overcome the other noted drawbacks. Dillman et al. (2009) recommend offering a sequential choice that begins with the web or online survey followed by a postal survey to benefit from the advantages of both modes of the survey. The advantages of a web-based survey are plenty including its cost-effectiveness, transmission and delivery efficiency, SPSS friendly output without the need for researcher intervention to manually input data and the option to complete the survey using a range of online capable media including smartphones and tablets (Fan and Yan, 2010). In this study, the sequential mode was opted that beganwith an invitation for the online survey followed by a mail-out package. The online invitation was sent through the university email (using mail-merge functionality), explaining the rationale for the study along with associated details. The email was personalised to include the surnames and salutations of the addressed. The mail-out package consisted of a personalised cover letter on the University branded letterhead, a Participant Information Sheet, a Consent Form, the questionnaire as well as a free to post return envelope. An additional feature of the personalisation included hand-signed cover letters by the researcher (Sauermann and Roach, 2013). The mail-out package was posted two weeks after the online invitation.

Other inducement factors included the design and appearance of the questionnaire which included the use of bright colours to make the questionnaire visually appealing (Greer et al., 2000). Visual design properties of contrast and having certain words in bold were used throughout the questionnaire (Dillman, 2014). Chenhall and Langfield-Smith (1998) focused on the visual elements and layout of the survey to ensure the complexities associated with lengthy surveys are minimized and the survey remains appealing to the respondents (De Meyer et al., 1989). Additionally, to make the questionnaire easier to process, the answer spaces (checkboxes) were all standardised (same size) and were made equidistant from one another (Dillman et al., 2014). Certain words were in bold to emphasise their importance drawing the attention of the respondents to the significant aspects that carry meaning. Also, the layout and positioning of the questions were consistent throughout to make it easier for the respondents to

process. Both the paper and online versions were designed by a professional graphics designer. For the online version, the drop-down menu was deliberately avoided due to the problems associated with accessibility as well as partial visualisation and also because only a few options had to be displayed (Gendal and Healey, 2008; Couper et al., 2004).

Dillman et al. (2014) highly recommend considering a holistic perspective informing the design of the questionnaire. The holistic approach not only takes into account the visual cues and appearance that provides meaning beyond words, but also the effect one question may have on the other. In other words, Dillman et al. (2014) endorsed that attention needs to be paid to the order of questions in which they appear in the questionnaire. The approach to designing the questionnaire should follow a logical order where related items or questions that reflect the same topic are groupedtogether. This approach makes it easier for respondents to retrieve the appropriate information cognitively leading to quality response. The questionnaire design takes into account of the question order effects and is grouped by the top-level construct that is measured. Moreover, visual cues are used to segregate one topic from the other. Furthermore, based on Dillman et al. (2014) guidelines, the questionnaire began with the seemingly interesting and easy to complete question to generate and retain interest (Cultural Controls). Thiswas also substantiated by one of the Academic Experts who found the sequence of controls within the questionnaire appropriate.

Regarding ensuring security and anonymity, the questionnaire (both online and postal) were designed not to collect personally identifiable information. For instance, the paper version did not collect signatures but was tracked using pre-assigned numbers. Similarly, the online mode did not collect personally identifiable information but was tracked using a combination of numbers and letters. Additionally, the online survey was hosted on the Bristol Online Survey platform (a JISC undertaking). This platform was chosen because of its compliance with the UK/EU data protection legislation and its UK/EU based server providing furtherlegitimacy and confidence to the participants as this platform has been used extensively for academic research including Post Graduate Research Experience Survey. Over 130 universities use this platform (Nottingham Trent University holds an organisational level license.

Response Inducement Factors Used in this Study

1.	Topic Saliency
2.	University Sponsorship
3.	University Branded Stationary
4.	Personalisation
5.	Free-to-post Return Envelopes
6.	Social Proof – Participation by Others
7.	Unconditional Non-Monetary Incentive
8.	Sequential Multi Modal Options
9.	Questionnaire Appearance, Visual Appeal
10.	Security and Anonymity

Table 23: Response Inducement Factors Used in this Study

Methods used to increase trust	Methods used to decrease cost	Methods used to increase rewards
Use of university-branded stationary	Visual design elements to reduce complexity and ease of use	Topic saliency
University sponsorship		Use of legitimate and trusted sponsor
Contact details of Lead Professor included	Sequential choice of modes	Participation by Sustainability Directors/Managers
Unconditional non-financial incentive	Both paper and web-based options	Findings dissemination in both academic and practitioner based conferences/workshops
Data confidentiality and Security provision	Stamped envelope for return	
Professional design	UK based server for web-based option	Provision for Paper/Web alternative
	Sensitive personal information not solicited	Questions of interest

Table 24: Inducement Factors and Benefits

8.3 Data Analysis

Despite best efforts to gather a large sample size, it seems that the inducement factors did not outweigh the costs of participation, resulting in the generation of only 32 responses at the time of writing this thesis. This represents 4% of the population that was included in the survey. Some reasons put forward for non-participation include lack of time, against company policy as well as non-suitability. Majority of the surveys were completed online. All 32 responses are

retained for a preliminary analysis and this phase of the study is treated as a pilot. It should be noted that there were eight respondents who did not fully complete the study, leaving a maximum of two data fields incomplete. Five of these respondents were contacted by the researcher to obtain the data by email and all the requests were accepted, while in the other three cases, the values were imputed using logical reasoning.

The sample is represented mostly by medium sized companies employing anywhere between 250-1000 employees amounting to 44% of the sample respondents. A further 38% is represented by large firms employing upto 10,000 employees while the sample had 16% of responding companies employing in excess of 10,000 employees. In terms of revenue, the majority of the sample companies earn a revenue in the range between £25million to £500million annually.

Majority of the respondents belonged to the Food, Beverage, Tobacco Product Manufacturing sector amounting to 41% of the sample. This was broadly followed by Chemical Based Products Manufacturers and Wood, Furniture Based Product Manufacturers. The majority of the respondents (53%) were in a role directly related to Sustainability including roles as the Director of Sustainability, Sustainability Managers as well as the Vice President of Corporate Responsibility and Sustainability. The average service duration of the respondents in their current roles amounted to a little over six years. The distributions are displayed in the charts below.
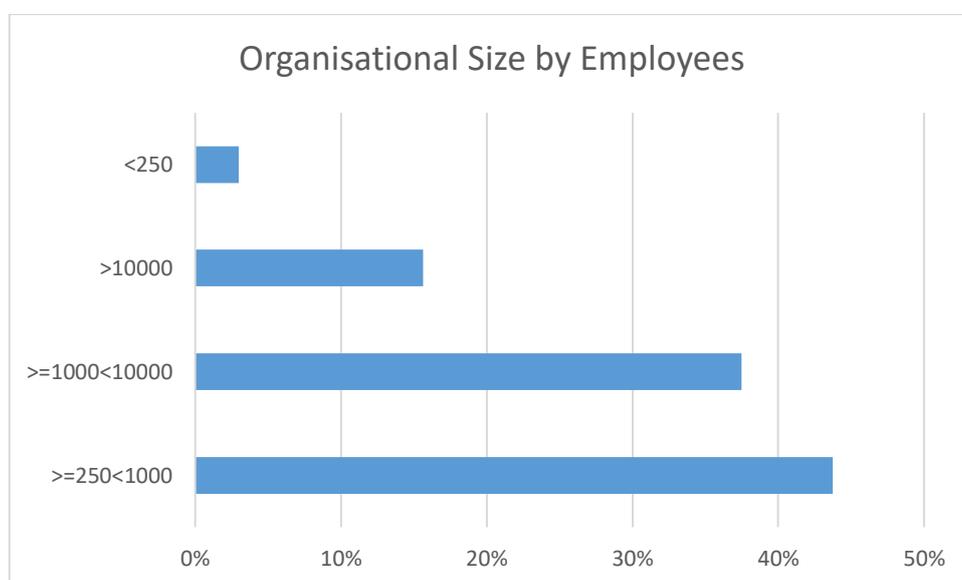
Chart 5: Organisational Size by Employees
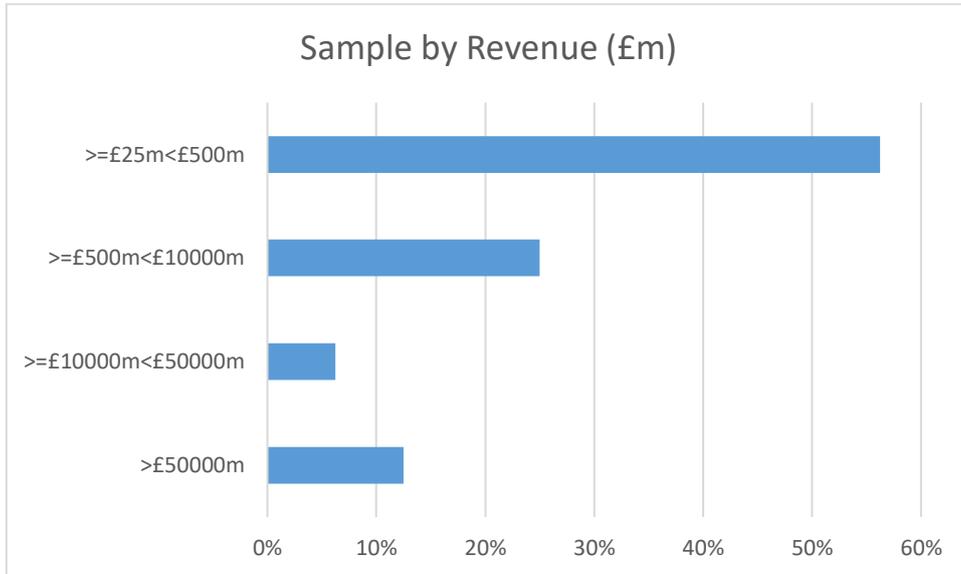
Chart 6: Sample by Revenue
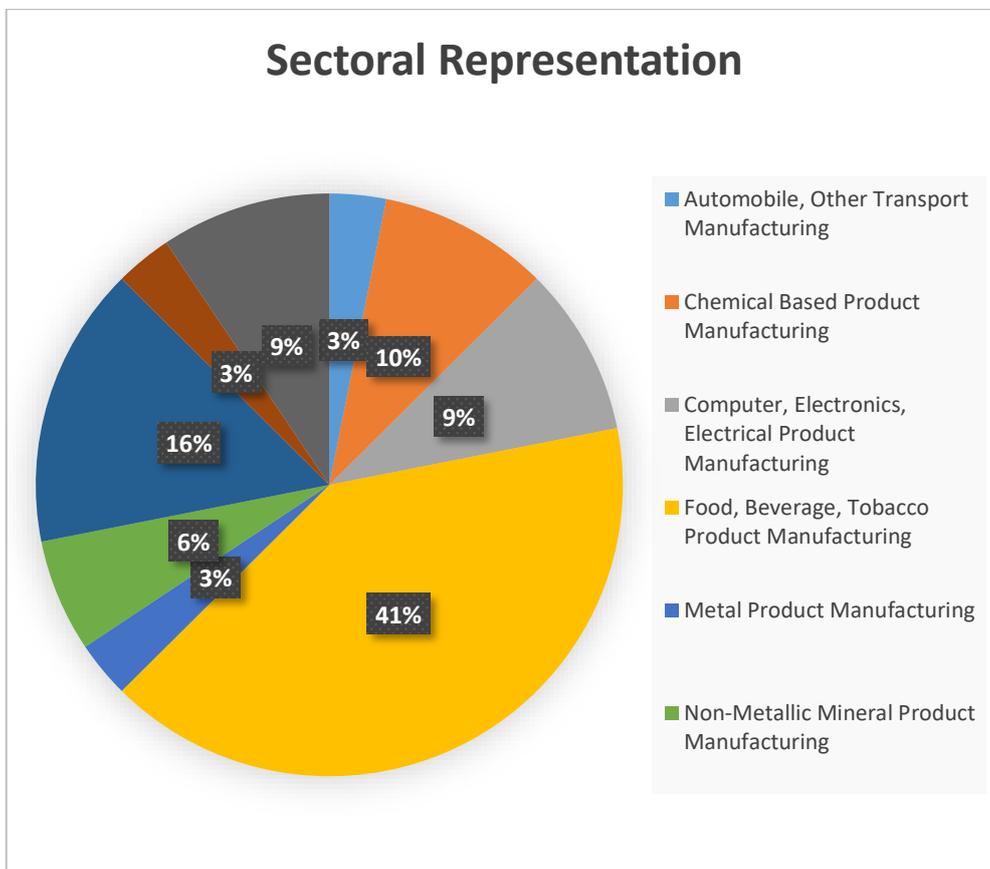
Chart 7: Sectoral Representation
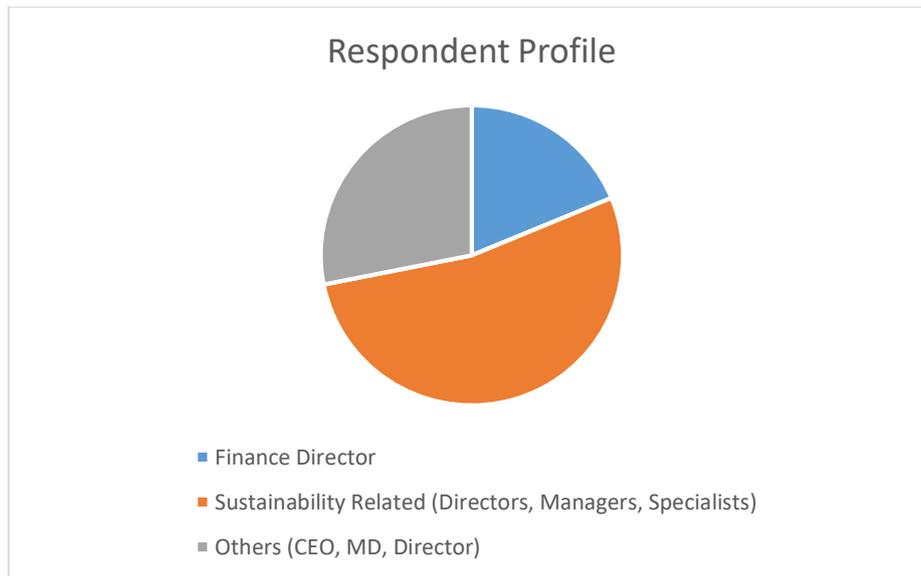
Chart 8: Respondent Profile

Below, firstly, the item reliability is established using Cronbach Alpha followed by a preliminary two stage cluster analysis.

Item Reliability: Continuing with Churchill (1979) recommendation, the Cronbach Alpha calculations using the items for each domain area was undertaken. The alpha measures whether the items reflect the domain that the items are meant to measure. Table 25 shows the calculated Cronbach alpha for each domain area. Initial reliability tests using Cronbach Alphas indicate the reliability of the items in representing a particular domain, using the generally accepted range of .7 -.8(Field, 2013). Only three domains returned an alpha score of less than .7 but were retained due to their very close proximity to the lower threshold (e.g. perceived uncertainty, 6.82). These are highlighted in the table below. However, it has been suggested that for exploratory research, minimum Alpha value of .5 is acceptable (Nunnally, 1978). Furthermore, for domains (Decision Support and Cross Functional Approach), the Cronbach Alpha was recalculated following item after deletion option indicating an improved Alpha score.

Domain Areas/Construct	Cronbach Alphas
Belief/culture	.939
Socialisation/culture	.820
Shared Values/culture	.916
Workforce Empowerment/culture	.958
Selection controls/culture	.843
Planning Depth/planning	.914
Institutional Context Analysis/planning	.729

Participatory approach (planning)/planning	.830
Budgetary Integration/budgets	.818
Participatory Budgeting/budgets	.870
PMS Sophistication/PMS	.758
KPI use for internal decision making/PMS	.892
Participatory approach (KPI)/PMS	**.678**
Interactive use of KPIs/PMS	.952
Financial Rewards/rewards	.863
Non- Financial Rewards/rewards	.981
Long Term Pay/rewards	.907
Decision Support/governance	.922 after 1 item deleted (Decision Support 1 deleted)*
Reliance on Codes/governance	.871
Assurance/Verification/governance	.832
Cross Functional approach/governance	.957 after 1 item deleted (Cross function 3 deleted)
Perceived uncertainty	**.682**
Compliance strategy	**.674** following deletion of Compliance 2
Efficiency strategy	.837
Proactive strategy	.892
Beyond proactive strategy	.904

Table 25: Cronbach Alphas

As an example, the final Alpha score for decision support is derived based on the following two steps. Tables are taken directly from SPSS output.

Decision Support

*Reliability Statistics

Cronbach's Alpha	N of Items
.662	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TMT Dec Support 1	**7.78**	**24.757**	**.086**	**.922**
TMT Dec Support 2	7.66	9.523	.816	-.026[a]

TMT Dec Support 3	7.81	11.254	.651	.285

a. The value is negative due to a negative average covariance among items. This violates

reliability model assumptions. You may want to check item codings.

Table 26: Cronbach Alpha – Decision Support 1

Following the above step, post deletion of TMT Dec Support 1, the alpha score improves to .922.

Reliability Statistics

Cronbach's Alpha	N of Items
.922	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TMT Dec Support 2	3.81	6.673	.854	.
TMT Dec Support 3	3.97	6.676	.854	.

Table 27: Cronbach Alpha – Decision Support 2

Exploring Underlying Structure - Component Analysis:

Moreover, following Churchill (1979) recommendations, an attempt was also made to explore the component structure for each control construct despite the low sample size. In other words, the focus was on identifying the underlying dimensions returned by the variables designed for each construct (Field, 2013). Firstly, the Bartlett Test of Sphericity was undertaken to determine whether the correlation matrix composed of variables representing each control construct (except for Organisational Design and Structure) returns any significant correlations between some or all of the variables underlying a construct. For each of the control constructs (e.g. Culture, PMS except Organisational Design and Structure), the Bartlett's Test of Sphericity was significant indicating enough significant correlations existing between variables to explore underlying dimensions. Additionally, theKMO results were also positive and significant. Following these initial tests, multiple steps were undertaken while conducting the component analysis. For instance, upon the initial PCA, items with a Communality value of less than 0.60 were dropped and the analysis rerun (Field, 2013). Only components with loadings of 0.6 or greater were retained for further exploration into the component structures. However, PCA analysis yielded theoretically relevant dimensions for Culture, PMS, Rewards

and Governance. PCA analysis was not performed on Organisational Structure since firstly, it captures the presence of certain structural arrangements measured as nominal variables, and secondly, the four different roles of Sustainability Professionals need to be explored as single item measures as each item relates to a specific role.

The final results from the PCA are briefly mentioned below.

For PMS construct, the underlying dimensions included Interactive Use of KPIs explaining 56% of the total variance followed by KPI use for Monitoring purposes explaining 11% of the total variance and KPI use for Product Development explaining 8% of the total variance. The question numbers relating to each item is indicated in the table below.

PMS - Pattern Matrix[a]

	Component		
	INTERACTIVE USE	MONITORING	PRODUCT DEVELOPMENT
KPI TMT Use 4 –q. 17d	.967		
KPI TMT Use 5 –q. 17e	.917		
KPI TMT Use 3 – q. 17c	.902		
KPI TMT Use 2 –q 17b	.868		
KPI TMT Use 1 –q.17a	.817		
KPI TMT Use 6- q. 17f	.738		
KPI use 8			
PMS Sophistication 1 - q. 13a		.902	
PMS Sophistication 3 - q. 13c		.901	
KPI use 2 - q. 14b		.750	
KPI use 4			
KPI use 1			
KPI use 5- q. 14e			.947
KPI use 6- q. 14f			.903
PMS Sophistication 2- q. 13b			.625
Collaborative KPI 1			
KPI use 7			

Table 28: PMS PCA

For the Rewards construct, the underlying dimensions included Financial Rewards and Non-financial Rewards, with the two constructs explaining over 82% of the total variance. It should be noted that question 21 was not included as part of the PCA analysis as these are single item measures, capturing whether assessments for rewards are undertaken subjectively or objectively.

Pattern Matrix[a]

	Component	
	FINANCIAL REWARDS	NON-FINANCIAL REWARDS
Financial Rewards 2 Middle Management–q18b	.933	
Financial Rewards 1 TM Level–q18a	.885	
Financial Rewards 3 Lower Management–q18c	.872	
LT Pay 1 –q. 20a	.865	
LT Pay 2 –q. 20b	.843	
Financial Rewards 4 Non-management workforce–q18d	.696	
Non financial reward 3 Non-Management -q19c		-1.001
Non financial reward 2 Lower Management-q19b		-.994
Non financial reward 1 Middle Management-q19a		-.918

Table 29: PMS PCA

For Governance construct, four components were identifiable including reliance on policies and codes, top management support for decision making, employee appraisal as well as audit.

Rotated Component Matrix^a

	Component			
	AUDIT	TMT DECISION SUPPORT	CODES	EMPLOYEE APPRAISAL
Verification 2 –q.26b	.879			
Verification 1–q.26a	.763			
Verification 3–q.26c	.723			
TMT Dec Support 3 – q 22c		.917		
TMT Dec Support 2- q 22b		.909		
Scodes 1 –q 25a			.926	
Scodes 2 –q 25b			.828	
Verification 5 –q26e				.931
Verification 4–q26d				.805

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 30: Governance PCA

For Cultural Construct, two main components were identified while the third component remains theoretically inconclusive. These include, one component focusing on Organisational Value aspects and the other on Socialisation Controls.

Rotated Component Matrix^a

	Component		
	Organisational Value Aspects	Inconclusive	Socialisation Controls
Belief 3 –q 1c	.920		
Belief 1–q 1a	.883		
Shared Value 1 –q 3a	.800		
Belief 2–q 1b	.798		
Belief 4–q 1d	.728		
Shared Value 2 -–q 3b	.656		

	Component
Shared Value 3–q 3c	.608		
Selection 2-q 5b		.889	
Selection 1-q 5a		.801	
Empowerment 2-q 4b		.647	.625
Shared Value 4–q 3d		.641	
Empowerment 1-q 4a		.632	.613
Socialisation 1 –q 2a			.845
Socialisation 4 – q 2d			.716
Socialisation 3 –q 2c			.631

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 31: Culture PCA

For Planning construct, after several attempts, a forced five component structure is observable. The components include measuring Planning Depth, Planning Participation, Institutional Context Analysis, Product Specific Planning with the fifth component remaining theoretically inconclusive.

Rotated Component Matrix[a]

	Component				
	Planning Depth	Participative Planning	Institutional Context Analysis	Product Specific Planning	Inconclusive
Planning Depth 2 – q 6b	.821				
Planning Depth 3 – q 6c	.762				
Planning Depth 1– q 6a	.715				
Planning Depth 4– q 6d	.676				
Participative Planning 3 – q 9c		.791			
Participative Planning 4 – q 9d		.714			
Participative Planning 2 – q 9b		.660			

Institutional Context Analysis 2 –q8b			.844		
Institutional Context Analysis 3- q8c			.841		
Planning Depth 6-q6f				.831	
Planning Depth 7-q6g				.817	
Participative Planning 1 –q9a					.832
Institutional Context Analysis 1 – q 8a					.740
Planning Depth 5					

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Table 32: Planning PCA

For budgeting control, two components were extracted. One component pertaining to Participatory Budgeting while the other component captures Budgetary Integration as originally developed on the basis of interview findings.

Structure Matrix

	Component	
	Participative Budgeting	Budgetary Integration
Participative Budgeting 2 – q11b	.897	
Participative Budgeting 4 – q11d	.892	
Budgetary Integration 1 q10a	.870	.628
Participative Budgeting 1 q11a	.757	.752
Budgetary Integration 3 q10c		.916
Budgetary Integration 4 q10d		.876

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

Table 33: Budgeting PCA

Even with a low sample size, the PCA provides evidence of the reliability of the items to return significant dimensions for all of the control constructs while remaining theoretically valid.Since the KMO scores for each construct remain above .7 on average for all constructs, it could be argued that even with a low sample size, the survey instrument is effective in capturing theoretically consistent components informing different dimensions of each construct. However, once an increased sample has been obtained, the PCA would be rerun to purify the items, modifying, deleting or adding items as appropriate to further improve the survey instrument.

Cluster Analysis:

A preliminary cluster analysis is undertaken to explore any underlying differences existing between control design and use in companies pursuing different strategic orientations. The cluster technique segregates and groups together firms of homogenous nature such that firms within each cluster will differ from firms situated in a different cluster(Hair et al., 1998).The analysis is undertaken on the basis that the items (after adjusted for) are reliable measures of each of the underlying control domains. The cluster analysis is based on each of the domain areas treated as "separate constructs"that are theoretically derived and item reliability validated.

The procedure undertaken is as follows. Firstly, the calculation of the mean values of each domain area after adjusting for item reliability was undertaken. Secondly, the hierarchical anglomerate technique with Wardslinkage method using squared Euclidean distance as the proximity measurewas performed, an approach followed by Chenhall and Langfield-Smith (1998) and also finding prominence in social sciences research.The hierarchical anglomerate method identifies two clusters at a time based on a proximity/similarity level, and combines them together until all observations of a homogenous nature are in the same cluster (Hair et al., 1998).Wards method is suitable as it typically returns an equal number of cases per cluster while minimising any variances within each cluster group. Wards method measures the similarity or proximity existing amongst a pair of observations and uses straight line distance as means of measuring proximity between a pair of observations (Hair et al., 1998).This step facilitated the identification of the total cluster numbers. To identify the cluster numbers, co-efficient scores were plotted against stage/cluster numbers. The largest difference between co-efficients occur between stages/cases 30 and 31 as also indicated in the agglomeration schedule. Additionally, the "elbow" forms at stage 30, indicating a two-cluster solution.

Moreover, by visually inspecting the Dendogram, only two nodal points are observable if a 10 point distance is taken into account.

Chart 9: Co-efficient-Stage Plot
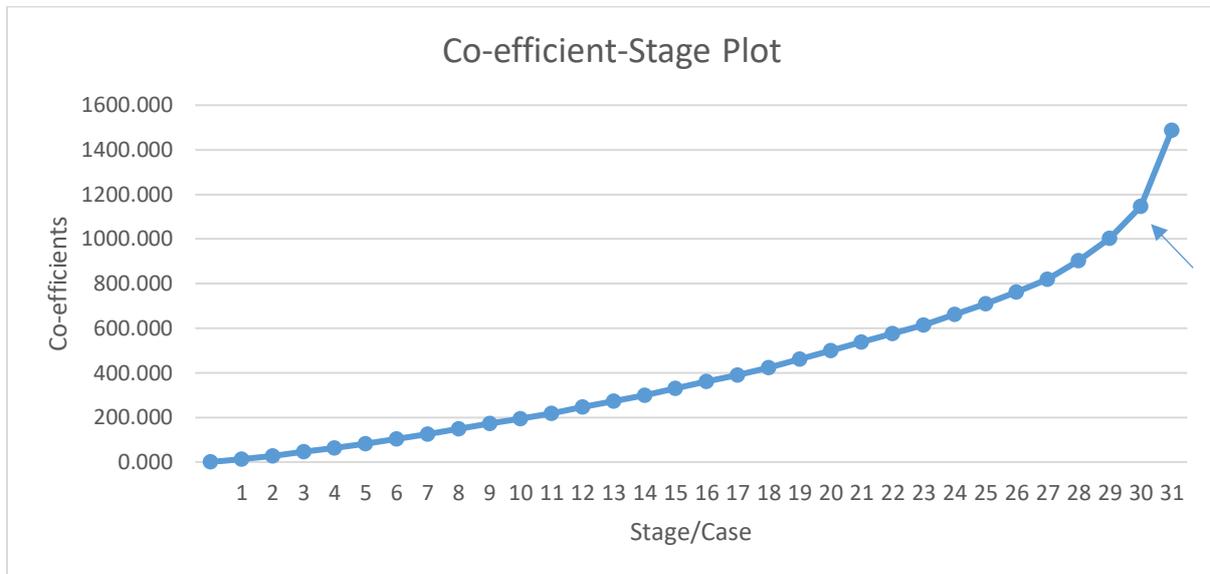
Table 34 Agglomeration Schedule

| Stage | Cluster Combined | | Coefficients | Stage Cluster First Appears | | Next Stage |
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	27	30	11.783	0	0	3
2	3	31	27.830	0	0	7
3	26	27	45.643	0	1	13
4	14	29	64.240	0	0	10
5	9	16	83.084	0	0	14
6	13	21	103.617	0	0	22
7	3	11	125.800	2	0	22
8	7	22	148.841	0	0	15
9	4	32	171.903	0	0	17
10	14	15	195.016	4	0	26
11	6	8	218.847	0	0	25
12	24	28	245.738	0	0	19
13	25	26	272.805	0	3	24
14	9	12	300.092	5	0	18
15	7	20	329.783	8	0	26
16	2	10	360.204	0	0	21
17	4	17	391.048	9	0	23
18	5	9	423.146	0	14	20
19	23	24	460.438	0	12	25
20	1	5	498.608	0	18	28
21	2	18	536.884	16	0	29
22	3	13	575.942	7	6	29
23	4	19	615.160	17	0	24
24	4	25	662.204	23	13	27
25	6	23	709.956	11	19	28
26	7	14	762.549	15	10	27
27	4	7	820.431	24	26	30
28	1	6	903.730	20	25	31
29	2	3	1002.495	21	22	30
30	2	4	**1147.053**	29	27	31
31	1	2	**1488.000**	28	30	0
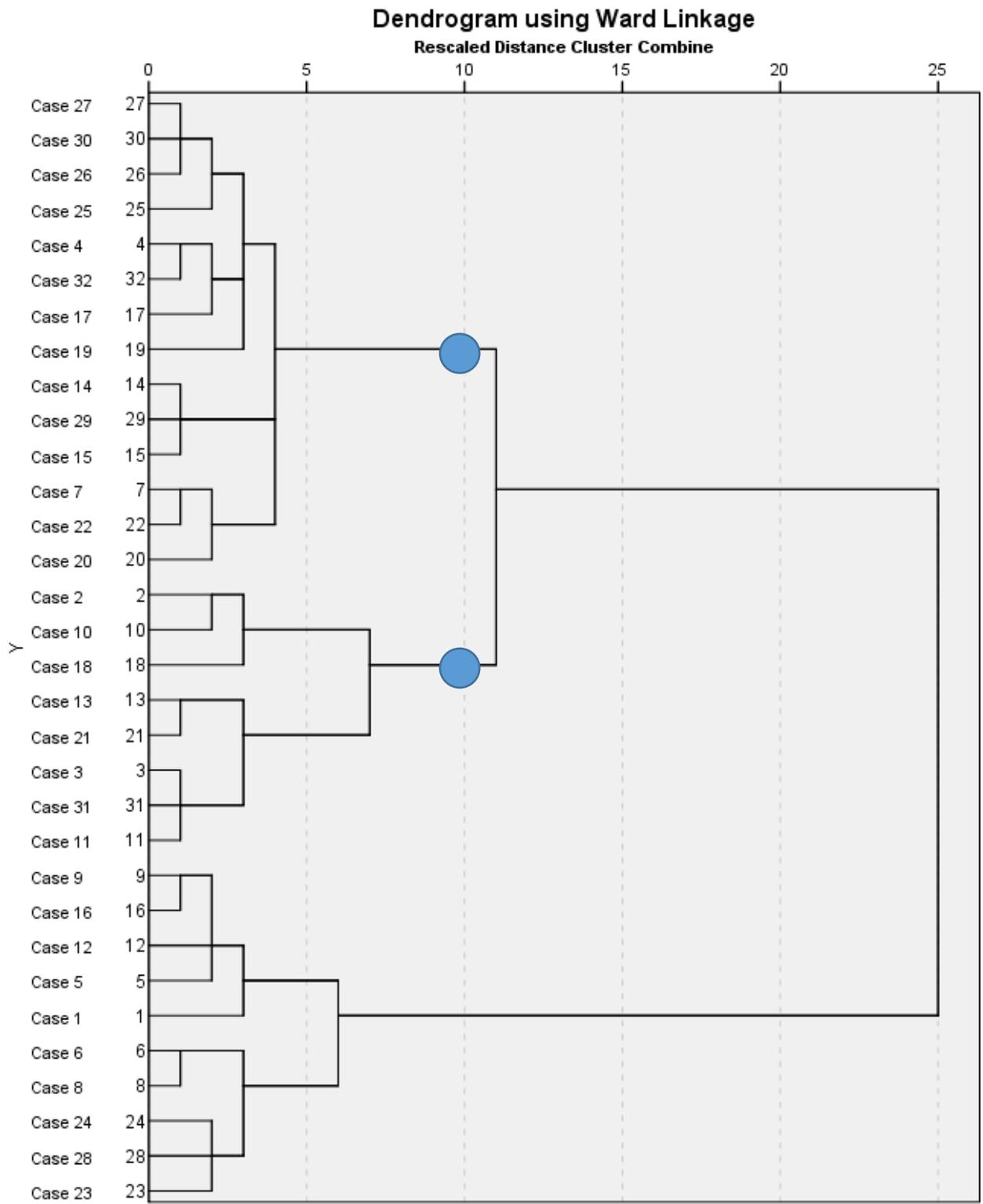
Figure 5: Dendogram

Having identified the number of clusters, the second step involved undertaking a K-Means cluster analysis with the 2 cluster solution. Cluster 1 had 13 cases and Cluster 2 consisted of 19 cases. The cases were also inspected manually to confirm that firms belonging to a certain strategic orientation were grouped in the same cluster. This review of the cluster membership resulted in four cases swapping clusters to achieve an improved cluster configuration based on the strategic approaches. The total cluster composition remained unchanged.

A visual inspection of the results based on the mean scores show some differences existing between each variable from each cluster.However, to account for any significant differences between the variables from each cluster, an Independent Samples T test was undertaken. Levene's test revealed whether variance differences (due to unequal number of cases in each cluster) are significant or otherwise.Table 34 shows the results from the independent samples T test and significance readings based on Levene's test are indicated in bold. It should be noted that several variables were cluster analysed on a standalone basis rather than as part of a collective of items measuring a particular domain of interest. For instance, it was of interest to the researcher to explore whether any statistically significant differences exist between the different roles played by sustainability professionals or differences in organisational structural design in relation to the type of strategies pursued. These standalone variables are indicated with an asterisk in the data tables.

Table 35: Group Statistics

Group Statistics	Cluster Number of Case	N	Mean	Std. Deviation	Std. Error Mean
BELIEF	1	13	3.67	1.745	.484
	2	19	5.59	.973	.223
SOCIALISATION	1	13	3.83	1.260	.349
	2	19	4.95	1.019	.234
SHARED VALUE	1	13	3.38	1.236	.343
	2	19	5.29	.875	.201
EMPOWERMENT	1	13	4.42	1.289	.357
	2	19	5.45	1.165	.267
SELECTION	1	13	2.88	1.244	.345
	2	19	4.34	1.482	.340
PLANNING DEPTH	1	13	3.84	1.406	.390
	2	19	5.49	.882	.202
INSTITUTIONAL CONTEXT	1	13	3.90	1.031	.286
	2	19	5.07	.960	.220
PARTICIPATORY PLANNING	1	13	4.19	1.531	.425
	2	19	5.26	1.159	.266
BUDGETARY INTEGRATION	1	13	3.58	.949	.263
	2	19	5.11	1.297	.298
PARTICIPATIVE BUDGETING	1	13	3.15	1.269	.352
	2	19	4.71	1.544	.354
PMS SOPHISTICATION	1	13	4.48	1.218	.338
	2	19	5.51	1.056	.242
KPI USE	1	13	3.99	1.078	.299
	2	19	5.45	1.105	.253
COLLABORATIVE KPI	1	13	3.19	1.300	.360
	2	19	5.00	1.581	.363
KPI TMT USE	1	13	3.22	1.147	.318
	2	19	4.67	1.480	.340
FINANCIAL REWARDS	1	13	2.21	1.350	.374

	2	19	2.22	1.561	.358
NON-FINANCIAL	1	13	2.72	1.439	.399
REWARD	2	19	2.84	1.877	.431
LT PAY	1	13	2.12	.982	.272
	2	19	2.55	1.992	.457
TMT DECISION	1	13	3.03	1.584	.439
SUPPORT	2	19	4.46	1.743	.400
RELIANCE ON	1	13	4.58	1.170	.324
CODES/POL	2	19	5.08	1.521	.349
VERIFICATION	1	13	3.20	1.172	.325
	2	19	4.98	1.113	.255
Matrix* (recoded)	1	13	1.54	.519	.144
	2	19	1.63	.496	.114
Sus/CSR Dept. * (recoded)	1	13	1.46	.519	.144
	2	19	1.47	.513	.118
Within other functions*	1	13	1.54	.519	.144
(recoded)	2	19	1.53	.513	.118
Formal Positions*	1	13	1.69	.480	.133
(recoded)	2	19	1.79	.419	.096
Informal Positions*	1	13	1.85	.376	.104
(recoded)	2	19	1.84	.375	.086
CROSS FUNCTIONAL	1	13	4.56	1.049	.291
APPROACH	2	19	5.60	1.438	.330
COMPLIANCE	1	13	5.71	.742	.206
	2	19	5.68	1.118	.256
EFFICIENCY	1	13	4.68	1.069	.297
	2	19	6.15	.639	.147
PROACTIVE	1	13	3.68	1.469	.407
	2	19	5.61	1.134	.260
BEYOND PROACTIVE	1	13	2.58	.624	.173
	2	19	5.67	1.011	.232
PERCEIVED	1	13	3.21	.908	.252
UNCERTAINTY	2	19	4.44	.963	.221

Quantitative Target*	1	13	2.92	1.115	.309
	2	19	3.53	.697	.160
Qualitative Target*	1	13	3.08	.862	.239
	2	19	3.74	.452	.104
Short Term Target*	1	13	2.85	.689	.191
	2	19	3.58	.769	.176
Medium Term Target*	1	13	2.92	.760	.211
	2	19	3.63	.597	.137
Long Term Target*	1	13	2.62	.870	.241
	2	19	3.11	.809	.186
Immunity*	1	13	2.08	1.038	.288
	2	19	2.74	.733	.168
BSC*	1	13	2.62	.768	.213
	2	19	3.16	.898	.206
Objective Rewards*	1	13	1.69	.855	.237
	2	19	2.16	1.119	.257
Subjective Rewards*	1	13	1.77	.725	.201
	2	19	2.21	.855	.196
TMT Compliance* Discussion	1	13	2.62	.768	.213
	2	19	3.58	.692	.159
TMT Strategic Decision*	1	13	2.77	.725	.201
	2	19	3.42	.692	.159
TMT Reporting Frequency*(recoded)	1	13	2.31	.630	.175
	2	19	2.74	.452	.104
BoD Reporting Frequency*(recoded)	1	13	2.23	.599	.166
	2	19	2.58	.507	.116
Role of Sustainability Professionals in Organisational Learning*	1	13	3.23	.725	.201
	2	19	3.16	1.302	.299
Role of Sustainability Professionals in providing Internal Advice*	1	13	3.38	.768	.213
	2	19	3.32	1.293	.297
	1	13	3.23	.832	.231

		19	3.11	1.286	.295
Role of Sustainability Professionals in Raising Capacity	2	19	3.11	1.286	.295
Role of Sustainability Professionals as Integrators	1	13	3.38	.768	.213
	2	19	3.11	1.329	.305
Size	1	13	2.69	.947	.263
	2	19	2.63	.684	.157

Table 35Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
BELIEF	Equal variances assumed	14.412	.001	-3.990	30	.000	-1.919
	Equal variances not assumed			-3.601	17.126	**.002**	-1.919
SOCIALISATION	Equal variances assumed	.533	.471	-2.775	30	**.009**	-1.120
	Equal variances not assumed			-2.665	22.186	.014	-1.120
SHARED VALUE	Equal variances assumed	1.641	.210	-5.115	30	**.000**	-1.905
	Equal variances not assumed			-4.796	20.071	.000	-1.905
EMPOWERMENT	Equal variances assumed	.051	.822	-2.340	30	**.026**	-1.024
	Equal variances not assumed			-2.295	24.149	.031	-1.024
SELECTION	Equal variances assumed	.622	.436	-2.910	30	**.007**	-1.457
	Equal variances not assumed			-3.009	28.622	.005	-1.457
PLANNING DEPTH	Equal variances assumed	5.181	.030	-4.097	30	.000	-1.654

	Equal variances not assumed			-3.764	18.449	**.001**	-1.654
INSTITUTIONAL CONTEXT	Equal variances assumed	.530	.472	-3.295	30	**.003**	-1.173
	Equal variances not assumed			-3.250	24.666	.003	-1.173
PARTICIPATORY PLANNING	Equal variances assumed	1.078	.307	-2.253	30	**.032**	-1.071
	Equal variances not assumed			-2.137	21.090	.044	-1.071
BUDGETARY INTEGRATION	Equal variances assumed	1.782	.192	-3.628	30	**.001**	-1.528
	Equal variances not assumed			-3.848	29.814	.001	-1.528
PARTICIPATIVE BUDGETING	Equal variances assumed	.326	.572	-3.003	30	**.005**	-1.557
	Equal variances not assumed			-3.118	28.874	.004	-1.557
PMS SOPHISTICATION	Equal variances assumed	1.790	.191	-2.553	30	**.016**	-1.032
	Equal variances not assumed			-2.484	23.384	.021	-1.032
KPI USE	Equal variances assumed	.419	.522	-3.716	30	**.001**	-1.464
	Equal variances not assumed			-3.733	26.365	.001	-1.464
COLLABORATIVE KPI	Equal variances assumed	.733	.399	-3.405	30	**.002**	-1.808
	Equal variances not assumed			-3.535	28.872	.001	-1.808
KPI TMT USE	Equal variances assumed	1.021	.320	-2.966	30	**.006**	-1.449
	Equal variances not assumed			-3.113	29.440	.004	-1.449
FINANCIAL REWARDS	Equal variances assumed	1.197	.283	-.023	30	.982	-.012
	Equal variances not assumed			-.023	28.246	.981	-.012

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
NON-FINANCIAL REWARD	Equal variances assumed	.986	.329	-.201	30	.842	-.124
	Equal variances not assumed			-.211	29.525	.834	-.124
LT PAY	Equal variances assumed	6.665	.015	-.730	30	.471	-.437
	Equal variances not assumed			-.822	27.798	.418	-.437
TMT DECISION SUPPORT	Equal variances assumed	.450	.508	-2.364	30	**.025**	-1.430
	Equal variances not assumed			-2.408	27.530	.023	-1.430
RELIANCE ON CODES/POL	Equal variances assumed	1.995	.168	-1.003	30	.324	-.502
	Equal variances not assumed			-1.054	29.500	.301	-.502
VERIFICATION	Equal variances assumed	.020	.888	-4.346	30	**.000**	-1.779
	Equal variances not assumed			-4.303	25.033	.000	-1.779
Matrix* (recoded)	Equal variances assumed	.714	.405	-.512	30	.612	-.093
	Equal variances not assumed			-.508	25.129	.616	-.093
Sus/CSR Dept. * (recoded)	Equal variances assumed	.018	.895	-.065	30	.948	-.012
	Equal variances not assumed			-.065	25.742	.948	-.012
Within other functions* (recoded)	Equal variances assumed	.018	.895	.065	30	.948	.012
	Equal variances not assumed			.065	25.742	.948	.012
Formal Positions* (recoded)	Equal variances assumed	1.383	.249	-.607	30	.548	-.097
	Equal variances not assumed			-.591	23.493	.560	-.097
Informal Positions* (recoded)	Equal variances assumed	.004	.953	.030	30	.976	.004
	Equal variances not assumed			.030	25.900	.976	.004

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
CROSS FUNCTIONAL APPROACH	Equal variances assumed	.993	.327	-2.212	30	**.035**	-1.032
	Equal variances not assumed			-2.347	29.828	.026	-1.032
COMPLIANCE	Equal variances assumed	2.128	.155	.077	30	.939	.027
	Equal variances not assumed			.083	29.992	.934	.027
EFFICIENCY	Equal variances assumed	2.186	.150	-4.875	30	**.000**	-1.470
	Equal variances not assumed			-4.445	17.867	.000	-1.470
PROACTIVE	Equal variances assumed	2.801	.105	-4.202	30	**.000**	-1.934
	Equal variances not assumed			-4.000	21.415	.001	-1.934
BEYOND PROACTIVE	Equal variances assumed	4.383	.045	-9.806	30	**.000**	-3.094
	Equal variances not assumed			-10.695	29.780	.000	-3.094
PERCEIVED UNCERTAINTY	Equal variances assumed	.000	.990	-3.641	30	**.001**	-1.233
	Equal variances not assumed			-3.682	26.930	.001	-1.233
Quantitative Target*	Equal variances assumed	2.587	.118	-1.887	30	.069	-.603
	Equal variances not assumed			-1.733	18.391	.100	-.603
Qualitative Target*	Equal variances assumed	7.525	.010	-2.828	30	.008	-.660
	Equal variances not assumed			-2.531	16.554	**.022**	-.660
Short Term Target*	Equal variances assumed	.110	.743	-2.760	30	**.010**	-.733
	Equal variances not assumed			-2.819	27.736	.009	-.733
Medium Term Target*	Equal variances assumed	.219	.643	-2.951	30	**.006**	-.709
	Equal variances not assumed			-2.819	21.711	.010	-.709

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Long Term Target*	Equal variances assumed	.156	.696	-1.632	30	.113	-.490
	Equal variances not assumed			-1.609	24.660	.120	-.490
Immunity*	Equal variances assumed	2.965	.095	-2.112	30	.043	-.660
	Equal variances not assumed			-1.979	20.044	.062	-.660
BSC*	Equal variances assumed	.224	.639	-1.776	30	**.086**	-.543
	Equal variances not assumed			-1.830	28.396	.078	-.543
Objective Rewards*	Equal variances assumed	4.734	.038	-1.266	30	.215	-.466
	Equal variances not assumed			-1.333	29.550	.193	-.466
Subjective Rewards*	Equal variances assumed	1.318	.260	-1.522	30	.138	-.441
	Equal variances not assumed			-1.571	28.499	.127	-.441
TMT Compliance Discussion*	Equal variances assumed	.141	.710	-3.700	30	**.001**	-.964
	Equal variances not assumed			-3.626	24.095	.001	-.964
TMT Strategic Discussion*	Equal variances assumed	.022	.884	-2.566	30	**.016**	-.652
	Equal variances not assumed			-2.544	25.129	.017	-.652
TMT Reporting Frequency* (recoded)	Equal variances assumed	2.541	.121	-2.246	30	**.032**	-.429
	Equal variances not assumed			-2.111	20.269	.047	-.429
BoD Reporting Frequency* (recoded)	Equal variances assumed	.031	.862	-1.772	30	**.087**	-.348
	Equal variances not assumed			-1.716	22.973	.100	-.348
Role of Sustainability Professionals in promoting Organisational Learning*	Equal variances assumed	2.393	.132	.183	30	.856	.073
	Equal variances not assumed			.202	29.057	.841	.073

Role of Sustainability Professionals in providing Internal Advice	Equal variances assumed	1.170	.288	.172	30	.865	.069
	Equal variances not assumed			.188	29.558	.852	.069
Role of Sustainability Professionals in Raising Capacity	Equal variances assumed	.847	.365	.309	30	.759	.126
	Equal variances not assumed			.335	29.947	.740	.126
Role of Sustainability Professionals as Integrators	Equal variances assumed	2.528	.122	.682	30	.501	.279
	Equal variances not assumed			.751	29.365	.459	.279
Size	Equal variances assumed	2.080	.160	.211	30	.834	.061
	Equal variances not assumed			.198	20.360	.845	.061

8.4 Brief Findings and Discussion

The narrative is kept brief and provides an overview of the key similarities and differences in observations between survey and interview data.

Of primary interest is to ascertain if significant differences exist between the clusters in terms of the type of strategy pursued as the objective is to explore clusters with dissimilar strategic approaches to sustainability. Although no statistically significant differences exist in terms of compliance, however when it comes to efficiency, proactivity and beyond proactive strategic approaches to managing sustainability, a significant difference at the 1% level exist. A visual inspection indicates that Cluster 1 firms still engage in efficiency related practices but the mean scores for efficiency based strategies varies greatly between the two clusters. This may indicate that Cluster 2 firms have already transcended the efficiency phase and are well established beyond the proactive phase (a mean score of 2.58 for Cluster 1 and a mean score of 5.67 for Cluster 2 for Beyond Proactivity phase). Furthermore, for the proactivity phase, the mean scores vary greatly between the two clusters (3.68 in Cluster 1 vs 5.61 in Cluster 2), indicating again that Cluster 1 firms are still establishing themselves at this phase. For simplicity, the clusters are differentiated using strategy as the contextual variable whereby Cluster 2 represents a proactive orientation towards sustainability and Cluster 1 is represented by those that are either transitioning towards the proactive phase or are relatively less proactive. Firm size based

on employee levels did not have any statistically significant differences indicating that firms in both cluster groups are represented by an equal (or near equal) distribution of similarly sized companies.However, both clusters could be argued to be operating under dissimilar levels of perceived uncertainties as statistically significant difference exists, hence this contextual aspect needs to be considered when comparing controls between clusters.

When considered in parallel to the interview findings, some interesting aspects emerge. The survey data further substantiates interview data findings that the strategic approach influences several control domains. For instance,from the survey data, it is observable that significant differences when it comes to planning depth and institutional context analysis at the 1% significance level as well as participative planning at the 5% significance level exist. In other words, as observed from the interview data, Cluster 2 companies tend to use the planning mechanism more rigorously relative to Cluster 1 companies. Rigorous planning approach could also be influenced by not only the need to remain proactive but also to manage uncertainties.Similarly, Cluster 2 companies also tend to put more emphasis to selection controls ensuring new recruits possess some understanding of sustainability. The survey findings also corroborate with interview findings of the presence of a more sophisticated PMS in proactive/beyond proactive companies, as evident in Cluster 2 companies and that KPIs are used to a very high extent for internal decision making purposes, significant at the 1% significance level. Additionally, the extent of collaborative approach to KPI design differs greatly in Cluster 2 companies, significant at the 1% level. The survey data also confirms interview findings that the extent of verification of sustainable practices remains statistically more prominent in Cluster 2 companies. The survey data also confirms interview findings where no differences were found to exist between companies pursuing different strategies on certain control mechanisms. For instance, no significant differences exist on the use of financial rewards and non-financial rewards, but the role of committees in providing decision support to TMT is significantly different only at the 5% level.

While the survey data verifies findings from interviews pertaining to the above mentioned control domains, other differences not already captured from the interview data emerges. For instance, interview data pointed towards different means of promoting the cognitive recognition within the workforce including a range of communication techniques and training events, irrespective of the strategic orientation. However, the survey data reveals a statistically significant difference existing in relation to the extent of focus on socialisation controls in Cluster 2 companies. Similarly, as would be expected, in Cluster 2 companies, there is a greater

focus on ensuring employee values are aligned with that of corporate goals and objectives in relation to sustainability as also evident from a higher emphasis placed on selection controls by Cluster 2 companies. One key finding from the survey data pertaining to governance mechanisms, is the significant difference attached to the importance placed by TMT to discussing matters of strategic importance in Cluster 2 companies as opposed to solely focussing on compliance related aspects. For interactive use of KPIs, the survey data shows a greater extent of focus of TMT on personally monitoring sustainability KPIs in cluster 2 companies. However, this difference was not evident from interview data where TMT personally involved themselves in firms with different strategic orientations.Moreover, it seems that Cluster 2 companies exhibit greater reliance or focus on a participatory approach overall when it comes to controlling sustainability relative to Cluster 1 companies. The greater focus on participatory approach is evidenced by the fact that Cluster 2 companies place greater focus on participatory planning, participatory budgeting as well as having a collaborative focus for KPI design as also evident from a greater reliance placed on cross functional approaches.

However, contrary to expectations, the survey data reveals no statistically significant differences existing between Cluster 1 and Cluster 2 companies on the role played by sustainability professionals. It was expected that sustainability professionals would play a greater role as an integrator in Cluster 2 companies, but survey data does not provide any evidence to support this perspective. It was also expected that there will be differences in structural arrangements, but no statistically significant differences were observable.

8.5 Conclusion

The primary aim of this penultimate chapter was to fulfil the second research aim of developing a survey instrument to measure controls for sustainability from a package perspective. The chapter focused on discussing the key steps undertaken to develop the survey and validating the items with several experts within the field of management controls and sustainability. It also focused on providing an overview of the data collection process for the second phase of the mixed methods study. The final objective of the chapter was to conduct a preliminary analysis by adopting the clustering technique, identifying any statistically significant differences between controls for firms pursuing different strategic orientations. The survey findings provide evidence to support some of the observations from the interviews. Additionally, newer perspectives on control differences not evident from the interviews also emerged.

CHAPTER 9

CONCLUSION

9.0 Conclusion

Extra-financial concerns have increasingly found relevance within top management decision-making lending support to the greater humanitarian objectives envisioned by globally recognised voluntary organisations (e.g. The UN) (UNGC, 2013). Increasingly, for-profit entities have started adopting explicit strategies to position themselves with regards to their obligations towards the society and the environment and contribute towards the sustainable development goals established by governments and the United Nations (McKinsey, 2011). Numerous reasons have been put forward for this changing stance of an increasing number of businesses adopting responsible practices. With the rapid changes within an organisation's institutional context brought about by changes in legislation and introduction of stringent laws on wastage, carbon emissions as well as global warming, supplemented by an ever-increasing public scrutiny of corporate practices as well as corporate concerns regarding the availability of raw materials at affordable rates, more and more businesses are devising means of responding to such contextual changes (PwC, 2017; Journeault et al., 2016). This is also fuelled by changing customer preferences with an ever-increasing demand for ethically sound products (BITC, 2013). By adopting extra-financial strategies corporations are designing means of positioning themselves with regards to the changing expectations and requirements emanating from the social fabric within which the companies operate. However, what is also noticeable is that there are differences in the types of strategies that companies are adopting with regards to sustainable practices. The literature has recognised that sustainable development at the micro-level is time bound and subjected to gradual progress and as such has broadly classified these strategies as belonging within a continuum of reactive on the one side to being proactive on the other (Benn et al., 2014; Buysse and Verbeke, 2003; Gago and Antolin, 2004). For instance, companies wanting to solely minimise risks and liabilities arising out of non-compliance with legislative requirements or to satisfy a limited number of influential stakeholders, may adopt strategies that are passive or reactive in nature (Berry and Rondinelli, 1998; Porter and Linde, 1995). In other words, some companies might adopt explicit non-financial strategies to primarily maintain the legitimacy of the business and ensure business continuity while minimising the risks and liabilities arising out of non-adherence to prescribed

rules. Whereas, other companies might be motivated to adopt responsible business practice oriented strategies not only for sustaining legitimacy but also for generating sustained competitive advantages by leveraging sustainable practices as means of differentiating themselves, or their product lines from competitors (Porter and van der Linde, 1995; Hart, 1995). These companies would proactively seek opportunities from sustainability related challenges and are likely to invest financial capital and innovate to sustain competitive advantage (Benn et al., 2014). In other words, these companies design proactive extra-financial strategies with a view to benefiting over the long-term from their positioning vis-à-vis the natural environment and the society.

While a large body of scholarly works within the extant sustainability field of research has explored how businesses have chosen to position themselves in relation to the extra-financial aspects, the rationale of businesses engaging in extra-financial activities has also received much prominence in the literature (Marsden, 1996; Fombrun et al., 2000; McWilliams et al., 2006; Epstein et al., 2015). The literature has pointed out to corporate reputational benefits, as well as their abilities to attract and retain talent, benefits accrued from cost reductions having an overall positive impact on the financial bottom line as some of the key business case reasons for adopting sustainable practices. More recent developments within the field referred to as "win-win" practices where businesses generate competitive advantages while creating value for their shareholders as well as the wider society and environment clubbed as the shared value concept (Porter and Kramer, 2011). While the extant sustainability literature has provided rich insights into corporate sustainability practices albeit with an extensive focus on corporate non-financial performance disclosure as well as detailed attention paid to the relationship between sustainability and financial value added, yet there has been a lack of significance attached to how companies are actually controlling non-financial strategies, ensuring that these strategies are implemented and realised (Morsing and Oswald, 2009; Bebbington, 2001). In other words, the literature is yet to provide deeper insights into how companies control and manage sustainability strategies.

Management scholars have long established the significance of carefully designed and used management controls as suitable means of controlling strategies (Shank and Govindarajan, 1993; Auzair and Langfield-Smith, 2005; Chenhall, 2005; Govindarajan, 1988; Govindarajan and Gupta, 1985). Yet, a systematic review of the literature on sustainability strategy and management controls revealed that the development in this area has so far remained at best modest with less than 60 articles devoting to the study of management controls for

sustainability strategies. This study adopted the view that the significance attached to sustainable practices could also be explored through the notion of management controls. In other words, the research sought to understand and explore if organisations are paying attention to the design and use of management controls in a manner that facilitates the translation of corporate adoption of explicit extra-financial strategies into practice in relation to the strategy adopted.

The dominance of qualitative research mostly through case study based approach indicates the novelty and the emerging nature of the research area. Prior research within this field has remained descriptive and prescriptive (Morsing and Oswald, 2009; Lee, 2009; Teh and Corbitt, 2015; Masanet-llodra, 2006; Riccaboni and Leone, 2009). Numerous frameworks have been advanced with a view to aid managerial decision making with regards to controlling for sustainability (Khoo and Tan, 2002; Panapanaan et al., 2003; Maon et al., 2009; Cramer, 2005). Descriptive studies have provided rich contextual details about how large companies already known for their sustainability initiatives manage their extra-financial responsibilities (Morsing and Oswald, 2009; Riccaboni and Leone, 2009). These studies sought to "discover" how sustainability strategy was implemented without elaborating or specifying the type of strategy pursued (Chenhall, 2005). But highlight the fact that both formal and informal controls are employed by companies to manage sustainability with varied emphasis (Durden, 2008).

The focus on qualitative driven research, however leaves room for survey-based studies. Consequently, the need to develop survey instruments that capture management controls for sustainability strategies was identified. Moreover, although the extant sustainability strategy literature has pointed out different strategic orientations that corporations may undertake to position themselves vis-à-vis the environment and society, yet the review of prior research revealed the exclusive focus on exploring management controls for sustainability strategy implementation as opposed to the strategic content (Morsing and Oswald, 2009;Petrini et al., 2009). The latter approach is necessary to understand how sustainability strategies may inform the design and use of management controls in a bid to identify any patterns pertaining to the design of controls for a specific strategy identified from practice (Bedford and Malmi, 2015). Management scholars have for long opined that controls need to be designed in accordance with the strategic context for the former to be effective. Incongruent controls on the other hand may lead to under performance (Chenhall, 2003; Langfield-Smith, 1997). However, there is a tendency of content based studies to concentrate on exploring a limited number of management controls although the case studies have provided evidence of the prevalence of a number of

management controls typically found in practice (Riccaboni and Leone, 2010). The narrow focus of controls has been criticised since controls do not operate in isolation from one another but rather within a package of controls typically employed in practice such that a narrow focus will negate the interdependencies existing amongst controls (Langfield-Smith, 1997). Chenhall (2003) noted that a narrow focus may lead onto the generation of erroneous outcomes. Case studies have provided evidence of the prevalence of both formal and informal controls to manage sustainability but have also cautioned against control incongruity leading to conflicts in decision-making (Norris and O'Dwyer, 2004). The review indicated that only six out of fifty-seven studies explored strategic content with a broader focus on controls leaving further scope to explore the influence of strategic content on management controls for sustainability. Much focus was given to PMS, planning and structure while leaving out other controls including rewards, culture and budgets (Maxwell et al., 1997; Azzone and Noci, 1998). Furthermore, the majority of the quantitative studies adopted a narrow view of controls leaving scope for survey instrument development and testing that considers a broad range of controls (Epstein and Roy, 2007; Perego and Hartmann, 2009). It was argued that due to a lack of a consideration for exploring controls through a systematic and structured means (e.g. through the lenses of control packages), the broad based studies have somewhat remained focused on a smaller range of controls rather than exploring controls in depth. Arguably, this approach led to the ad-hoc selection of controls subjected to empirical exploration.

On the backdrop of the observations, the study had two primary aims. Firstly, to understand how sustainability strategies inform the design and use of a broad range of management controls in a structured manner, and, secondly, to develop a survey instrument that will facilitate measuring how these broad range of management controls are shaped by specific strategic orientations.

Empirical Contribution: To enable the researcher, fulfil both aims, a management control package specifically adopted for sustainability management and control was developed. The management package concept promotes the view that controls do not operate in isolation but as part of the overall management control structural framework. In other words, employing the package perspective facilitates the systematic and structured exploration of how a broad range of controls are designed and used in accordance with different sustainability strategies. Such a structured and systematic exploration has been missing within the identified literature. For instance, the focus of broad based studies typically involved planning, PMS and culture while paying limited or no attention to other controls that are typically found in practice including

rewards, budgets as well as governance. This study adapted the Malmi and Brown (2008) control package framework specifically for the use in sustainability research. The existing framework provides an overview of how each of these controls typically found in practice may aid in management control more geared towards business in general and not specifically for managing sustainability. The framework consists of seven controls that are typically found in practice, including culture, planning, budgets, rewards, governance, organisational design, as well as PMS. In this study, each of these control elements is explored to identify how these could contribute specifically towards sustainability management. Unarguably, the adapted framework itself remains a key contribution for future research use. Given the emerging nature of research looking at controls for sustainability, the adapted framework provides a parsimonious and simple means of exploring the topic further. The framework remains holistic in nature and has attempted to cover a range of different means by which each of the control elements could be applied in practice. For the purposes of this research, the framework provided a structured and systematic means of exploring controls for sustainability strategies providing the means of subjecting each of the control elements in empirical contexts to understand how strategies might influence the design and use as well as explore the interdependencies existing between different controls. Moreover, to the best of knowledge, this is the only study that has brought in the package perspective to not only explore controls but also understand how the strategic contexts might shape package constituents.

Theoretical Contribution: Theoretical advancement within the field of controls for sustainability strategies has remained stagnant. The review of the literature indicated that only a handful of studies have applied theoretical frameworks to drive research within this field as our knowledge has been generated typically through descriptive and prescriptive studies (Riccaboni and Leone, 2009; Maon et al., 2009). However, both traditional and non-traditional theoretical frameworks have been employed by the handful of studies seeking to explain the association between sustainability and management controls (Epstein et al., 2015; Durden, 2008). Although companies are increasingly adopting explicit strategies to manage sustainability and expectations from different stakeholder groups (Edie Insight, 2017; Journeault et al., 2016), yet such adoptions of strategic goals, directions or aims are insufficient to drive the sustainability agenda forward unless these strategic pursuits are supported by appropriately designed management controls (Chenhall and Langfield-Smith, 1998). In other words, the explicit adoption of such goals may not transform an organisation to become a responsible business unless management controls promote such strategic orientations.

However, majority of the studies within this field have ignored the need to explain the relevance of studying controls for sustainability, and in doing so, have not contributed towards either the development of new theoretical frameworks or to demonstrate the illustrative powers of existing frameworks (Keating, 1995). On the backdrop of this limitation, the widely applied Contingency theoretical framework that has found prominence within the extant business strategy and management control literature provided the explanatory justification of the relevance of management controls for sustainability. As mentioned previously, sustainable development is a gradual process and not all organisations will adopt the same strategic orientation vis-à-vis the natural environment and society such that differences in the types of explicit strategies adopted by different organisations are expected and observable (Benn et al., 2014). The study broadly posited that such differences will lead onto observable dissimilarities in the ways management controls are designed and used. The illustrative power of Contingency theory is demonstrated by the fact that the theory explains that differences in contexts (e.g. strategy) will lead onto differences in ways management controls are designed and used while rejecting the notion that "one size fits all" [companies] (Shih and Young, 2001, p. 482). The framework thus caters for the variability that is expected in organisational design of controls for sustainability as different strategic orientations are likely to play a role in organisational approach to managing sustainability. Specifically, this study adopted the Configurational-Congruence fit of contingency aligned with the notion of broader perspective of controls reflected in the adopted control package view (Malmi and Brown, 2008). The study finds evidence of the validity of the underlying assumptions underpinning the configurational congruence view of fit. Specifically, the study found differences in strategic orientations having implications on the ways controls are designed, thereby, evidencing the illustrative power of the seldom used theoretical premise within this field of research. Secondly, the study found that a number of controls are in fact employed by organisations to drive the sustainability agenda and that some controls are interrelated (e.g. PMS and Culture) thereby providing justification of the configurational view of fit consistent with the control package perspective. Finally, the underlying assumption of the congruence view of fit is upheld also in the field of sustainability management since the study finds evidence of managerial selection and in the abilities of management to design relevant management controls for sustainability while remaining aware of the shortcomings in certain control types for sustainability management.

However, the study also found that contingency theory by itself is insufficient to explain the relationship between management controls and sustainability strategies due to one of its major

flaws in that it perceives controls to be subordinate to the context (Chenhall, 2003). On the contrary, the study revealed that controls play a dominant role in the generation of internal resources in the form of capacities and capabilities that inform strategic progression (Kober et al., 2007). In other words, within the field of sustainability management, control proactivity is observable thereby demonstrating reduced predictive abilities of the widely used contingency framework in this field. This led to the view that a resource-contingent theoretical framework is more suitable to explore management controls for sustainability. The framework developed on the basis of both contingency and the resource based view of the firm is argued to be a better predictor of the control-sustainability strategy relationship. The framework considers firstly, that sustainability strategic progression is dependent largely upon the development of internal resources which take the form of different capacities and capabilities; and secondly, controls may play an active role in the development and promotion of such internal resources that have a direct implication on sustainability strategic progression. The emergent theoretical basis provides the platform to investigate further the two-way relationship that may exist between management controls and sustainability, i.e. context influences controls and vice-versa (Kober et al., 2007).

Core Findings and Managerial Implications: The study findings may find relevance to managers responsible for sustainability specifically from the manufacturing industry. The choice of manufacturing industry was motivated primarily by the sector's vulnerability against the rapid changes within the institutional context brought about by legislative changes, rising costs as well as changing customer preferences for ethical products (Edie Insight, 2017). Moreover, the UK government future strategic vision for the industry closely mimics Benn et al. (2014) phase based model that captures both proactive as well as reactionary strategies. The study was strongly grounded within the configuration-congruence view of fit that focuses on how a given strategic approach is reflected by a large number of control mechanisms typically found in practice. The findings from the interviews suggested that a mere focus on the contingency perspective may not suffice as controls were found to play a proactive role in the development of firm specific resources informing strategic progression leading onto the development of the resource-contingency model. The model shows controls as playing an active role as opposed to the generally accepted notion that management controls act as subordinates or in a passive state in relation to its contextual factors. Managers may take note of this finding, that there is a need to develop firm specific competences (e.g. knowledge, cognitive recognition) in a bid to raise awareness of sustainability and how it may contribute

towards augmenting performance. The study found a major emphasis given to cultural controls and the proactive role it plays in developing knowledge internally. It also emerged that without such cognitive underpinning, other controls may not be effective (e.g. KPIs, budgets). For managers, it is important to recognise that certain controls are effective in certain combinations (e.g. KPIs/PMS and Culture). Furthermore, the study revealed that certain controls may not receive much emphasis as evident from both interview and survey data (e.g. financial rewards) for various reasons including issues related to underreporting and that the use of financial rewards may remain temporal in nature, specifically for those pursuing an efficiency strategy. However, the study found the prevalence of rewards of a non-financial nature. Managers may consider the role of financial rewards (specifically the temporal role) it plays when the firm is initially embarking on its sustainability journey to incentivise top managers making decisions based on sustainable business principles.

The findings also revealed how differences in strategic orientations result in differences in the ways controls are designed. Specifically, the impact on performance measurement systems, budgets and strategic planning in relation to changes in strategic orientations were understood. For instance, it was found that efficiency based strategies were mostly driven by mechanistic, policy led controls whereas on the other hand, an organic form of control was shown to drive strategic proactivity. The study also revealed that irrespective of the strategic approach, there were similarities in the ways governance mechanisms were designed in the studied sample (e.g. role of councils). But some differences are also observable. For instance, greater emphasis may be placed on matters pertaining to aspects of strategic as opposed to compliance only aspects by TMT when pursuing a proactive/beyond proactive strategy. Moreover, one of the key findings emerging from the study, are the different roles sustainability professionals play as part of the organisational design and structure. The role of sustainability professionals was not identified from the systematic review of the literature. Their key roles as identified in the study encompass promoting organisation learning and awareness, acting as integrators to ensure that units are not operating in silo as well as sharing best practices with different units and functions. For firms seeking to embed sustainability as part of the overall organisational design and structure, may pay particular attention to the types of roles that are more suitable for particular strategic contexts. For instance, the role as the facilitator of organisational learning is more significant in those pursuing lower levels of strategic progression (e.g. efficiency), whereas those that have reached the proactive level, the role as organisational integrators take precedence.

9.1 Research Objectives, Key Findings and Contributions

Research Objectives	Methodology	Key Findings	Potential Contributions
RO 1 Develop an integrated management control package framework to understand corporate approach towards sustainability.	The survey instrument is designed to measure how a number of controls are shaped by specific strategic orientations and any underlying interdependencies. The interview findings alongside core aspects from the literature provided the basis of developing this survey instrument.	The findings indicate the prominence of control interdependencies whereby certain controls tend to exist in certain combinations to be effective. By employing the package perspective facilitates the systematic and structured exploration of how a broad range of controls are designed and used in accordance with different sustainability strategies. The framework consists of seven controls that are typically found in practice, including culture, planning, budgets, rewards, governance, organisational design, as well as PMS.	The sustainability strategies literature covered studies which were based on a narrow range of control. This study specifically is designed as a holistic integrated management package framework which enabled understanding and exploring corporate approach towards embedding and implementing sustainability in organizations. The adopted framework remains a key contribution for future research. Moreover, to the best of knowledge, this is the only study that has brought in the package perspective to not only explore controls but also to understand how the strategic contexts might shape package constituents.

RO 2 Explore and understand how different sustainability strategic puruits impact the design and use of management control package framework.	From a methodological standpoint, the study provides rich insights through interviews undertaken by elite participants on the role of management controls for specific strategies.	Organisations at different phases of sustainability strategic progression tend to feature differences in the ways management controls are designed and used. It was found that efficiency based strategies were mostly driven by mechanistic, policy led controls whereas on the other hand, an organic form of control was shown to drive strategies proactively. For firms adopting the same strategy, differences are noticeable in how specific controls are designed (e.g. strategic planning). A brief into a resource contingent view of sustainability management controls is presented and discussed. The empirical findings indicate support for the manegerialist view of the contingency framework where the former seems to possess sufficient know-how to design	The study makes a theoretical contribution by focusing on the seldom used contingency perspective providing evidence of its illustrative powers in explaining the relevance of control-strategy relationship from the sustainability perspective. This led to the view that a resource-contingent theoretical framework is more suitable to explore management controls for sustainability.

| | | and implement controls to manage sustainability since some controls received relatively low emphasis due to the assumption that such controls may promote "bad behaviour" (e.g. rewards). | |
| | | Further, the studies find that companies may take proactive or reactive strategies; reactive when taking explicit non-financial strategies and proactive to adopt responsible business practice oriented strategies by leveraging sustainable practices as a means of differentiating themselves. | |

9.2 Future Research

A number of areas for future research can be identified. Whereas the current study has concentrated on exploring a range of traditional management control mechanisms in medium to large organisations and found evidence of diverse approaches to controlling for sustainability within these organisations, it will be interesting to study how small firms design and use management controls for sustainability. Previously, it was noted that controllingsustainability is resource intensive and that small firms may lack such capabilities. However, Lee (2009) study prove otherwise. Hence, it is quite possible that small firms may rely on a number of traditional management controls, but perhaps the major difference relative to how large firmscontrol for sustainability will be in the type of controls that receive major emphasis in the small firms.

The literature review also indicated the lack of comparative studies within the field of controls for sustainability. It is quite possible that approaches to controlling for sustainability may differ in Anglo Saxon countries relative to those that follow the German model of controlling. Exploratory research may explore how institutional differences may lead to differences in controlling for sustainability in different institutional contexts. Moreover, the review also indicated research focussing exclusively on develop countries. A major gap exists that looks at controlling for sustainability in firms indigenous to developing countries.

Additionally, the approach undertaken by multinational firms in designing controls and any variability, if at all, in the design approach across political borders is an interesting area of research that is yet to be considered. It stems from the fact that different country contexts may necessitate considerations of strategic issues of material interest unique to the country context, thereby having an influence on the ways controls are designed to cater for such local issues. Such that we may find different approaches to control design across political boundaries (Escobar and Vredenburg, 2011). Within the reviewed sample, Hansen et al., (2010) illustrate the importance of a BSCS to strategically link societal or community initiatives with other stakeholder groups at a Thailand based subsidiary of a major German pharmaceutical company but does not consider the prevailing circumstances in the German based headquarters in terms of BSCS design or any influences on Thai subsidiary's adoption of BSCS.

Furthermore, there is a significant need of undertaking research within this field at the unit as well as the individual levels. Research at the individual level will provide evidence of the effectiveness of traditional management controls in different combinations in facilitating behavioural change as well as directing employees towards sustainability goals. Moreover, current research has not paid much attention towards the tensions that arise during sustainability related decision making (exception includes Epstein et al., 2015), hence undertaking qualitative study exploring the perspectives of employees on the effectiveness of traditional management controls for sustainability could provide a basis for understanding the management control effectiveness.

A key aspect that has emerged from the interview data is the role of sustainability professionals. At least four key roles were identified. This provides a possibility for future research to unravel the roles played by sustainability professionals further specifically the differences in firms that are at different stages of sustainable development.

From a theoretical standpoint, the findings have suggested that management controls play an active role in influencing the strategic progression towards value creating sustainability strategies (Dunphy et al., 2014). Future research could explore controls for sustainability by relying on both contingency as well as the resource based theoretical perspectives to explore if a two-way relationship exists between management controls and sustainability strategies (Kober et al., 2007).

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Appendix 2A Broad – Control Design and Strategic Process

Study	Culture	Planning	PMS	Reward	Administrative
Riccaboni and Leone (2009)	• As part of the strategic goals for sustainability of embedding sustainable thinking within daily work routine • Focus on internal communication on targets and goals and progress • Newsletter based communication • Events such as Earth Day • Sustainability Ambassadors	• Embeds sustainability objectives within the traditional planning and target setting process - $50 million in cumulative sales of sustainable product range to fulfil the financial objective of increasing net sales • Sets target of 20% reduction in environmental emissions from plants • Stakeholder engagement conducted by MDO	• To monitor if targets are met		• Global Sustainable Department • Tracks and communicates progress • Internal reporting enables further dialogue on how to enhance performance • Structure plays an important role. Global Business Units are responsible overall with new product development whilst the Market Development Organisations solicit feedback from local stakeholders and there is dialogue between GBO and MDOs

Norris and O'Dwyer (2004)	• Too much emphasis on cultural control to promote sustainability • *Socialisation Controls* • Peer pressure • Values • *Self Controls* • Selection • Cultural fit • Training • Clan based control through socialisation and self		Measures financial outcomes Sustainability initiatives are not measured	• financial focus, at best perceptual, not based on objective measures or goals	
Durden (2008)	• Promotes an external image for brand building	• Stakeholders mentioned in the TBL remained uncoupled from the strategic plan • The plan only incorporated the vision of operating responsibly but no goals or formal plans were established.	• Measures financial outcomes	•	
Morsing and Oswald (2009)	• Promotes organisational values on sustainability • Events are organised to promote sustainable thinking	• Long term targets are established	• Measures and monitor intended outcomes • *BSC* – cascaded down to units and owned by TMT •	•	• sustainability department serving many purposes including stakeholder dialogue and sustainability principle dissemination • TMT Ownership of sustainability goals

Epstein et al (2015)	• Establish sustainable thinking over the long term • Helps integrate sustainability in daily decision making	•	•	•	• Supplier focused Policies • Cross departmental dialogue to solve issues related to conflicts between social, environmental and financial objectives • Policies to create boundaries within which decisions ought to be made
Masanet-Llodra (2006)	• Internal communications • Training Plans •	•	• Investment in environmental technologies • BSC • EPIs	Non financial rewards in the form of promotions	•
Khoo and Tan (2002)	• Training and Learning • Awareness raising • Empowerment • Learning organisation • Shared vision • Mental models • Action learning	• Cultural transformation • Promote systems thinking	• Collect Data		• Top management walk the talk • Leadership attributes
Cramer (2005)	• Value internalisation • Internal communication • Training • Internal Reporting • Mission and Vision	• ST dialogue • LT and ST Strategies	• KPI to monitor performance		• Code of conduct • Different policies include supplier, HR, work regulations
Panapanaan et al (2003)	• Communication	• Planning	• Monitoring and evaluation		• Structure

Maon et al (2009)	• Awareness raising • Internal and external communication • Training • Mission and Vision	• Translate vision into practice • Integrate with Planning • Cont inuous stakeholder dialogue and feedback	• Monitoring and evaluation	Incentivise to engage employees	• Structure • Internal dialogue • Committee • TMT
Lee (2009)	• Training	•	• Environmental Impact Analysis		• Internal audit • Cross functionality • Environmental Department
Teh and Corbitt (2015)	• Training • Shared Value	•	• Carbon emissions		• TMT commitment • Functional Collaboration • Board Commitment
Albelda et al (2007)	• Awareness raising • Comprehensive training • Engagement • Skills development • Organisational learning • Continuous improvement	• Inclusion of internal stakeholder aspects • Inclusion of non-financial aspects •	• Environmental scorecards		• Cross functional collaboration
Maas and Reiners (2014)	• Mission and vision • Selection based controls • Internal communication	• Stakeholder engagement and inputs • Action plans • Resource planning	• Budgetary planning • KPIs		• CSR Ambassadors • TMT Communication
Leon-Soriano et al (2010)	• Mission and vision statements	• Stakeholder identification and engagement • Plans	• SBSC Validated Model		•
Contrafatto and Burns (2013)	•	• Stakeholder inclusion	•		• Environmental Department • Codes and Values

					• SR • TMT commitment
La¨nsiluoto, A., and Ja¨rvenpa¨a¨, M. (2010)	• Profit driven culture has an impact on the way environmental practices are undertaken and in the choice of KPIs and decision making	•	• Recognises that both internal and external contexts drive the implementation of a PMS and BSC		•
Schneider and Vieira (2010)	• Establishes the vision and mission of the company	• Goals and targets	• The development of a BSC for a company operating in the wind sector • Identifies the usefulness of a cascaded scorecard	Advocates the need to integrate rewards and SBSC	•

Appendix 2B Narrow – Control Design and Strategic Process

Study	Culture		Planning	PMS and Budgets		Reward	Administrative
Chalmeta and Palomera (2011)	•		•	•	methodological approach to designing a BSC for sustainability • spans 9 phases • Corroborates Figge et al (2002) assertion of additional perspectives		•
Figge et al (2002)	•		•	•	Designing a SBSC for a business unit including a non market perspective to consider aspects of strategic importance		•
McCloskey and Maddock (1994)	•	Successful EMS implementation is facilitated by adoption of strong values based approach and codes to translate the values to practice. • Codes belong to compliance/ethics based, excellence based and educational based categories	•	•			•
Ballou et al (2012)	•		•	•	The limited role played by accountants in measuring sustainability performance and identifying risks		•

Epstein and Wisner (2001)	•	•	• BSC- offers reasons why an extra perspective may be necessary • Provides examples from practice where sustainability KPIs were included within 4 perspectives • Cascading BSC for units adopted to reflect local circumstances		•
Hsu and Liu (2010)	•	•	• Provides statistical evidence of the links between sustainability performance indicators within each of the four perspectives of a SBSC		•
Lothe and Myrtveit (2003)	•	•	•	Argues that conflicting goals prevent the implementation of environmental strategy since rewards do not consider EPIs for compensation purposes	•
Dias-Sardinha et al (2007)	•	•	• BSC TBL value creation and Stakeholder based approach		•

James et al (1999)	•	•	•	• Environmental policy formulation
Slack et al (2015)	• Internal communication • Staff engagement and involvement • Shared vision	•	•	•
Epstein and Roy (2007)	•	•	•	• Centralisation of environmental decision making
Chung et al (2008)	•	•	• Both short and long term monitoring of environmental performance • Use of BSC • Three to five year rolling budgets	•
Petrini et al (2009)	•	•	• The use of BI to facilitate the use of BSC and performance information	•
La¨nsiluoto, A., and Ja¨rvenpa¨a¨, M. (2008)	•	•	• Provides evidence of internal forces driving embeddedness of environmental aspects within PMS	•
Tseng et al (2011)	•	•	• Develops a BSC as means of improving a BSC	•
Butler et al (2011)	•	•	• Deals with different BSC designs for sustainability	•

Appendix 2C Broad – Control Design and Strategic Content

Study	Culture	Planning	PMS		Reward	Administrative/IT		Strategy
Gates and Germain (2010)	•	•	•	Inclusion of sustainability measures within BSC		•		Social and environmental
Van der Woerd and van der Brink (2004)	•	•	•	BSC – suitable for a ST driven and/or synergy driven approach to sustainability • Focuses on three aspects of value creation and the significance of stakeholder engagement in the value creation process		•		Synergy and Stakeholder driven
Benitez-Amado and Walczuch (2012)	•	•	•			•	IT capabilities enable proactive environmental strategy and influences firm performance	Environmental Proactive
Berrone and Gomez-	•	•	•		CEO total pay and its relationship	•		Pollution prevention vs end of pipe

mejia (2009)				with environmental performance and governance structure		
Perego and Hartmann (2009)	•	•	•	EPI sophistication and informative properties are influenced by strategic stance	•	Proactive
Shaukat et al (2016)	•	•	•		• Gender diversity • Board independence • Financial expertise in audit committee	Proactive
Hansen et al (2010)	•	•	•	Provides evidence of a community enabled BSC to drive corporate community involvement projects	•	Social Community Involvement
Dias-Sardinha and Reijnders (2005)	•	•	•	A thematic use of a BSC at different organisational levels to manage sustainability	•	Three types of Strategies along a continuum

Dias-Sardinha et al (2002)	•	•	• A cascading BSC for sustainability	• Six types of Strategies along a continuum

Appendix 2D Narrow – Control Design and Strategic Content

Study	Culture	Planning	PMS	Reward	Administrative/IT	Strategy
Gates and Germain (2010)	•	•	• Inclusion of sustainability measures within BSC		•	Social and environmental
Van der Woerd and van der Brink (2004)	•	•	• BSC – suitable for a ST driven and/or synergy driven approach to sustainability • Focuses on three aspects of value creation and the significance of stakeholder engagement in the value creation process		•	Synergy and Stakeholder driven
Benitez-Amado and Walczuch (2012)	•	•	•		• IT capabilities enable proactive environmental strategy and influences firm performance	Environmental Proactive

Berrone and Gomez-mejia (2009)	•	•	•	CEO total pay and its relationship with environmental performance and governance structure	•	Pollution prevention vs end of pipe
Perego and Hartmann (2009)	•	•	• EPI sophistication and informative properties are influenced by strategic stance		•	Proactive
Shaukat et al (2016)	•	•	•		• Gender diversity • Board independence • Financial expertise in audit committee	Proactive
Hansen et al (2010)	•	•	• Provides evidence of a community enabled BSC to drive corporate community involvement projects		•	Social Community Involvement
Dias-Sardinha and Reijnders (2005)	•	•	• A thematic use of a BSC at different organisational levels to manage sustainability		•	Three types of Strategies along a continuum

Dias-Sardinha et al (2002)	•	•	• A cascading BSC for sustainability	• Six types of Strategies along a continuum

APPENDIX 7A FINAL INTERVIEW GUIDE

Controlling for Sustainability Strategies: Evidence from UK

Stage 1
Final Interview Guide

Thank you once again for accepting my request for an interview. Below, I list the purpose and expectations from the interview. A guide to the probable questions are also provided.

The **purpose** of the interviews are manifold.

- To gather rich insights into the role of controls for sustainability
- To explore if and how different controls are employed simultaneously to support sustainability strategies
- If some controls receive more emphasis than others (primary/secondary emphasis)
- To inform the development of a survey instrument
- To contribute to our existing understanding of controls for sustainability strategy.

Please **note:**

- I am **exploring a range of control systems**. These include: organisational culture, planning, budgets, performance measurement systems, compensation systems, governance, team structures and written policies.
- **Not all of the above** may be employed as the emphasis could be given to few controls and not all. I have included a broad range of controls to cater for different control designs in different organisational settings.
- During the interview, **you are welcome to relate to other forms of controls even when we are exploring a specific control type.** For instance, if we are exploring planning as a form of control, you are welcome to refer to another form of control if you think there are interlinkages or interdependencies or if such a reference would aid in the discussion.

The following questions are meant to be used **as a guide only**. Questions will be designed in accordance with the flow of the interview.

SAY: Good….. Finally I have the opportunity to meet you albeit via Skype. **PAUSE**. Thank you again for offering me an appointment. **LISTEN**

SAY: The purpose of the interview. How multiple forms of controls are designed and used...the Rationale behind it. And this is the first stage of data collection.

Define Controls – as internal mechanisms to direct employees towards an end objective for sustainability.

SAY: There are four PARTS

Part A

Participant Detail:

Please briefly explain your role. Both implementation and formulation?

PART B

Sustainability Strategy

Please select one of the options that best describes your organisation's approach to sustainability. Why have you made this selection?   Y N R

PART C

Control systems

- What is/are the most significant means of directing employee behaviour towards the type of sustainability strategy pursued by your organisation?

THANK YOU

- How would you describe the role of *organisational culture* as means of controlling for sustainability with examples, if possible.

How does sustainability influence staff **selection,** if at all?   Y N R

To what extent are staff **selected** based on their understanding of sustainability?   Y N R

Do you look for a **match** between organisation's sustainability values and the individual's values for sustainability, specifically important if HR contributes to Sustainability?   Y N R

Do you **train** your employees on sustainability? How?   Y N R

Is the **training** at a comprehensive level, or limited to few functional areas? Why?   Y N R

How do you **communicate** about sustainability with your employees   Y N R

Do you **assign** ambassadors? What is their role?   Y N R

Do you **organise events** on sustainability?   Y N R

Do you **encourage peer pressure** to ensure employees make decisions in line with value systems and policies?

How?   Y N R

From what we have discussed about cultural control, how does it enhance employee **capabilities**, if at all? Learning, proactive thinking, looking for solutions?
Y N R

THANK YOU

- Please discuss the role of *planning* as means of controlling for sustainability with examples, if possible.

How is planning used to set sustainability **targets**? Are these short term and/or long term? Example? Y N R

How does planning help to **internalise sustainability principles** and vision and mission, if at all?   Y N R

How is planning used to **interpret the institutional context** and set appropriate response, if at all?   Y N R

Does employees and stakeholders have an **input** in the planning process? Why so?   Y N R

Do you solicit inputs from **different functional departments** in the planning process? Why so?   Y N R

To what extent is planning used to **develop firm specific capabilities** for sustainability? HR   Y N R

From what we have discussed about planning control, how does it enhance employee **capabilities**, if at all? Knowledge management? Learning, proactive thinking,
looking for solutions?   Y N R**THANK YOU**

- Please discuss the role of **budgets**as means of controlling for sustainabilitywith examples, if possible.

How do you **allocate** budgets for sustainability? Is there a written policy?   Y N R

Do make long term **allocations** or short term?   Y N R

To what extent planning influence budgetary **allocations?**Y N R

To what extent do **employees participate** in the budgetary allocation process? Why?   Y N R

Is there a provision for budgetary **revision**? Why?

Do you use it as a planning and **communication** tool then?   Y N R

THANK YOU

- Please discuss the role of **performance measurement systems**as means of controlling for sustainabilitywith example, if possible. Are the measures used interactively, if relevant?

To what extent is PMS used for **internal decision making**? How? (future planning, risks)   Y N R

Are Indicators quantified in **financial units**?   Y N R

How **many indicators** do you use?   Y N R

For **environmental performance** and for **social performance**?   Y N R

How are the indicators generated? Who **decides** the indicators?   Y N R

Is ST input solicited?   Y N R

Do you use a **BSC for sustainability?** Why?   Y N R

Where are **indicators located in a BSC**? How do you use them?   Y N R

To what extent does the top management **use** the indicators **interactively**? Do they monitor some indicators personally? Why?
Y N R

THANK YOU

- Please discuss the role of *rewards* as means of controlling for sustainability with examples, if possible.

Who is rewarded? Non Managerial. TMT, Everyone?   Y N R

Why do you offer a reward ?   Y N R

Are rewards linked with **PMS**? Why so?   Y N R

How is the reward **determined**? Subjectively/Objectively?   Y N R

What are the **types** of rewards? Monetary/Promotion/Non-Monetary/Negative   Y N R

THANK YOU

Please discuss the role of *governance structure* as means of controlling for sustainability with examples, if possible.

How is sustainability **governed**?   Y N R

Is there a **TMT position** for sustainability? Top 10 in the company?   Y   N   R

Is there a **board level** representation for sustainability?

Supervisory Board? Committee ?   Y N R

Why so?   Y N R

What are **the objectives** assigned to the board? For compliance only? Or product level, **BSC**, HR level etc   Y N R

- How does the structure facilitate interaction for sustainability, if relevant.

Where is sustainability **located** in the organisational structural framework?   Y N R

What is **the role** of this committee?   Y N R

Does the **committee integrate the views of different functional areas**? Example?   Y N R

To what extent do you rely on **cross functional teams** for sustainability? Why? What are these teams?

Dialogue, meetings etc?   Y N R

What is **the reporting structure?** Departments to departments, departments to committees etc? Y N R

THANK YOU

- What role does written *rules and policies* play in promoting sustainable actions, if at all.

Standardised?

How are these **implemented?** Y N R

Do you use **pre-action reviews**, authorisations to ensure policies on sustainability are abided by   Y N R

To what extent are employees **empowered** to take decisions on their own? Ie. **Autonomously?** Y N R

Audit? Y N R

THANK YOU

- Please discuss the role of any other forms of controls employed as means of controlling for sustainability with examples, if possible.

THANK YOU

PART D

Control Multiplicity/Package Rationale

1. Why have you considered a multiple of controls? Please illustrate with examples. How are these controls dependent on each other?Y N R

If these are not dependent, how do these controls work simultaneously to promote sustainability strategy?

How do you cater for the internal consistency of different controls? For instance, these controls will help you achieve the end objective?
Y N R

2. Do you put primary emphasis on certain controls? Why? Why do the other controls receive secondary emphasis?Y N R

Thank you for your time. It is greatly appreciated.

Once the research is concluded, I will provide you with a summary document with the major findings.

APPENDIX 7B PILOT INTERVIEW GUIDE

Stage 1

Interview Guide

The following questions are meant for a guide only.

A. Sustainability Integration

How closely is sustainability integrated within the core business areas?

How does your organisation integrate sustainability within the core business areas?

How are stakeholder perspectives included in decision making, if at all?

B. Control systems

What is/are the most significant means of direct employee behaviour towards sustainability?

Does your organisation employ all or any of the following control systems to direct employee behaviour towards sustainability? If so, please elaborate with examples where possible.

The extent of use and emphasis placed on the control systems

- ❖ Mission and vision Statements
- ❖ To embed sustainability into organisational culture?
- ❖ Informal meetings?
- ❖ Peer pressure
- ❖ Training and workshops
- ❖ Written rules and procedures
- ❖ Sustainability strategic planning (short term/long term)

- ❖ Strategic target setting
- ❖ Communication of sustainability strategy
- ❖ Use of budgets
- ❖ How is performance of sustainability objectives evaluated (use of scorecards, financial only or non-financial only indicators)
- ❖ Frequency of evaluation
- ❖ With reward and compensation systems (both for employees and top management)
- ❖ Accounting techniques (environmental accounting, social accounting)
- ❖ Any other controls

C. Sustainability - Strategic Uncertainty

Does top management actively look for sustainability related strategic uncertainties (opportunities, threats)?

D. Strategic Orientation

How would you describe the sustainability strategic orientation pursued by the company?

E. Impact on Performance

How attainable are the sustainability objectives considering how these are controlled?

APPENDIX 7C PARTICIPANT INFORMATION SHEET

Controlling for Sustainability Strategy: Evidences from UK and Germany

Biswaraj Ghosh (Raj), PhD Candidate
Nottingham Business School
Nottingham Trent University

Participant Information Sheet

WHAT ARE THE AIMS OF THE PROJECT?
The first aim of this project is to explore <u>how</u> a range of traditional management control mechanisms are designed and used in medium to large UK based manufacturing companies covering several sectors in accordance with specific sustainability strategy orientations; **the second aim** of this project is to investigate whether there are differences in management control approach for sustainability in international settings (UK and Germany). Whilst the first aim fulfils the requirements of a fully funded PhD study that I am undertaking exploring management controls for sustainability in the UK context, the second aim informs a separate study jointly explored with Professor Christian Herzig that explores management controls for sustainability in international settings.

WHY AM I BEING INVITED TO TAKE PART?
We are inviting a member of the top management team from a large number of medium and large sized UK and German based manufacturing organisations. Your inputs will facilitate a large scale exploration of how management controls are designed and used for sustainability strategies and will allow us to understand how different organisations are controlling for different sustainability strategies.

WHAT WILL MY PARTICIPATION INVOLVE?
You are invited to participate in the survey exploring your organisation's approach to sustainability and how different management controls traditionally found in practice are designed and used for sustainability management. The survey will take approximately 15-20 minutes to complete.

WHAT WILL HAPPEN TO THE INFORMATION I PROVIDE?
The data will be used to map how a large number of medium to large manufacturing companies are designing and using management controls for sustainability. The collected data will be analysed at the aggregate level to firstly inform the PhD study that specifically explores management controls for sustainability in the UK and another study jointly explored by Professor Christian Herzig and me to understand how management controls for sustainability compare in the UK and Germany. The analysed data will be used for PhD thesis, publications and presentations at workshops and

conferences. You may make a request to withdraw the data without having to offer a reason until 05/12/17. Any data withdrawal requests can be sent to the Principal Investigator at Biswaraj.ghosh@ntu.ac.uk

HOW WILL I HANDLE OF CONFIDENTIALITY AND ANONYMITY ISSUES?
The survey does not collect the name of the organisation and the name of the individual completing the survey. However, the survey asks for demographic details of the organisation (such as size, stock market listing) to explore if demographic characteristics influence management controls for sustainability. To track completions and to allow the project team to comply with data withdrawal requests, the consent form includes a unique identification number assigned to the organisation invited to participate in the study. However, the data will be analysed and reported at the aggregate level and any publications will not feature the names of organisations or participants. The project team will retain the raw data in a password protected Excel worksheet which will be subsequently used for analysis in a password protected statistical package (SPSS).

Contact details: Please forward any questions or clarifications to the Principal Investigatorin the first instance.

Principal Researcher:	Director of Studies:	Second Supervisor:
Biswaraj Ghosh (Raj)	Professor Christian Herzig	Professor Musa Mangena
E: biswaraj.ghosh@ntu.ac.uk	E:Christian.herzig@ntu.ac.uk	E: Musa.Mangena@ntu.ac.uk
Nottingham Trent University	Nottingham Trent University	Nottingham Trent University

Controlling for Sustainability Strategy: Evidences from UK and Germany

CONSENT FORM

Please read and confirm your consent to participate in this survey by ticking the appropriate box(es)

1. I confirm that the purpose of the project has been satisfactorily explained to me, that I have been given information about it in the form of a Participant Information Guide ☐

2. I understand that my participation is entirely voluntary and that I am free to withdraw my data by 05/12/17without having to offer a reason ☐

3. I understand that the promise of an unconditional report on project findings, does not in any way negate my rights to not participate/withdraw from the project ☐

4. I freely and voluntarily agree to participate in this project ☐

5. To keep it anonymised, we are not collecting signatures. Please tick this box to confirm your participation on the basis of the above information

   ☐

Please return the consent form along with the survey document in the envelope included with the invitation pack. Many thanks

APPENDIX 7D TRUNCATED INTERVIEW GUIDE

Controlling for Sustainability Strategies: Evidence from UK

Stage 1
Interview Guide

Thank you once again for accepting my request for an interview. Below, I list the purpose and expectations from the interview. A guide to the probable questions are also provided.

The **purpose** of the interviews are manifold.

- To gather rich insights into the role of controls for sustainability
- To explore if and how different controls are employed simultaneously to support sustainability strategies
- If some controls receive more emphasis than others (primary/secondary emphasis)
- To inform the development of a survey instrument
- To contribute to our existing understanding of controls for sustainability strategy.

Please **note:**

- Control is defined as internal mechanisms that is typically used to achieve organisational goals and objectives. These mechanisms may include the ones mentioned below.

- I am **exploring a range of control systems**. These include: organisational culture, planning, budgets, performance measurement systems, compensation systems, governance, team structures and written policies.

- **Not all of the above** may be employed as the emphasis could be given to few controls and not all of the above. I have included a broad range of controls to cater for different control designs in different organisational settings.

- During the interview, **you are welcome to relate to other forms of controls even when we are exploring a specific control type.** For instance, if we are exploring planning as a form of control, you are welcome to refer to another form of control if you think there are interlinkages or interdependencies or if such a reference would aid in the discussion.

The following questions are meant to be used **as a guide only**. Questions will be designed in accordance with the flow of the interview.

Part A

Participant Detail:

Please briefly explain your role.

PART B

Sustainability Strategy

Please select one of the options that best describes your organisation's approach to sustainability. The options are included in a separate document.

PART C

Control systems

- How do you control for the type of sustainability strategy your organisation pursues?

- Please discuss the role of *organisational culture* as means of controlling for sustainability with examples, if possible. This includes the emphasis given to communicating sustainability principles, provisions for training, emphasis on employee selection, peer pressure and vision and mission statements.

- Please discuss the role of *planning* as means of controlling for sustainability with examples, if possible.

- Please discuss the role of *budgets* as means of controlling for sustainability with examples, if possible.

- Please discuss the role of *performance measurement systems* as means of controlling for sustainability with example, if possible. Are the measures used interactively, if relevant?

- Please discuss the role of *rewards* as means of controlling for sustainabilitywith examples, if possible.

- Please discuss the role of *governance structure* as means of controlling for sustainabilitywith examples, if possible. How does the organisational structure facilitate interaction for sustainability, if relevant.

- What role does written *rules and policies* play in promoting sustainable actions, if at all.

- Please discuss the role of any other forms of controls employed as means of controlling for sustainability with examples, if possible.

PART D

Control Multiplicity/Package Rationale

1. Why have you considered a multiple of controls? Please illustrate with examples. How are these controls dependent on each other?

If these are not dependent, how do these controls work simultaneously to promote sustainability strategy?

How do you cater for the internal consistency of different controls? For instance, how will these controls help you achieve the end objectives or goals for sustainability?

2. Do you put primary emphasis on certain controls? Why? Why do the other controls receive secondary emphasis?

Thank you for your time. It is greatly appreciated.

Once the research is concluded, I will provide you with a summary document with the major findings.

Sustainability Strategy Phase Identification

Please consider the following and choose the most relevant/applicable statement from below:

- Please consider the competitors as a frame of reference
- Please consider the organisation or the division as a whole
- Please consider the general pattern of sustainability focus over time

Statement A

The focus is on fulfilling the expectations of regulatory stakeholders with a view of reducing risk. For instance, attention is primarily on complying with relevant pieces of environmental and/or work place related legislation. Philanthropic activities may be additionally undertaken but remaining largely uncoupled from core business activities.

Statement B

The focus is on generating efficiency gains over the short term primarily through cost cutting initiatives. Attention is paid to the identification of waste streams and reducing associated costs. It may involve a focus on employee training, upskilling, engagement and lateral communication. Besides, the focus may also be on the implementation of technical solutions to reduce wastage and better utilisation of resources and/or lesser reliance placed on conventional energy and/or emphasis given to recycling/reuse to reduce wastage.

Statement C

The focus is on generating efficiency gains over the long term through the development of (sustainable) value added products, innovation led approaches and swiftly responding to market changes, leading onto long term competitive advantage. The focus is also on developing firm centric and future oriented human and ecological capabilities and capacities, not easily imitable by competitors, to support the organisational wide uptake of sustainability principles. Attention is paid to engage key with stakeholder groups and augmenting social, intellectual, financial and environmental capitals.

Statement D

Emphasis is on exerting influence on the wider society including the extant industries and stakeholder groups to undertake regenerative actions. The firm proactively promotes sustainability values within the wider sections of the society. Focus is on forming collaborative partnerships to address wider issues of ecological and social sustainability with the objective of generating shared value. Innovation plays a critical role. Significance is attached to implications on future generations. Wider negative implications arising out of activities are proactively considered and mitigated.

The above statements do not signify good or bad practices.

APPENDIX 7E CONFIDENTIALITY AGREEMENT

CONFIDENTIAL AGREEMENT.

In this agreement Author refers to the producer of the material to be transcribed.

This agreement is to confirm that all work received by David Maskell, Director, Transcription Services will be handled in a confidential matter and that no information   be distributed to any other source or used in any articles whatsoever by Transcription Services. The material supplied by the Author is determined to be the sole property of the Author and the Author retains all rights to this material.

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If and when requested the Author will supply Transcription Services with the layout required, and any special formatting of the ransc •bed material. Signed• aa/07(z015.

Dated •⋯⋯⋯⋯•⋯⋯•⋯⋯⋯⋯⋯⋯⋯⋯ 8 Evesham Court, Toton, Nottingham, NG9 6FG Phone: 07957491087

Email: deml@sky.com

APPENDIX 7F MEMO NVIVO INTERVIEW WITH RD5 (AN EXAMPLE)

So the understanding of sustainability was there but not the structure or formal mechanisms. Measurements did not build on a solid logical foundation and "really just as we saw fit". So the changes started with having to comply with external reporting framework with the responsibility given to the individual in charge of finance. The understanding was based on doing the right thing for instance the distribution centre has a rain water harvesting facility.
The discouse is fundamentally built around the economic imperative or benefits arising out of sustainability initiatives and also business resilience. So how does environmental initiaves contribute to potential cost savings and adds to business resilience.

The company focuses on the long term aspect and also sets the standards in terms of how say, bottles are going to be designed so as to generate a plethora of shared benefits of values. In one sense, they are setting the stanrds for the industry and changing the practice, for instance through the design of lighter bottles. They also want to engage with customers and make them identify their own environmental impacts. One way, they are achieving it is through packaging. Not only does this enable them to achieve zero landfill, financially benefit them from landfill tax and simultaneously built in the message for customers as to why they have taken such an approach.

Fundamental to control is culture. It helps carry the message of sustainability across different functions and levels. It helps to rationalise why sustainability is important, how the company benefits from it. It flows from the organisational vision and staff are assessed against that.

The cultural perogative drives staff to come up with their own ideas and share it. They also have the opportunity to get in touch directly with the SD for clarifications or with any concerns. Probably, it is due to the relatively smaller size of the company and less reliance on the hierarchical structure. Sustainability plays a key role in staff selection and as such environmental and social aspects are included in the role advertised. Given the relatively small size of the business and the emphasis on having a very open structure not influenced by hierarchy, probably it is important to put emphasis on the cultural fit. Induction...

The focus of planning is to ensure that there is continuous improvement. It is not based on objective targets but qualitative in nature focusing on the need to improve recurringly. So the focus is not on achieving a target but to have a "better" performance the following year. However, investment appraisals are undertaken in terms of their return. So in terms of budgetary allocations, it is the functions thay will pick up the bill as they are the ones to benefit from such investment. So cost benefit analysis play a clear role. But again the long term vision will play a role in guiding functional units where the budgetary investments need to be made. The budgetary allocation is however done through a collaborative approach where the SD and OD are present.

They also measure the social return on investment but there is a lot of subjective assumptions and reliance on external data. On a monthly basis, different divisions are engaged to discuss about their KPIs using the traffic light system. Quantification of KPIs in financial terms is used according to the type of

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audience. For instance, discourse around water use will not be based on financial terms but around risk - because it is very much about resilience as water is horribly undervalued at the moment.

Some indicators are deduced from legislation but others are internally generated. It is based pretty much on adaptability and where the business is in terms of its progress on certain KPIs. There is a monitoring mechanism in place to discuss why a certain KPI is not as expected. So structure provides with a sort of monitoring mechanism. In other words, if there is no structure in place, KPIs benefit may be reduced. So the TMT will monitor some KPIs personally. No rewards explicitly for sustainability but on financial performance. But in this organisation, the focus of sustainability is on business resilience and cost savings. So probably, embedded in that aspect.

But there is a definitive structure. A SD supported by a EM. The social side is managed by SD through interactions. There is also a board level reporting obligation twice a year.There is also an exec level committee where the SD represents sustainability.

In terms of structure, there is no department explicitly for sustainability, it sits very much with the SD who is assisted by the EM. However, it has been made pretty clear that sustainability is a shared responsibility rather than of the EM. And hence it is built into the appraisal process of each individual. So, the discourse on savings and resilience is communicated and built into the cultural system. The EM and SD are seen as co-ordinators and also as a mechanism to weave different functional areas together as part of the complete puzzle. Cross functional reliance for certain projects are solicited. But the key is on finance representation. The EM liaises with different functions and hence acts as an integrated liaison. Limited emphasis on policies.

KPIs are just not enough to manage sustainabiltiy due to very broad nature of it. It is dependent on interactions, it is dependant on understanding it holistically. And some areas where quantified KPIs may not be appropriate but a qualitative judgement is required - bio diversity for instance.

CHECK: How do they put the message across to customers about sustainability aspects - packaging? Do you measure social return on environmental investments. You gave the xample of bottle vs cans? Budgets: Is it capital investment based? Paybacks? Centrally held Funds for imvestment by functions? Or functions receive a budget every year and they decide how to spend it? TMT rewarded for sustainability ?

APPENDIX 7G NVivo Coding Structures

Medium term control	B RM10	B RD11	RM3 BC	RM7 BC	C RGEM9	RD6 C	RD1 D	RD2 D	RL4 D	RD5 D	RH8 D	RD12 D
Culture	Cognition, communication emphasis, training, no fit	Cognition, communication, training on awareness raising, no fit	Cognition, communication, training, no fit, themed events	Cognition, communication, training	Cognition, communication, training, value fit	Cognition, communication, training, value fit	Cognition, training, education focused, understand relationship, external audit, value fit; alignment	Cognition, communication, training, value fit	Cognition, communication, training	Cognition, communication, training, value fit	Cognition, communication, training, looking into value fit and to facilitate cultural shift	Cognition, communication, training, part value fit for marketers
Strategic Planning	First time setting strategy targets, - medium term 3 years Customer stakeholder focus Not formalised, in pockets Understand what is relevant for units	Not a lot of ext. stakeholder engagement On legislative and technological changes	Targets, stmt Stakeholder every 3-4 years	Integration into strategic planning risk register Materiality assessment Action plans Stakeholder every 3-4 years - customers	Eco-design, product planning Regular stakeholder engagement Functional inputs – business plans and feedback top	High level goals from top – functions not told how to operationalise Goals, materiality, stakeholder engagement annually with wide range solicit functional inputs	Medium term goals, Small company, ad hoc functional dependency Exceeding govt target Collaborative engagement Benefit farmers through innovative approach through	Very long 2050 targets Devolved into units Annual trend analysis fed into business plans Template to capture how units address top down plans Multiple stakeholder engagement Product/operational plans Business plans	Extensive stakeholder engagement NGOs frequent basis Range of context analysis tools	Qualitative goals	Multifunctional inputs across layers.	Paris Agreement agendas, range of stakeholders Multi functional input to understand risks etc.

							collaboration on					
Budgets	Around regulatory Some for environmental communications at site level CAPEX but requires understanding Unit level, none at group fund	Itemised approach, landfill costs – how much to recycle Innovation fund Units apply	Zero based budget Apply for budgets	Unit investment plans	Apply for budgets	Normal budgeting planning at unit level	CAPEX	CAPEX	CAPEX	Normal budgeting cycle		Capex
Performance Management System	Developing atm FQ Future planning use evolving in terms of cost benefit analysis Top down KPI Some level of interest on interactive use		Dashboard FQ Helps in cognition Monitored by function and TMT (quarterly reports)	Driven by KPIs for reporting and targets No FQ Use of KPIs for monitoring, reporting externally Essentially top down but some consultations with bus units	Dashboard not fully integrated WIP Separate dashboard for sus FQ – KPI use monitoring, understand deviation	BSC in trial Benchmarking, monitoring Reviewed six months by division director but twice through reporting at TMT Decided at group	Financial Q to see returns KPIs used for future project planning and budgetary allocation Frequent monitoring of KPIs Co-developed KPI	Compliance based KPIs – external for reporting FQ Cofunctional developed KPIs Operation planning use – meeting targets Monthly review of key targets – high level carbon, ethics etc	BSC – direction of travel FQ TMT monitoring of critical KPIs	Reviewed monthly Financial Q		FQ TMT Reviewed KPI co dev

						level with some flex at functional level						
REWARD	Non-fin Top management getting embedded – bonus tmt	Non-fin; temporal	Bonus, based on role; incl sales NF KPI	No comp at any level, no buy in	Non-fin	Issues of under reporting Not linked to KPIs Affects bonus	BONUS (n) Non-fin Subjective Non-fin - employees	BONUS (n) Middle/top Small % so no manipulation	based on role KPIs subjective	Non-fin	Bonus, based on role /kpi nf	In the future (quote) to ensure key strategic decisions are made; Non-fin;
Organizational Structure and Design	Champions atm Under technical function Matrix structure Learning; internal consultant	Under operations, GM of every business responsible Not too much of rules pols Data. HS audit	2 departments CSR council - reps	Promote learning – understand risks opport… Within HR and comms			externall audit, survey to check understanding					
Governance Structure	Codes, policies Monthly board meeting at site Group technical board on a monthly basis then	One Exec meeting/year No more committees	Report to BoD twice Exec reporting four times CPO direct link to board									

	to exec board										
	Twice reported										
	No committee, group exec forum										
	Chaired by Exec										
	Formal reporting										
	No BoD reporting										
	Prefers direct reporting to exec, rather than within operational function										
	No group level audit										

APPENDIX 9A SOURCES OF ITEMS (ALL RESOURCES CONSULTED)

Construct	ITEMS POOL Reference (*indicates sources used in final survey)
Sustainability/CSR Strategy	Banerjee (2002)
	Christ and Burritt (2013)
	Aragón-Correa (1998)
	Galbreath (2010) *
	Pondeville et al. (2013)
	Perego and Hartmann (2009)
	Buysse and Verbeke (2003)
	Gago and Antolín (2004)
Cultural Controls	Bedford and Malmi (2015)*(* INDICATES SOURCES WHERE ITEMS ARE TAKEN)
	Simons (1987)
	Henri and Journeault (2010)
	Kober et al. (2003)
	Lee et al. (2013)
	Jose and Jabbour (2011)*
	Fairfield et al. (2011)

	Morris (1997)
	Journeault et al. (2016) *
	Widener (2007) *
Strategic Planning	Galbreath (2010) *
	Shih and Yong (2001)
	Ittner and Larcker (1997)*
	Lee et al. (2013)
	Wisner et al. (2006)
	Judge and Douglas (1998)*
	Walker et al. (2015)* Bedford and Malmi (2015)
	Bouwens and Abernethy (2000)
Budgets	Simons (1987)
	Chenhall and Langfield (1998)
	Henri and Journeault (2010) *
	Christ and Burritt (2013)*
Performance Measurement System	Simons (1987) *
	Bouwens & Abernethy (2000)

	Chenhall and Langfield (1998)
	Henri and Journeault (2010) *
	Kober et al. (2003)
	Fairfield et al. (2012) *
	Perego and Hartmann (2009) *
Rewards	Shih and Yong (2001)
	Ittner and Larcker (1997) *
	Fairfield et al. (2012)
	Morris (1997)
	Govindarajan and Gupta (1985)
Governance	Simons (1987)
	Chenhall and Langfield (1998)
	Henri and Journeault (2010)
	Kober et al. (2003)
	Dasgupta et al. (2000)
	Lee et al. (2013)
	Morris (1997)

	Journeault et al. (2016)*
	Widener (2007)
	Shih and Yong (2001)
	Ittner and Larcker (1997) *
	Fairfield et al. (2012)
	Wisner et al. (2006)
Structure	Gordon and Narayan (1984)
	Fairfield et al. (2012)
	Jose and Jabbour (2011)
	Kober et al. (2003)
	Ittner and Larcker (1997)
Use	Abernethy and Brownell (1999) *
	Acquaah (2013)
Strategic Uncertainty	Pondeville et al. (2013) *

APPENDIX 9B MODEL

CONTROLLING FOR SUSTAINABILITY STRATEGY: EVIDENCE FROM THE UK—A TRADITIONAL MANAGEMENT CONTROL PERPSECTIVE

CONTINGENT FACTORS

SUSTAINABILITY STRATEGY   ORG. SIZE   FINANCIAL STRENGTH   PERCEIVED UNCERTAINTY   PRIM ST. LISTING

Compliance, Efficiency, Proactive   Medium/Large   Relative Low/High   Low/High   Yes/No

TRADITIONAL MANAGEMENT CONTROL PACKAGE FOR MANAGING SUSTAINABILITY

CULTURE BASED CONTROLS

Values/Belief (High/Low)

Socialisation (High/Low)

Shared Values (High/Low)

Workforce Empowerment (High/Low)

Recruitment—Selection (High/Low)

STRATEGIC PLANNING

Planning Depth (High/Low)

Nature of Goals (Quantified/Qualitative/Mixed) (Short/Medium/Long)

Institutional Context Analysis (High/Low)

Participatory Approach
- stakeholder (high/low)
- Units/functions (high/low)
- TM (high/low)

Implementation
- loose/tight

BUDGETARY CONTROL

Integration with budgetary practice
-capital investment decisions (High/Low)
-within budgets (High/Low)

Participatory Approach
- Units/functions (high/low)
- Non-management (High/Low)

Immunity from financial distress/shock (high/low)

PERFORMANCE MEASUREMENT

Coverage/Depth (High/Low)

Decision Making Use (High/Low)

Integrated Mechanism (e.g. BSC) (High/Low)

Participatory Approach (e.g. KPI design)
- stakeholder (high/low)
- Units/functions (high/low)

Interactive Use of PMS by Top Management (personal monitoring) (high/low)

REWARDS AND COMPENSATION

Financial Rewards Across Levels (High/Low)

Non-Financial Rewards Across Levels (High/Low)

Long Term Pay (High/Low)

Assessment Style (Subjective/Objective/Mixed)

GOVERNANCE

Top Level Decision Support (e.g. committee; external experts) (High/Low)

Top Level Matters of Agenda (Compliance related/Strategic aspects)

Reporting Frequency to Top Management (None/Very Frequent)

Policy /Codes Reliance (High/Low)

Verification/Assurance (High/Low)

ORGANISATIONAL DESIGN AND STRUCTURE

Structure Type (Embeddedness) (Yes/No)

Integrated Liaison/Collaborative Approach (Cross functional teams) (High/Low)

Role of Sustainability Professionals Internally—Dynamism (High/Low)

TRIPLE BOTTOM LINE PERFORMANCE

APPENDIX 9C CONTENT VALIDITY DOCUMENTS

Controlling for Sustainability Strategy: Evidence from the UK

REQUEST FOR EXPERT FEEDBACK ON SURVEY CONTENT VALIDITY

Project Brief

The research focuses on a number of traditional management controls including Performance Measurement Systems, Cultural Systems, Reward and Compensation, Governance mechanisms, Structural arrangements, Strategic Planning and Budgets and explores how the aforementioned are designed and used to manage sustainability strategies.

The study also recognises that sustainable development is a gradual process and that different organisations may be at different phases of strategic progression. Specifically, the study seeks to understand how organisations design and use controls for different strategic orientations towards sustainability (for instance, compliance driven approach towards sustainability). In doing so, the study aims to identify if management controls exist in certain combinations for specific approaches to sustainability and if certain management control combination leads to optimised organisational performance levels.

Given the exploratory nature of the study and lack of prior research focussing on a comprehensive range of traditional management controls, a survey instrument has been developed. The instrument has been informed by findings from interviews that were undertaken with Sustainability Directors/Managers from leading manufacturing organisations.

The survey seeks to understand organisational practice (i.e. the practice at the organisational level rather than business unit or individual levels). One member of the top management team (e.g. Managing Director, CEO) from different medium to large manufacturing organisations (multiple sectors) will be invited to complete the survey.

Given the novelty of the survey instrument, you are requested to provide feedback as an Accounting/Control Expert on the survey questions, items as well as the measurement scale to confirm content validity. Your feedback is very significant in the development of the survey and will be used as the basis for finalising the final survey instrument to be administered on a larger scale.

I am enclosing a model that captures the different aspects (factors), a response form and the survey instrument.

It will be great if you are able to provide some feedback by 30th May, 2017.

Feedback Sheet

Please refer to the enclosed survey questionnaire and the study overview to provide your feedback/inputs.

A Please use the space below to provide feedback/suggestion on the **overall layout of the survey** (for instance, appeal, ease of navigation, ease of use etc)

B Please use the space below to provide feedback/suggestion **on the order of each section** (for instance, would you like to see the section on Sustainability Strategy before the sections on different Management Controls)?

C The sections below correspond to each question and the associated items as included in the survey questionnaire as enclosed.

The following measures are designed to evaluate the **content validity of a measure** included in the survey questionnaire.

Please rate each survey item as follows:

I.   **Representatives** measures how each survey item clearly represents the theoretical definition or the domain area (included below) within each construct that is been measured. Space is provided for you to comment on the item or suggest revisions.

1= item is not representative

2= items need major revisions to be representative

3=items need minor revisions to be representative

4=item is representative

II.   **Clarity** measures how clearly each survey item is worded and if it's easily understandable. Space is provided for you to comment on the item or suggest revisions.

1= item is not clear

2= item needs major revision to be clear

3= item needs minor revision to be clear

4= item is clear

III. **Comprehensiveness**Please evaluate the comprehensiveness of the items measuring a theoretical domain area by indicating if any items need to be deleted and/or added.

IV.   **Scale Measurement** Please provide any feedback on whether the questions and the measurement labels are adequate and relevant.

CONSTRUCT: ORGANISATIONAL CULTURE AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	**Representativeness** – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	**Clarity** – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	**Comprehensiveness** –Does any of the items need deleting or any item needs adding?	**Scale Measurement –** Is the question and the anchor labels adequate/relevant?
Belief/values – *Measures the extent to which sustainability values/beliefs are relied upon and incorporated in mission, vision or value statements*	*1a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	1b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	1c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	1d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Socialisation - *Measures the extent to which the organisation relies upon different means (for instance training,*	*2a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	2b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

communication etc)	**2c**	1 2 3 4	1 2 3 4
to ensure workforce		**Comments if any:**	**Comments if any:**
alignment with			
organisation's			
sustainability value,	**2d**	1 2 3 4	1 2 3 4
goals and objectives		**Comments if any:**	**Comments if any:**

CONSTRUCT: ORGANISATIONAL CULTURE AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	Representativeness – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	Clarity – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	Comprehensiveness –Does any of the items need deleting or any item needs adding?	Measurement – Is the question and the anchor labels adequate/relevant?
Shared value - *- measures the extent to which there is a collective understanding of sustainability goals, values amongst the workforce*	*3a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	3b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	3c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	3d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Workforce empowerment - *Measures the extent to which workforce is given the freedom to look out for*	*4a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	4b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

opportunities and share ideas			
***Selection controls –** measures the level of emphasis placed on recruiting candidates on their sustainability credentials*	***5a***	1 2 3 4 ***Comments if any:***	1 2 3 4 ***Comments if any:***
	5b	1 2 3 4 ***Comments if any:***	1 2 3 4 ***Comments if any:***

CONSTRUCT: STRATEGIC PLANNING AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	Representativeness – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	Clarity – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	Comprehensiveness –Does any of the items need deleting or any item needs adding?	Measurement – Is the question and the anchor labels adequate/relevant?
Planning depth– *Measures the depth of planning for sustainability or how comprehensive is the approach to planning for sustainability*	*6a*	1　　2　　3　　4 **Comments if any:**	1　　2　　3　　4 **Comments if any:**		
	6b	1　　2　　3　　4 **Comments if any:**	1　　2　　3　　4 **Comments if any:**		
	6c	1　　2　　3　　4 **Comments if any:**	1　　2　　3　　4 **Comments if any:**		
	6d	1　　2　　3　　4 **Comments if any:**	1　　2　　3　　4 **Comments if any:**		
	6e	1　　2　　3　　4 **Comments if any:**	1　　2　　3　　4 **Comments if any:**		
	6f	1　　2　　3　　4 **Comments if any:**	1　　2　　3　　4 **Comments if any:**		

6g   1   2   3   4   1   2   3   4
       Comments if any: *Comments if any:*

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	**Representativeness** – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	**Clarity** – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	**Comprehensiveness** –Does any of the items need deleting or any item needs adding?	**Measurement –** Is the question and the anchor labels adequate/relevant?
Nature of goals – *Measures whether goals for sustainability arising out of the planning process are quantitative and/or qualitative in nature. Also identifies the temporal dimension of the goals.*	**7a**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	7b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	7c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	7d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	7e	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Institutional content analysis – *Measures if (the*	**8a**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

| extent) the organisation undertakes an analysis of the external and internal context within which it operates to plan for sustainability | **8b** | 1   2   3   4
Comments if any: | 1   2   3   4
Comments if any: | |
| | **8c** | 1   2   3   4
Comments if any: | 1   2   3   4
Comments if any: | |

CONSTRUCT: STRATEGIC PLANNING AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	**Representativeness** – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	**Clarity** – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	**Comprehensiveness** –Does any of the items need deleting or any item needs adding?	**Measurement –** Is the question and the anchor labels adequate/relevant?
Participatory approach – *Measures the extent to which the organisation relies on inputs from different stakeholders as well as functions/units to plan for sustainability*	*9a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	9b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	9c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	9d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	9e	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Plan implementation -	*10*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

Measures how closely/rigorously the sustainability plans are implementedwithin the organisation	**11**	1 2 3 4 **Comments if any:**	1 2 3 4 **Comments if any:**

SPACE FOR ADDITIONAL OBSERVATIONS/COMMENTS IF ANY:

CONSTRUCT: BUDGETARY CONTROL AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	**Representativeness** – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	**Clarity** – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	**Comprehensiveness** –Does any of the items need deleting or any item needs adding?	**Measurement –** Is the question and the anchor labels adequate/relevant?
Integration with budgetary practice– *Measures if sustainability related aspects are integrated/incorporated within budgetarypractices (e.g. importance attached to sustainability related criteria for capital investment decisions etc.)*	*12a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	12b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	12c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	12d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Participatory approach *– measures the level of unit level and non-management participation in the*	*13a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	13b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

| budgetary planning process | **13c** | 1 2 3 4
 Comments if any: | 1 2 3 4
 Comments if any: |
| | **13d** | 1 2 3 4
 Comments if any: | 1 2 3 4
 Comments if any: |

CONSTRUCT: BUDGETARY CONTROL AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	Representativeness – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	Clarity – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	Comprehensiveness –Does any of the items need deleting or any item needs adding?	Measurement – Is the question and the anchor labels adequate/relevant?
Budgetary immunity - *Measures the extent to which sustainability budgetaryallocation is immune from financial crisis/shock*	**14**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

CONSTRUCT: PERFORMANCE MEASUREMENT SYSTEM (PMS) AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

PMS coverage/depth - *Measures the depth and sophistication of PMS to measure sustainability related KPIs*	**15a**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	15b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	15c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

	15d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
Internal decision making –	**16a**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
Measures the extent to which sustainability KPIs are used for	**16b**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	16c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
internal decision making purposes	**16d**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	16e	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	16f	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	16g	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	16h	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*

Integrative mechanism– *reliance on BSC/tabloids*	**17**	1 2 3 4 Comments if any:				1 2 3 4 Comments if any:		
Participatory approach– *Measures the extent to which the organisation develops sustainability KPIs with inputs from stakeholders and units*	**18a**	1 2 3 4 Comments if any:				1 2 3 4 Comments if any:		
	18b	1 2 3 4 Comments if any:				1 2 3 4 Comments if any:		

CONSTRUCT: PERFORMANCE MEASUREMENT SYSTEM (PMS) AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	**Representativeness** – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	**Clarity** – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	**Comprehensiveness** –Does any of the items need deleting or any item needs adding?	**Measurement –** Is the question and the anchor labels adequate/relevant?
Top management use of PMS Measures the extent to which top management uses PMS in an interactive manner or in other words, if top management personally monitors sustainability performance	**19a**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	19b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	19c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	19d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	19e	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	19f	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

CONSTRUCT: REWARDS AND COMPENSATION AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	Representativeness – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	Clarity – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	Comprehensiveness –Does any of the items need deleting or any item needs adding?	Measurement – Is the question and the anchor labels adequate/relevant?
Reliance on financial rewards – Measures the reliance attached to financial compensatory practices to manage sustainability	**20a**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	20b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	20c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	20d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Reliance on non-financial rewards – Measures the reliance attached to non-financial reward practices (e.g. Recognition	**21a**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	21b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

based, awards, promotions, tokens) to manage sustainability	**21c**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*

SPACE FOR ADDITIONAL OBSERVATIONS/COMMENTS IF ANY:

CONSTRUCT: REWARDS AND COMPENSATION AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	Representativeness – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	Clarity – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	Comprehensiveness –Does any of the items need deleting or any item needs adding?	Measurement – Is the question and the anchor labels adequate/relevant?
Long term pay - *Measures if (the extent) sustainability performance affects the long term pay of top and middle management*	**22a**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	22b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Assessment criteria – *Measures the approach undertaken to assess individual performance based on sustainability performance (if objective, subjective or both)*	**23a**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	23b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

Space for any additional comments/observations

CONSTRUCT: CORPORATE GOVERNANCE AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED THEORETICAL DEFINITION	Q./ Item	Representativeness – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	Clarity – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	Comprehensiveness –Does any of the items need deleting or any item needs adding?	Measurement – Is the question and the anchor labels adequate/relevant?
Top management decision-making support –	*24a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Measures the level of support top management receives to make decisions on sustainability	*24b*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	24c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Matters of agenda at the top management level –	*25a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Measures whether the top management discusses only	*25b*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

compliance related aspects or otherwise			
Reporting frequency– Measures how frequently the top management receives reports on sustainability related aspects	*26a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	26b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*

SPACE FOR ANY ADDITIONAL COMMENTS/OBSERVATIONS

CONSTRUCT: CORPORATE GOVERNANCE AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED *THEORETICAL DEFINITION*	*Q./ Item*	**Representativeness** – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	**Clarity** – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	**Comprehensiveness** –Does any of the items need deleting or any item needs adding?	**Measurement –** Is the question and the anchor labels adequate/relevant?
Codes and policies – Measures the extent to which the organisation relies on codes and policies to drive the sustainability strategy	*27a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	27b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
Verification - *Measures the extent to which the organisation undertakes a range of audit/verification practices to manage sustainability*	*28a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	28b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	28c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

28d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
28e	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*

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CONSTRUCT: ORGANISATIONAL STRUCTURE AND DESIGN AS PART OF A MANAGEMENT CONTROL MECHANISM TO MANAGE SUSTAINABILITY

DOMAIN AREA MEASURED *THEORETICAL DEFINITION*	*Q./ Item*	**Representativeness** – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	**Clarity** – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	**Comprehensiveness** –Does any of the items need deleting or any item needs adding?	**Measurement** – Is the question and the anchor labels adequate/relevant?
Structural arrangement *Identifies the structural arrangement for sustainability management –* *5 different arrangements are identified.* *It is quite possible for organisations to have a deeply embedded structure that covers more than one*	***29a***	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	29b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	29c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	29d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

structural arrangement included in the question	*29e*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*	
Collaborative approach – *Measures the extent to which the organisation undertakes a collaborative* *approach to managing sustainability*	*30a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*	
	30b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*	
	30c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*	
Role of sustainability professional - dynamism *Measures the role of sustainability professionals internally – how dynamic their role is within the organisation*	*31a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*	
	31b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*	
	31c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*	

| | 31d | 1   2   3   4
 Comments if any: | 1   2   3   4
 Comments if any: | | |

SPACE FOR ANY ADDITIONAL COMMENTS/OBSERVATIONS

CONSTRUCT: SUSTAINABILITY STRATEGY					
DOMAIN AREA MEASURED *THEORETICAL DEFINITION*	*Q./ Item*	**Representativeness** – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	**Clarity** – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	**Comprehensiveness** –Does any of the items need deleting or any item needs adding?	**Measurement –** Is the question and the anchor labels adequate/relevant?
Sustainability strategy - this study recognises that sustainable development is a gradual process and that different organisations will be at different phases along a continuum between compliance driven to been proactive in their approach to	*32a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	32b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	32c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

strategizing sustainability.	**32d**	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	32e	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	32f	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	32g	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	32h	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
	32i	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*

32j	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32j	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32k	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32l	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32m	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32n	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32o	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*

32p	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32q	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32r	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32s	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*

CONSTRUCT: ORGANISATIONAL PERFORMANCE

DOMAIN AREA MEASURED *THEORETICAL DEFINITION*	*Q./ Item*	**Representativeness** – how clearly does the item/statement represent the theoretical domain? (please highlight one number from below)	**Clarity** – how clearly is the item/statement worded, is it easy to understand?(please highlight one number from below)	**Comprehensiveness** –Does any of the items need deleting or any item needs adding?	**Measurement –** Is the question and the anchor labels adequate/relevant?
Organisational performance - *Organisational performance is based on how the organisation performs financially, socially as well as environmentally. In other words, the study adopts a triple bottomline approach to measuring organisational performance.*	*33a*	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	33b	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	33c	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	33d	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		
	33e	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*		

33f	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33g	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33h	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33i	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33j	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33j	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
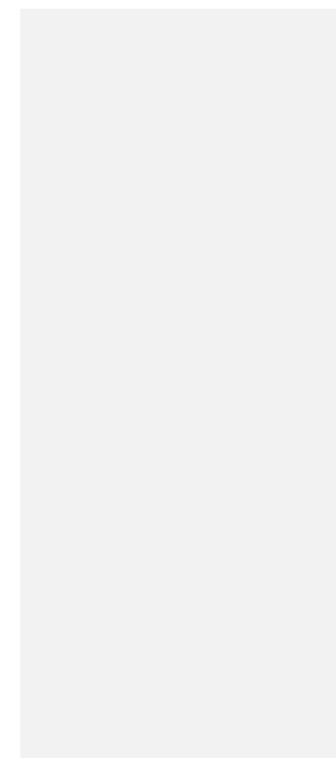
33k	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33l	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33m	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33n	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33o	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
32p	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*

33q	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*
33r	1 2 3 4 *Comments if any:*	1 2 3 4 *Comments if any:*

Questions 35-42 - Any generic comments/feedback/suggestions

APPENDIX 9E QUESTIONS WITH SCORE 3 OR LESS

Question	Academic Expert 4	Academic Expert 6	Treatment
8a		reduce	Question Truncated
14	Sustainability projects or initiatives	Sustainability projects or initiatives	Changed accordingly
25		At what level: BOD, Senior Management	Top Management example added
26		Who is producing?	Questioning style changed
30a 30b		Terms "functional/collaboration"	Retained
22a, 22b	Long term pay significance – is it usually an annual pay review linked to performance? Or do managers this aspect?		Unchanged
23a, b	This assumes sustainability KPIs are at an individual level – have we asked if individual KPIs are identified as part of performance review?		Unchanged
18a`	Emphasise KPI aspect		
13d	Consulted in what way? Active participation in decision making or asked for their view?		Changed to focus on active participation
6c	Difference between operational plans and strategic actions. Switch b a c		Changed accordingly

APPENDIX 9F CRITICAL FEEDBACK

Question #	Practitioner 2	Practitioner 1	Academic Expert 1	Academic Expert 4	Academic Expert 2	Academic Expert 6	Treatment
1b				Put "actively" in bold			Changed accordingly
2a					Change the word "reinforce" to support		Changed accordingly
2b					Social/informal events – not changed		Not Changed
2d				Plethora – interpretation?	Multiple channels rather than plethora		Changed accordingly
3a-b				Similar			Not Changed
3c	This needs more granularity – you should be asking separately about each of top management, "your manager" and colleagues.						Not changed, as this will make it a multi level study – although a valid idea

3d	ADD a question – Are there barriers to you exercising stated company values on sustainability			open ended question is deliberately avoided
4a	ADD question – Our workforce is rewarded for … TAGS then to rewards and KPIs	Q4: what ideas have come from the workforce? If they can give some examples, it proves their answer to 4a and b.		open ended question is deliberately avoided
5a	What do you mean by selecting? If recruiting, say that, if in forming teams, say that.		Recruiting rather than selecting	Changed accordingly
6			Strategic and operational Planning (Title) Changed 6 c before b. How different are 6a and 6c?	Changed accordingly
	ADD – Training workforce to increase sustainability			Repetitive as a question on training already asked in Q 2a

	knowledge / experience		
6b.	"broken down" is not clear, consider "is detailed in "		Changed accordingly
6d.	Specific sustainability issues are integrated into the crr….		Changed accordingly
6e	What's your point on 6e? For example, we're a leader in this field and don't have too many written plans… we have to be more agile than that.		Not changed, retained as different organisations may have different approaches
6g.	We have new markets based on our ….		Not changed
7.	Consider reframing as 'extensive' rather than 'how important' – the current construction may tend to focus only on a few aspects. Breadth is just as important here as	Be careful with Q7. Goals can be counter productive. For example, if I asked XX to reduce carbon by x% per year, he may focus on that to the detriment of water, waste,	Changed to Extensive to capture breadth than importance as suggested

	perceived importance, I should think!	biodiversity etc… I suspect that from the five parts to this question, you're not looking to make a judgement, just get an idea of what is done? Happy to elaborate if you wish		
7a			Highlight quantified	Changed accordingly
7cde			Use of symbols	Retained symbols
8a.`	Consider specifically identifying those tools, and asking about each one. Actually, I think this question is far too vague to be useful, and perhaps could be both ways. Ie. Relies on SWOT to inform Sust Strat AND ALSO Relies on Sust Strat to inform SWOT AND ALSO Relies on broader Sust to inform SWOT.			Question truncated

	Consider adding – Calculate its ROI on sustainability ?						
8a				Reduce length			Question truncated
8b						Consider 6d	Retained
9a				Ext/int – will they understand the difference?	Broadest sense - meaning	Actively solicit inputs rather than rely, switch 9a b	Changed accordingly
9		Language on Q9 may encourage people to score themselves highly. Could you make it more objective, eg for 9b: "To what extent does the organisation use external stakeholder input for organisational decision making purposes?"					Changed accordingly
10		could be opinion only, particularly if it's the CEO answering – he/she will likely think (or hope) his plans are cascaded perfectly.	White format		Not clear if the questions ask about implementation		Question Deleted

11			Good question – perhaps more items – a research on its own	Funding for sustainability related to firm's financial performance		Single item measure retained
12a				Criteria rather than impacts		Changed accordingly
12c and d	are really difficult – indeed we deliberately don't try to quantify spend or income from sustainability projects. In my opinion they should be just part of the culture and business, but hopefully this isn't leading to any sort of judgement.					
12d				sustainability decisions		Changed accordingly
14			Sust projects/initiative – good question			Changed accordingly
15					Grouping into management, operational and environmental condition PIs	Not Changed, may increase complexity

| 16. | Add metric about bonuses | you're asking about how we use KPIs, but not about how prevalent those KPIs are. Example: I'd score all of those quite highly, but you wouldn't have picked up on any of my qualitative measures such as biodiversity, improvements to waste processing, social impacts etc. You could broaden this question to ask about "data and KPIs" to be clear. Also, add a question on "what's the balance between quantitative and qualitative tracking of performance?" Avoid the view that quantification is the best answer – it's not the case in this subject! | | | | | Highlight the use of KPIs | Use of KPIs highlighted |

19.	I'm a little concerned that your questions in this section are slightly different – eg. Top management = day to day, Op mans = are frequently I think you would do better to be consistent here.				Retained unchanged, due to theoretical justification; However positioning of the question on operational directors moved as the final question in the section
19c			With developing sust KPIs		Changed accordingly
20		Incentivise to manage			Changed accordingly
25			At what level: BOD, Senior Management		Top Management examples given
26			Who is producing?		Questioning style changed
q29		I hope that q29 is for information gathering rather than casting judgement!			
30a			Cross functional – will they understand?	Rely appropriate (30)	
Q31		NA option		NA option	NA option added
31a			Ranking as an option		Appropriate but not considered
Q32a-e		Do questions Q32a-e crossover			Changed

	and therefore confuse each other?				
32o		Diversity broad term			Acknowledged but not changed
32m			Sust specific st		Changed accordingly
33.	ADD – How would others rate the following aspects of ……		In bold – relative to others	Are managers aware of other organisational performance?	Relative to others put in bold
34			Hard to answer		
36		These many middle categories?			
37		Is your org. listed in one or more SE?			Changed accordingly
39		Clearer (e.g. work in a sust function)?			Changed accordingly

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Controlling for Sustainability Strategies: A Systematic Review of Sustainability Strategy and Management Control Literature

Author Details

Author 1 Name: Mr Biswaraj Ghosh

University/Institution: Nottingham Business School

Town/City: Nottingham

Country: United Kingdom

Author 2 Name: Prof Dr Christian Herzig

University/Institution: Nottingham Business School

Town/City: Nottingham

Country: United Kingdom

Author 3 Name: Prof Dr Musa Mangena

University/Institution: Nottingham Business School

Town/City: Nottingham

Country: United Kingdom

Corresponding author: Mr Biswaraj Ghosh **Corresponding Author's Email:** biswaraj.ghosh@ntu.ac.uk

Controlling for Sustainability Strategies: A Systematic Review of Sustainability Strategy and Management Control Literature

Abstract: Over the past decade the focus of sustainability researchers has broadened to explore management controls for sustainable business practice (Wood, 1991; Bebbington, 2007). This paper contributes to the emerging area of interest on understanding the roles management controls play by presenting a systematic review of literature that specifically focuses on the relationship between management controls and sustainability strategies. Nine key themes arising out of the review of fifty-seven articles are presented. The limitations of current research are subsequently addressed and avenues for further research are discussed.

Word Count: 7623 words excluding tables, charts, time map and references

Introduction

Research focusing on the relationship between strategy and management controls is not new and has been extensively studied within the extant management control and business strategy literature (Langfield-Smith, 1997). Porter (1985) pointed out to the need for formulating a set of strategic priorities shaping an intended course of strategic direction to be a part of effective management. Building on this premise, Chenhall and Langsfield-Smith (1998) asserted that

setting out strategic priorities is insufficient for achieving corporate goals if not supported by appropriately designed and used management control mechanisms (Auzair and LangfieldSmith, 2005; Chenhall, 2005; Simons, 1994). The corporate adoption of "explicit" strategies to manage sustainability has been well documented (Buysse and Verbeke, 2003; Bocquet et al., 2013; Sharma and Vredenburg, 1998). Numerous strategic frameworks based on corporate sustainability have been advanced within the sustainability strategy literature (Benn et al., 2014; Porter and Kramer, 2006). Ackerman and Bauer (1976) opined that

an institutionalised approach to responsible business practice requires designing controls that will promote sustainable practices holisticallywithin the organisations. Bebbington (2007) refers to the role of certain internal control mechanisms to manage sustainability and Morsing and Oswald (2009) question the assumption that sustainability is seamlessly integrated within corporate practices indicating that controls have a role to play in supporting strategies for sustainability.

Over the past decade, the focus of sustainability researchers has broadened to explore management controls for sustainability (Wood, 1991; Bebbington, 2007). Lueg and Radlach (2016) identified as many as 83 articles that have explicitly considered management controls for sustainable development as the core focus of study. This paper contributes to the emerging area of interest in understanding the roles management controls play by presenting a systematic review of literature that specifically focuses on management controls and sustainability strategy. It maps research within this field by examining studies focussing on strategic content and strategic process perspectives in the context of sustainability (Chenhall, 2005) and the role control design and use play in supporting sustainability strategies (Tucker et al., 2009).

First, the review methodology is established and descriptive findings subsequently introduced. This is followed by the identification of the main themes arising out of the reviewed literature. Finally, the paper concludes by discussing the findings and avenues for further research.

Methodology

The study adopts a systematic review approach, a method that originated within the medical sciences, to analyse the literature on controls for sustainability strategies in a structured manner (Tranfield et al., 2003). The approach has not only found increasing prominence within the extant sustainability literature (Carter and Easton, 2011; Burritt et al., 2010) but specifically also within the sustainability control literature (Lueg and Radlach, 2016; Hansen and Schaltegger, 2016). The strength of this research strategy lies in the fact that it facilitates the gathering and presentation of evidence based, context specific and an unbiased overview of knowledge accumulated through prior research investigating strategy and control from a sustainability perspective. It adopts a transparent process that could be imitated and reproduced overcoming the limitations of "traditional narrative reviews" (Tranfield et al., 2003, p. 207). The process is summarised in Table 1a.

Four databases including Science Direct, Proquest, Emerald and EBSCO were selected. Malmi and Brown (2008) management control package framework provided the basis for selecting controls to be included as keywords during the search process in stage 3. Controls including culture, planning, rewards, budget, scorecard, performance measurement, structure and policies were included in the search process. Overall, twenty-six keywords were used (see Table 1b) in different combinations limited to their inclusion in the title or abstracts within the targeted publications during the period 1989-2016, inclusive of both years. The search concentrated on ABS recognised journals, however, due to the technical limitations of the databases, some non-ABS journals were returned and were included in the selection process. The initial search returned 18,371 articles in aggregate, with 2,258 remaining as unique articles following the identification and removal of duplicates. Subsequently, following a two-phase article selection process, 43 articles were selected in the final sample for further analysis along with 14 additional articles based on bibliography search. The first phase involved excluding articles based on analysis of titles followed by a comprehensive analysis of abstracts of the remaining 186 articles. Primarily four conditions had to be fulfilled including that the article focuses on an element or a combination of controls; includes

sustainability/CSR/extra-financial responsibility strategy; concentrates on the micro level i.e. for-profit entities; and written by academics. A descriptive and thematic analysis of the main findings is presented in the latter sections.

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Research Strategy Development	Article Source Identification	Article Search	Exclusion Analysis	Key Areas of Focus	Thematic Findings
Systematic Review	Databases (4)	Key Words Used (26)	Limiter 1 Relevance/Title Analysis (186 articles Remain) Limiter 2 Sustainability Strategy and Controls included (112 remain)	Control Design and Strategic Process Control Design and Strategic Content Control Use	Multiplicity of Controls and Emphasis on Formal and Informal Controls Tensions in Decision Making ⊓ Management Practice Frameworks ⊓ Supplementary Roles of Controls Control Multiplicity for Environmental Strategies Balanced Score Approach to Controlling for Sustainability Employee Perception of Controlling for Sustainability
	Journals (50+) ABS Journals (Management, Accounting,	Search Criteria (Abstract/Title)	Relevant Articles incl. bibliography analysis (57)	Narrow Control Focus Broad Control Focus	Individual Controls for Sustainability Strategies
	Responsible Business, Corporate				Control Use for Sustainability Strategies

	Governance)				
		Time Period 1989-2016 (October)	Relevant Journals (32)		
		Total Articles Returned (18,371) Unique Articles after Duplicates Removed (2258)			

Table 1a – Systematic Literature Review Process

| Key Words used for Controls	Key Words used for Strategy	Key Words used for Sustainability
budget*; governanc*; structur*; cultur*; design; polic* ; control; account* ; measure*; reward; compensation; plan*; scorecard; manage*; cost*; BSC; performance	Strateg*; decision	sustainab*; CSR; environment*; social*; respons*

Table 1b – Key Words Used

Descriptive Findings

Publication Frequency and Output

Over two-thirds of the studies (41) included in the sample have been conducted only over the last ten-year period (2007-2016) (see time map 1). Some of the earlier studies remained mainly conceptual in nature (McCloskey and Maddock; Azzone and Noci, 1998; Epstein and Wisner, 2001; Figge et al., 2002; Lothe and Myrtveit, 2003), and only a few provided any empirical evidence (Maxwell et al., 1997; James et al., 1999).

Research Timeline
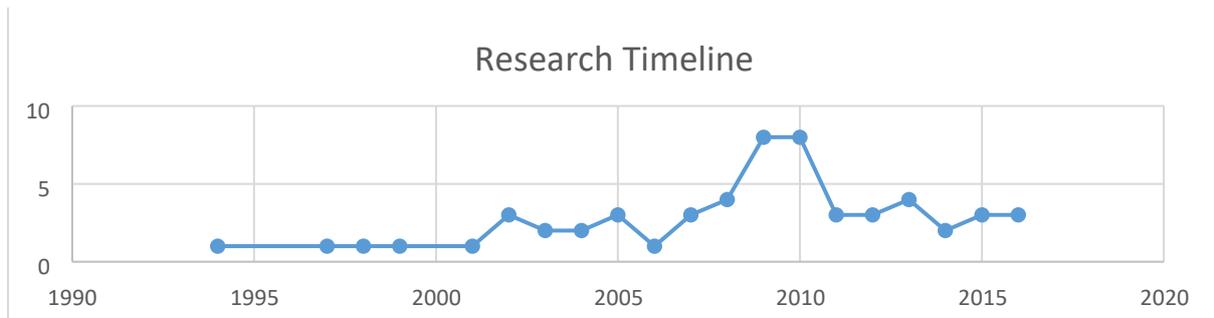
Time Map 1

The agenda during the pre-growth period remained diverse with empirical papers providing an overview of how notable companies were managing sustainability (for instance, Maxwell et al., 1997). There was

also a growing interest in the conceptual advancements of how a Balanced Scorecard (BSC) (Kaplan and Norton, 1996) could be adopted within a sustainability context

(Figge et al., 2002; Epstein and Wisner, 2001; der Woerd and den Brink, 2004). Others have provided the conceptual basis for including sustainability within rewards and compensation systems (Lothe and Myrtveit, 2003).

However, the past decade saw an influx of empirical studies with various research focus (Journeault et al., 2016; Perego and Hartmann, 2009; Durden, 2008). This indicates the exploratory nature of research looking at sustainability strategy and control that is yet to develop into a key theme within either sustainability or management control literature (Chenhall, 2003).

Regarding sources of publications, the sample studies have been published in as many as 32 different journals with majority featuring in *accounting* publications closely followed by *ethics and sustainability* oriented management journals (see Table 2). Regarding research quality, as much as 61% of studies included in the sample has featured in high impact journals (ABS 3 or 4 stars) albeit only three articles featuring in a 4-star rated publication (Berrone and GomezMejia, 2009; Azzone and Noci, 1998; Galbreath, 2010).

Journal Ranking	Frequency	ABS	Speciality	Percentage Coverage
Management Accounting Quarterly	2	1	Accounting	30%
European Accounting Review	1	3	Accounting	
Advances in Management Accounting	1	2	Accounting	
Abacus	1	3	Accounting	
Qualitative Research in Accounting and Management	1	2	Accounting	
Accounting Forum	1	3	Accounting	
Accounting Horizons	1	3	Accounting	
Accounting, Auditing and Accountability Journal	2	3	Accounting	
British Accounting Review	2	3	Accounting	
Management Accounting Research	5	3	Accounting	
Management Decision	3	2	ETHICS-CSRMAN	25%
California management review	1	3	ETHICS-CSRMAN	
Journal of Business Ethics	6	3	ETHICS-CSRMAN	
The Academy of Management Perspectives	1	3	ETHICS-CSRMAN	
Academy of Management Journal	1	4	ETHICS-CSRMAN	
Business Horizons	1	2	ETHICS-CSRMAN	

British Journal of Management	1	4	ETHICS-CSRMAN	
Corporate Governance: The international journal of business in society	1	2	Finance	2%
Industrial Management and Data Systems	1	2	Info Man	5%
European Journal of Information Systems	1	3	Info Man	
The Journal of Strategic Information Systems	1	3	Info Man	
International Journal of Productivity and Performance Management	2	1	OPSandTECH	5%
International Journal of Operations and Production Management	1	4	OPSandTECH	
The Journal of the Operational Research Society	1	3	ORandMANSCI	2%
Corporate Social Responsibility and Environmental Management	1	1	REGIONAL STUDIES, PLANNING AND ENVIRONMENT	14%
Business Strategy and the Environment	7	3	REGIONAL STUDIES, PLANNING AND ENVIRONMENT	
Long range planning	1	3	Strategy	2%
Environmental monitoring and assessment	2	Non ABS	Non ABS	16%
Environmental Quality Management	3	Non ABS	Non ABS	
Journal of Business Strategy	1	Non ABS	Non ABS	
Journal of Cleaner Production	2	Non ABS	Non ABS	
Corporate Governance	1	Non ABS	Non ABS	
Sum (32)	57	3-4* (35)		100%

Table 2 – Sources of Dissemination

Methodological Aspect

Conceptual/Empirical Our understanding of the control-strategy relationship is informed by both conceptual (including conceptual-empirical) (n=18, Lothe and Myrtveit, 2003; Epstein and Wisner, 2001;

Maas and Reniers, 2014;Petrini and Pozzebon, 2009) and empirical studies (n=39, Journeault et al., 2016; James et al., 1999;Sundin et al., 2010).

Half of the studies that were mostly conceptual in nature, focused on single control mechanisms concentrating mostly on Performance Measurement Systems (PMS) and more specifically on BSC for sustainability (Chung and Parker, 2008; Figge et al., 2002; van der Woerd and van der Brink, 2004; Epstein and Wisner, 2001).

Empirical Studies Following Tucker et al., (2009) recommendation of analysing empirical studies according to their methodological prevalence, the review shows the dominance of the qualitative approach (n= 25, 64% overall) informed mostly by case studies (n=18, 72% of qualitative studies and 46% overall, inclusive of action research, see Table 3).

METHODS/APPROACH	FREQUENCY
CASE STUDIES INCL. ACTION RESEARCH	18
INTERVIEWS	4
OTHER QUALITATIVE	3
SURVEY	11
DATABASE/OTHER QUANTS	3

Table 3- Empirical Approach

Based on Keating (1995) framework, only seven case studies could be identified making a theoretical contribution. For instance, Norris and O'Dwyer (2004) and Durden (2008) case studies illustrate the relevance of stakeholder theory to explain the control-strategy relationship. However, the literature is yet to reach the stage where new theories are developed to explain the relationship between controls for sustainability strategy and to refine existing theories suitable for large scale statistical tests.

The majority of the case studies remained unguided by any underlying theoretical underpinnings remaining largely exploratory in nature. For example, Riccaboni and Leone (2010) explore P&G through a case-based approach identifying the controls that are put in place to implement sustainability. The exploratory nature of the case studies signifies the novel and emergent nature of the literature.

Empirical Sample Characteristics

The majority of the empirical studies (n=15) clustered around representing cross – sectional organisations from multiple industries while a limited number were selective in the choice of industry (see chart 1). The large concentration on cross-sectional representation indicates that the current knowledge provides relatively little insights about controlling for sector specific sustainability strategies (notable exception includes Berrone and Gomez-Mejia, 2009).

POPULATION FOCUS

Legend: Automobile, Energy, FMGC, Health Care, Manufacturing, Multiple, Natural resources, Retail, Sensitive, Pharma
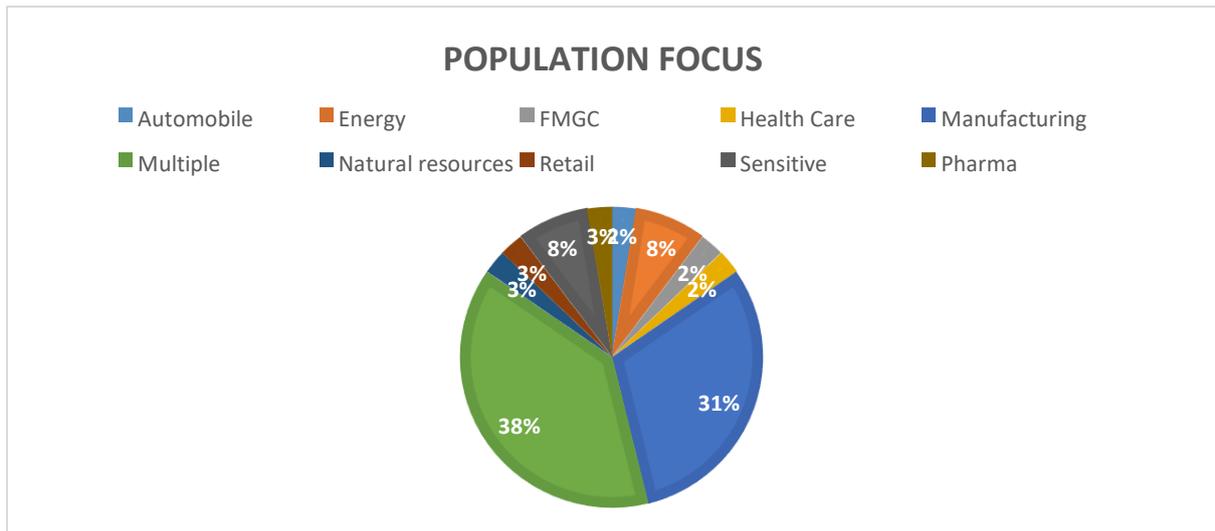
Chart 1 – Population Focus

Regarding organisational size, some variability exists (as illustrated in chart 2). Nearly, 62% of the empirical studies were conducted on large to very large companies possibly due to the underlying assumptions that large companies possess the resources necessary for pursuing sustainability (Perego and Hartmann, 2009). Only two case studies solely concentrated on small sized firms (Lee, 2009; Durden, 2008). Lee (2009) case study provides evidence of visible and deliberate modifications in control mechanisms in two Korean firms to implement sustainability.

ORGANISATIONAL SIZE

Unclear 5%
Varying 28%
Small 5%
Large to very large 62%
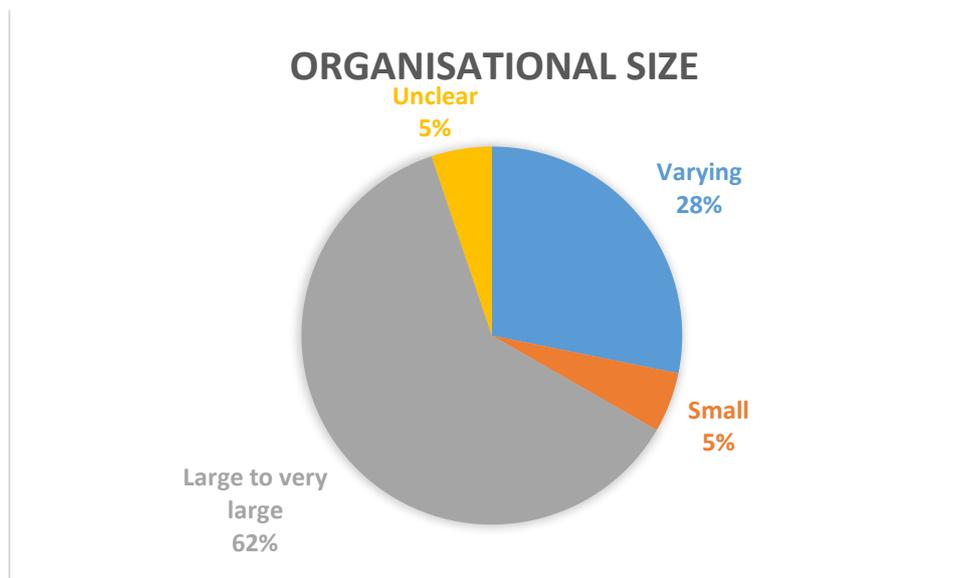
Chart 2 – Organisational Size

Consistent with Lueg and Radlach (2016) sample characteristics, emerging countries are yet to receive much attention with much attention paid to developed countries and specifically to the EU countries (shown in chart 3).
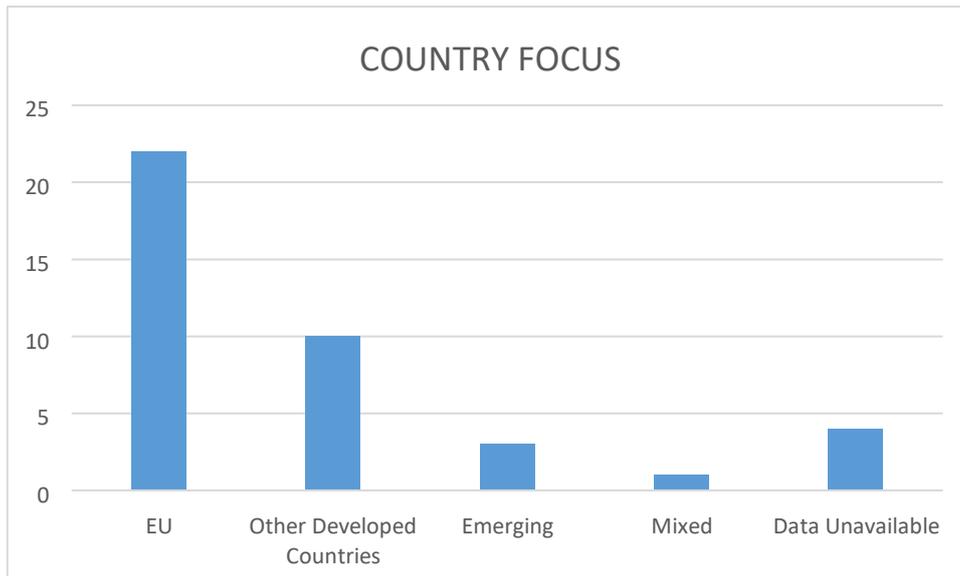
Chart 3 – Country Focus

Additionally, Luft and Shields (2003) recommend paying careful attention to the level of analysis as the overall meaning and interpretation from findings are impacted by the unit of analysis. An overwhelming majority of studies within the empirical sample (82%) explored controls for sustainability at the organisational level. Only one study (Slack et al., 2015) concentrated at the individual or employee level while three studies at the unit or site level (see chart 4).
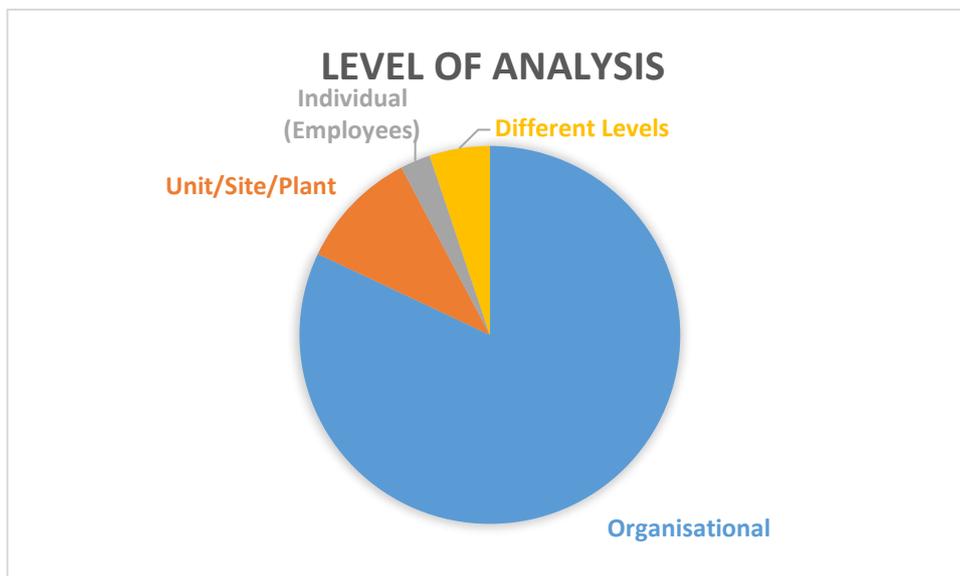

Chart 4 – Level of Analysis

Theoretical Aspect

Remarkably, as a departure from the traditional theoretical bases used extensively in the extant management control literature namely the contingency framework (Langfield-Smith, 1997), the analysis indicates that sustainability researchers within this field are keen to experiment with more non-traditional theoretical bases. And as such only five studies were guided by traditional theoretical frameworks (for example, contingency and resource-based perspectives) (Shaukat et al., 2016; Epstein and Wisner, 2005;

Pondevillea et al., 2013). Others relied on cross-disciplinary theories bringing to light the explanatory power of these seldom used theories within the sustainability fore (Slack et al., 2015; Epstein et al., 2015; Journeault et al., 2016). Overall only 14 empirical studies were backed up by theoretical explanations.

Strategic Aspect

As many as 38 studies focused on the strategic process perspective while only a significantly smaller number looked at the strategic content (*19 studies*) (Chenhall, 2005). Within the strategic process perspective, majority of studies have considered exploring controls for strategy implementation rather than formulation (except James et al., 1999 and Arjaliès and Mundy, 2013 who touch upon strategic formulation), although only a handful of scholars have explicitly stated implementation as a goal of study (notable exceptions include Riccaboni and Leone, 2010; Figge et al., 2002; Maon et al., 2009; Teh and Corbitt, 2015; Gond et al., 2012).

Moreover, the sample echoes Neugebauer et al., (2016) concerns that researchers have largely ignored the diverse viewpoints of the strategic process governed by different schools of thought assuming strategy to be an outcome of a rational and planned process (Ansoff, 1987; Riccaboni and Leone, 2010). The inherent flaw in dismissing the debate as argued by Neugebauer et al. (2016) is that sustainability is considered to be a complex and wicked issue (Frame, 2008) and a planned process may not necessarily reflect a genuine attempt to solve those issues, specifically those wicked issues that are not easily controllable. *Only one article* (Arjaliès and Mundy, 2013) concentrated on controls supporting strategic opportunities to emerge bottomup. The lack of focus on the strategy as practice school of thought may be explained by the tendency of sustainability strategists to emphasise on top management commitment (Harris, 2007) and sustainability integration within the strategic planning process (Banerjee, 2002; Roome, 1994).

Additionally, *only two studies* could be identified where the purpose was to explore controls for intended strategies (Journeault et al., 2016; Arjaliès and Mundy, 2013) whereas others have focused on the implementation or the content of deliberate, realised strategies although not explicit in many cases (Langfield-Smith, 2007).

Operationalising Extra-Financial Strategy Regarding conceptualising strategy, there is a significant variation (see Table 4). Twenty-four studies consider environmental strategy and responsibility (Perego and Hartmann, 2009; Masanet-llodra, 2006; Berrone and Gomez-mejia, 2009) while only four studies focus exclusively on social aspects on how controls cater for stakeholder concerns (for instance, Durden, 2008; Norris and O'Dwyer, 2004). A large proportion of studies that focus on both social and environmental aspects explore BSC for sustainability (Hubbard, 2009; Butler et al., 2011; Sundin et al., 2010).

A wide disparity also exists regarding how "extra-financial" responsibilities have been addressed (Herzig and Ghosh, 2014). A large proportion of studies address extra-financial responsibilities as part of the broader *sustainability* discourse (n=23) while a handful of studies refer to the CSR terminology (n=6).

TERMINOLOGY/CONCEPT FREQUENCY

CSR	6
SUSTAINABILITY	23
CSR/SUSTAINABILITY	8

CSP	2
ENVIRONMENTAL RESPONSIBILITY	17
CSR/CSP	1

Table 4 – Terminology/Concept

Control Aspect

Design/Use Tucker et al. (2009) identify the conceptual distinction between how controls are used and how these are designed in accordance with specific strategic orientations as one of the salient developments in the extant literature focusing on management control and strategy relationship (Simons, 1987; Abernethy and Brownell, 1999; Kober et al., 2003).

Controls for sustainability is predominantly conceptualised from a design perspective (Masanet-Llodra, 2006; Pondevillea et al., 2013; Durden, 2008; Panapanaan et al., 2003; Contrafatto and Burns, 2013) with only five studies identified as paying attention to how controls are used within the reviewed literature (e.g. Adams and Frost, 2008; Journeault et al., 2016; Arjaliès and Mundy, 2013).

Broad/Narrow Moreover, there has been a growing trend within the extant management control and business strategy literature on the number of controls that have been subjected to exploration, investigation or theory testing within a study irrespective of whether the focus is on control design or use (see, Bedford and Malmi, 2015). This follows criticisms by eminent scholars of the limitations of research that focuses solely on one form of control (see Chenhall, 2003). Based on this growing trend, the sample exhibits an almost equal distribution of studies employing a broad (n=28) and a narrow (n=29) control focus. Performance measurement systems received the most prominence within narrow control focused studies (see Table 5).

Narrow Control Focus	*Frequency*
Performance Measurement Systems	*17*
Compensation	*2*
Culture	*2*
Governance	*1*
Structure	*2*
Information Technology	*2*
Policy	*1*
Other	*2*

Table 5 – Narrow Control Focus

Contrastingly, studies with a broad control focus tend to cover a number of control areas and provide an understanding of the relevance of a multiplicity of controls to manage sustainability. Although a range of controls are explored in aggregate within the sample, yet there is a visible tendency within the sample studies to focus exclusively on PMS, Cultural controls and planning mechanisms simultaneously (n=14/28; Epstein and Wisner, 2005; Durden, 2008; Albelda et al., 2007; as shown in Table 6). However, the objective remains exploratory, and a rich descriptive account of multiple controls is provided. Interestingly, the focus on planning and leadership (for instance top management commitment Epstein and Wisner, 2005) further

provides evidence of an implicit assumption within the reviewed literature that strategy is a planned and structured process enacted top-down (Ansoff, 1987). This is consistent with Ghosh and Herzig (2014) findings of top management commitment remaining a significant factor in driving sustainability. However, there has been a dearth of studies undertaking large-scale surveys exploring the role of a multiple of controls supporting the implementation of specific strategy types.

Broad Control Focus Distribution											
Culture	Planning	PMS	Reward	Design	Policy	Governance and Leadership	SR	Budget	LOC	EMA	IS
Y				Y	Y						
Y	Y	Y		Y							
Y	Y	Y		Y							
Y		Y	Y					Y			
Y	Y		Y	Y	Y	Y				Y	
									Y		
Y	Y	Y		Y		Y	Y				
Y	Y	Y	Y	Y		Y	Y				
Y		Y	Y								
Y	Y	Y			Y						
	Y		Y			Y					
Y	Y	Y									
Y	Y	Y		Y		Y					
Y	Y	Y				Y					
Y	Y	Y				Y					
Y	Y	Y		Y							
Y	Y	Y	Y	Y		Y					
Y				Y						Y	
Y	Y	Y		Y				Y			
Y		Y		Y		Y					
									Y		
	Y	Y									Y
Y	Y										
Y	Y	Y	Y	Y							
Y	Y	Y	Y								

Y		Y		Y							
Y		Y									
	Y		Y	Y					Y	Y	
23	19	21	9	14	3	9	2	3	3	2	1

Table 6 – Broad Control Focus

Overall, based on the strategy and control classifications introduced earlier, the focus has been on understanding control design from the strategic process perspective with an exclusive focus on strategy implementation (indicated in Table 7).

Strategy/control	*Design*	*Use*
Process	36	2
Content	16	3

Table 7 - Overall focus

Thematic Findings

The key themes are presented below and are segregated based on the strategy and control classifications, as shown in diagram 1.

Diagram 1 – Thematic Analysis

Thematic Analysis

CONTROL DESIGN

CONTROL USE

No further classifications due to low number of articles available for analysis

Broad Control-Strategic Process

- Multiplicity of Controls and Emphasis on Formal and Informal Controls

- Tensions in Decision Making

- Management Practice Frameworks

- Supplementary Roles

Broad Control – Strategic Content

- Control Multiplicity for Environmental Strategies

- Antecedents of Control Multiplicity

Narrow Control–Strategic Process

- Balanced Score Approach to Controlling for Sustainability

- Employee Perception of Controlling for Sustainability

Narrow Control – Strategic Content

No further classifications

Control Design

Broad Control Design Implications for Strategic Process

The multiplicity of controls The core theme of articles within this section points to the role of a multitude of controls in implementing sustainability strategies, without however elaborating on the type of strategy that the controls are supporting. The qualitative studies that were not guided by any theoretical underpinnings but remaining largely informed by a small number of case organisations, provided context laden and textually rich depiction of how multiple controls were designed to support strategy implementation and remained descriptive in nature (Morsing and Oswald, 2009; Lee, 2009; Teh and Corbitt, 2015; Masanet-llodra, 2006; Riccaboni and Leone, 2009). Their purpose was to "discover" or unpack how sustainability was implemented in organisations known for their sustainability prerogatives (for instance, P&G; Novo Nordisk). These studies provide the empirical evidence to support the management frameworks discussed later on in this section, and particularly lend support to the role of multiple controls as has been conceptualised within these frameworks (Khoo and Tan, 2002; Panapanaan et al., 2003; Maon et al., 2009; Cramer, 2005). Besides providing evidence of the prevalence of control multiplicity, the case studies also provided evidence of the existence of both formal and informal controls supporting strategic implementation (see Morsing and Oswald, 2009; Lee, 2009; Riccaboni and Leone, 2009). For instance, Riccaboni and Leone (2009) observed visible changes in formal controls including organisational structure and design as well as strategic planning processes on the one hand and informal controls on the other supporting strategic implementation. The prevalence of both formal and informal controls and their significance for sustainability implementation as found in practice may be explained by the need to "embed" sustainability within the management routine as part of a "continuous cycle of actions" (Mass and Reniers, 2014, p. 108, see also van der Heijden et al., 2010). Mass and Reniers (2014) argue that emphasis could be given to both informal controls to promote "belief driven interactions" within organisations as well as formal controls to promote "action driven interactions" recognising the role played by both types of controls (Mass and Reniers, 2014, p. 108).

Tensions in decision making The role of informal and formal controls have been further debated, specifically regarding controls promoting and checking tensions in decision making. For instance, Norris and O'Dwyer (2004) contribute to the discussion of formal and informal controls, by focusing on system congruency to implement strategies (see also Durden, 2008). In other words, they contend that responsible behaviour is controlled effectively when both formal and informal controls support each other and work in harmony and collectively promote responsible actions (Falkenberg and Herremans, 1995). Where formal and informal controls were not acting in harmony, gave rise to tensions in decision making as observed in their case context (Norris and O'Dwyer, 2004). Contrary to Durden (2008) and Norris and O'Dwyer (2004) observations, Epstein et al., (2015) however assert that informal controls are sufficient to controlling for sustainability as these embed sustainability focus into decision making rendering formal controls unnecessary. Riccaboni and Leone (2009) provide empirical evidence of the application of an indigenously developed PSAT tool facilitating the assessment of each of the three dimensions of sustainability, namely financial, environmental (LCA) and social (stakeholder assessment) of new products. This indicates that organisations that have reached a certain stage of maturity with regards to sustainability have resorted to innovative measures to overcome challenges imposed by potential conflicts in balancing financial and non-financial aspects of decision making.

Management frameworks Several studies have extended frameworks to aid decision makers to manage sustainability CSR/sustainability and remain prescriptive in nature (Khoo and Tan, 2002; Panapanaan et al., 2003; Maon et al., 2009; Cramer, 2005). The frameworks have common denominators in that these recommend the inclusion of controls that are common within these frameworks. For instance,similar to the preparation and transformation phases in Khoo and Tan's (2002) framework, Maon et al., (2009) model identifies the need to transform the existing firm culture by developing the workforce through training and education so as to create a shared vision for sustainability and consequently empowering employees to take positive actions. Emphasis is on the establishment of a learning organisation where empowerment, awareness, knowledge sharing and action learning are encouraged. Formal controls are also included in these frameworks. For instance, the need to include vision and mission in the strategic plans as means of translating CSR mission and vision, and values into practice (Maon et al., 2009). Additionally, Khoo and Tan (2002) and Cramer (2005) refer to the mobilisation of PMS to collect information about environmental performance for decision making. Maon et al., (2009) emphasise reward mechanisms to incentivise employees to engage with the implementation process. The focus is also paid to structural reforms to facilitate the implementation of the adopted strategy (Panapanaan et al., 2003).

Supplementary roles played by controls Albelda et al., (2007) contended that the development of intangible assets through staff training and engagement programme ensured that EMS was kept "…alive and fresh, avoiding becoming bureaucratic" indicating the role of informal controls in EMS mobilisation (Albelda et al., 2007, p. 410). Masanet-Llodra (2006) also found the presence of non-financial rewards as additional means of motivating employees and engage them in the EMS implementation process. The empirical evidence points out that EMS in isolation may not be effective in implementing a strategy but need to be supplemented by other controls. Additionally, La¨nsiluoto and Ja¨rvenpa¨a¨ (2008, 2010) provide empirical evidence of cultural and structural controls facilitating the integration of sustainability indicators in hybrid performance measurement mechanisms (e.g. a BSC).

Narrow Control Design Implications for Strategic Process

Focus on Sustainability Balance Scorecard The majority of research within the reviewed field pertains to the single control dimension of PMS and specifically the BSC approach. The emergent focus of sustainability control researchers and more so those included in this review points back to the assumption that sustainability entails a structured and planned approach and as such it could be monitored using a structured tool (Neugeber, 2016). Consistent with Hansen and Schaltegger (2016) findings, the reviewed papers while remaining primarily conceptual in nature with the occasional use of illustrative cases advances different means of designing BSC. Simplistically, the differences in design exist in how multiple goals are included as part of the scorecard. For instance, Figge et al., (2002) BSC design resonates with the strictly hierarchical structure (Hansen and Schaltegger, 2016) where sustainability goals are bound by a strict cause and effect relationship with the underlying emphasis on augmenting the financial bottom-line. Contrastingly, other designs consider multiple goals as equally important resonating with the triple bottom line perspective such that the financial perspective is replaced by each of the elements of the triple-bottom-line concept (Hsu et al., 2011). Additionally, some designs may also reject that strict cause and effect relationship need not exist and as such sustainability objectives "may exist in their own right" (Hansen and Schaltegger, 2016, p. 206) exhibiting the characteristics of a semi-hierarchical structure (see van der Woerd and van der Brink, 2004; Dias-Sardinha et al., 2007; Leo´n-Soriano et al., 2010). Others have focused on

how sustainability objectives are integrated within a BSC including a dedicated perspective solely for sustainability (Chalmeta and Palomera, 2011), the inclusion of sustainability objectives in few perspectives of a traditional BSC, in all the four traditional perspectives or a combination of a dedicated perspective and the remaining two approaches (Figge et al., 2002; Epstein and Wisner, 2001).

Employee perception of controlling for sustainabilityThe only study that considers the perspectives of individual employees demonstrates the vitality of informal controls and the aspects that need to be taken into account within control design (Slack et al., 2015). Having employees or individuals as the unit of analysis as opposed to the organisation, provided unique aspects about the effectiveness of controls for sustainability understood through the perspectives of employees. The study explored the employee perspectives of CSR and noted the disparities in the views. The divergent views demonstrated the lack of organisational awareness of CSR indicating a lack of shared vision for CSR commitment further fuelled by a lack of internal communication, especially from the top management. The study observed that informal controls were inadequate and failed to promote an understanding of the significance of undertaking CSR, the organisation's stance towards CSR as well as what it meant for the firm. The case illustrated the importance of informal controls providing evidence from the employee perspective (Epstein et al., 2015).

Broad Control Design Implications for Strategic Content

Control multiplicity for environmental strategies Previously, the need for a range of controls to implement sustainability was established, however without explicitly considering the type of strategy that has been pursued. Articles presented in this section provide empirical evidence of a range of controls matched to particular strategic orientations. For instance, Epstein and Wisner (2005) reported that Mexican manufacturing facilities that mobilised a range of controls including comprehensive planning mechanisms, integrated environmental responsibilities within their value systems as well as rewarded both managerial and non-managerial employees based on environmental actions were better at executing environmental compliance strategies (see also Azzone and Noci, 1998). Maxwell et al., (1997) presented three brief cases to illustrate the role of different controls for a proactive stance towards social responsibility. They observed in all the three cases the extensive reliance placed on creating a shared understanding of extra-financial responsibilities and the use of associated investments to propagate such commitments, structural reforms (either modified or newly set up to accommodate a proactive stance) and goal setting with the establishment of both short-term and long-term targets to provide direction. Regarding the use of planning systems, the goals and objectives responded to the proactive nature of the strategic direction. In other words, plans were put in place to prevent wastage and inefficient use of resources and generate competitive advantage besides formally complying with prevailing legislative requirements (for instance, in P&G).

Antecedents of control multiplicity While the above studies concentrated on exploring control design for environmental strategies, Pondeville et al., (2013) retake a step to understand the antecedents of such control systems. One of the major findings of the study is that perceived uncertainty in the decision-making context hampers the development of both formal and informal controls for environmental strategy, while additionally hampering proactivity towards the environment. In other words, since environmental proactivity remains impaired in uncertain ecological settings, consequentially controls for environmental strategy remain undeveloped.

The finding reinforces Neugebauer et al., (2016) concern noted earlier about the planned nature of strategy assumed by sustainability scholars. Hart (1992) and Regnér (2003) note that a structured approach is valid in controllable environments where decision making is straightforward, simple and not subjected to ambiguity. The study also observes that organisational stakeholder commitment and participation are absolute requirements for a proactive stance and influences the development of informal controls for ecological strategies. Other stakeholders including community and market stakeholders were found to positively influence strategic proactivity with varying influence on the direct development of controls.

Narrow Control Design Implications for Strategic Content

The studies included in this section focus exclusively on a single control mechanism and explore their design and underlying attributes in detail about the type of strategy pursued. Six studies concentrate on the design of a BSC for a particular sustainability strategic orientation (Gates and Germain, 2010; van der Woerd and van der Brink, 2004), whilst each of the remaining four concentrates on the design of PMS (Perego and Hartman, 2009), governance (Shaukat et al., 2016), IT (Benitez-Amado and Walczuch, 2012) and rewards (Berrone and Gomez-mejia, 2009) for different strategic orientations.

For instance, van der Woerd and van der Brink (2004) develop a BSC for a community-driven strategic focus that emphasises stakeholder engagement in the value creation process. The model reflects the community-driven strategic direction by redesigning each of the perspectives of the scorecard such that the resulting BSC reflects the stakeholder input in the value creation process. The changes in design could be contrasted with a profit and/or compliance driven strategies requiring no such changes as the authors assert that a traditional BSC would suffice the requirements (see also the discussion in Hansen and Schaltegger, 2016).

Perego and Hartman (2009) demonstrate the increasing complexities of the overall PMS design with a higher level of strategic approaches. Additionally, the study confirms greater reliance placed on PMS by firms pursuing a proactive environmental strategy relative to those that are merely reacting to institutional requirements. For firms pursuing a proactive environmental strategy, the PMS design reflects the posture through its design attributes of timeliness, scope and quantification (Chia, 1995; Tillema, 2005).

Berrone and Gomez-mejia (2009) found proactive environmental strategies attracted greater executive compensation than reactive environmental strategies, i.e. the compensated amounts were higher for executives assuming additional risks in making proactive environmental decisions (Hart, 1995). Additionally, the study finds reward mechanisms informed by proactive strategy take into account the longer term perspective, i.e. it influences the long-term pay of executives. Reward systems are aligned with the level of the strategy pursued and that nonfinancial elements of performance affect the total pay package.

Shaukat et al., (2016) identify the attributes of governance and leadership mechanism that inform a proactive strategy. Specifically, they find a proactive CSR strategic orientation is supported by board characterised by board independence, gender diversity as well as the presence of financial expertise within audit committee, which in turn also augmented sustainability performance.

As one of the only two articles identified focusing on the IS perspective, Benitez-Amado and

Walczuch (2012) research demonstrates that proactive strategies require firms to develop IT capabilities to support the implementation of a proactive stance. IT is identified as one of the key resources that inform the capacity of a firm to implement a proactive strategy.

Control Use

With regards to how controls are used for managing sustainability strategies, largely, two different types of studies could be identified, one that applies Simon's Levers of Control (1995) as the underlying framework to guide research and the other that does not use such premise.

Nonetheless, useful information can be obtained on account of whether a specific framework is used or otherwise. For instance, Adam and Frost (2008) assert that KPIs need to be used not only for external reporting purposes but also for internal decision-making purposes to internalise the benefits from pursuing sustainability. Furthermore, corroborating with Perego and Hartmann (2009) findings, they also point out that superior benefits are obtained if sustainability KPIs are designed to return financial information used in internal decision making (also highlighted by Azzone and Noci, 1998).

While the above studies highlighted the KPI properties facilitating decision making, both Rodrique et al., (2013) and Arjailes and Mundy (2013) articles bring in the notion of risk management and discuss how controls are used to manage uncertainties and sustain legitimacy.

These studies typically rely on Simon's Levers of Control Framework and map the use of controls along the four levers namely belief, boundary, interactive and diagnostic uses. For instance, through the use of belief systems, firms were found to disseminate the commitment top management places on sustainability, facilitating the diffusion of values on which sustainability is based. Additionally, Rodrigue et al., (2013) note that stakeholder concerns become infused throughout the organisation, through the use of the belief systems and that such use helps translate stakeholder views into practice. The use of codes of conduct and policies informed through both legislative as well as voluntary standards establish the boundaries and the constraints within which employees are to perform their duties. Such constraints provide the means for organisations to manage risks emanating from both internally as well as externally. The use of supplier codes and policies provide ways to maintain legitimacy and manage any risks associated with the use of child labour in the supply chain or unethical practices (Arjailes and Mundy, 2013).

Through interactive use, Rodrigue et al., (2013) find the rhetoric of legitimacy and risk management resurfacing. For instance, the case organisation relied extensively on the interactive use of environmental KPIs with the community, regulatory and internal stakeholder groups as means of managing uncertainties and understanding potential threats to organisational legitimacy. Beyond the need to maintain legitimacy and manage risk, Arjaliès and Mundy (2013) found interactive use associated with the development of strategies through the sharing of emergent ideas and as means of implementing intended strategies holistically throughout the organisation by bringing in different actors from different organisational departments together by facilitating functional collaborations. While the interactive use enabled ideation and holistic implementation of strategies, the diagnostic use enabled units to verify if the performance was on par with firm level expectation so that corrective measures could be undertaken (Rodrigue et al., 2013; Arjailes and Mundy, 2013). The studies provide evidence that merely incorporating sustainability KPIs within PMS may not be sufficient unless the KPIs are used in certain ways.

Discussion and Conclusion

The low number of publications (n=57) indicates that the research field is at a very nascent stage and is still emerging as a fully-fledged area of interest. As the field is yet to reach a state of maturity with total publications below hundred (considered by Hansen and Schaltegger, 2016 as a means to gauge the maturity of a given field), it necessitates further research to be undertaken to enhance our understanding of controlling for sustainability strategies by building on the insights and other related observations gathered from the existing literature. Consistent with the emerging nature of the field, the studies that have been part of the review remained largely exploratory in nature as is expected of an area of emerging interest (Gold et al., 2010).

The emerging nature of research is reflected in the simplistic advancements of knowledge within the field that is yet to take into account the level of complexity inherent in the extant management control literature. Nonetheless, a number of learnings could be observed from the reviewed literature that may form the foundational basis for future research within the field. Few instances of key understandings of control and sustainability strategy relationship are depicted below.

The empirical publications largely demonstrate that similar to business strategy, sustainability strategy need to be brought under the purview of control mechanisms and that strategy implementation requires a carefully considered control design and use. The publications revealed a range of controls for sustainability strategies while noting that both formal and informal controls have significant roles to play consistent with the conceptual frameworks that have been advanced (Slack et al., 2015; Norris and O'Dwyer, 2004; Morsing and Oswald, 2009; Riccaboni and Leone, 2009). Both conceptually and empirically, the internal mechanisms noted for controlling for sustainability include informal controls to acquaint the firm culture with sustainable thinking and formal controls including structure, governance and leadership, planning, rewards, information technology/system and performance measurement system to promote the cause of sustainability beyond the financial aspect. The wide range of controls necessary for sustainability management demonstrate the adaptabilities needed in existing control mechanisms to cater for sustainability. It provides evidence to negate the inherent assumption within the extant sustainability literature that a seamless integration takes places for internalising sustainability (Morsing and Oswald, 2009). On the contrary to this assumption, visible changes need to be made to existing controls to manage sustainability even at the stage of compliance (Riccaboni and Leone, 2009; Epstein and Wisner, 2005). In other words, sustainability strategies are accompanied by modifications to existing control mechanisms although not in all instances is this observed (Durden, 2008) indicating a possibility of an inherently external orientation towards sustainability for image enhancement purposes and not a genuine attempt to make a move towards sustainable strategies by some firms. Perhaps it could be argued that studying internal controls may provide the means to verify whether firms are genuinely moving towards sustainability rather than engaging in an empty rhetoric without any substance.

One key theme has been the role of controls of diverse nature, i.e. formal and informal. Whilst it is evident from the case studies and the conceptual frameworks that both forms of controls are significant, yet disparities exist within the literature with views ranging from control congruity (that is a balance needs to exist between formal and informal controls) (Norris and O'Dwyer, 2004), that both forms of controls need to reinforce one another to promote sustainability objectives internally (Durden, 2008) and the primacy of informal controls negating the need for formal controls (Epstein et al., 2015). Our understanding of control

congruity or primacy is based on research undertaken on a limited number of organisations and as such statistical tests examining the role of both types of controls are yet to be undertaken. Case study evidence shows that incongruity led to tensions in decision making as formal controls failed to promote sustainability and focused primarily on financial aspects of decision making (Norris and O'Dwyer, 2004). In other words, the case studies have provided anecdotal evidence of the need to consider both types of controls to implement strategy effectively (Slack et al., 2016; Riccaboni and Leone, 2009; Norris and O'Dwyer, 2004; Durden, 2008) but we are yet to learn about the optimal configurations of different types of controls that exist in practice (Bedford and Malmi, 2015). Calls have been made to subject investigation based on happenings in practice, and as such, there is a need to broaden the research horizon to include a larger number of organisations to explore controls for sustainability (Bedford and Malmi, 2015; Gond et al., 2012).

Although the review indicates a significant number of controls necessary for managing sustainability and that vigorous changes within the existing control design may not be a need to cater for sustainability with only moderate modifications to adapt for sustainability (Riccaboni and Leone, 2009), yet caution must be exercised when debating the appropriateness of visible adaptations made to internal controls for sustainability. An implementation may remain inadequate and ineffective even if sustainability is reflected in visible changes to control mechanisms. For instance, from Slack et al. (2016) study it was evident that structural changes were inadequate to control for sustainability without the proactive participation of employees (see also Berrone and Gomez-mejia, 2009). Rodrigue et al., (2013) identified employees as one of the major stakeholder groups without whom implementation remains challenging. The same premise was also put forward by Grubnic et al., (2015) who observed the intrinsic motivation of staff driving sustainability at the case organisation. However, the lack of cultural controls and a shared understanding of sustainability hampered the implementation process (Slack et al., 2016). This provides prima facie evidence of the interdependencies between different control mechanisms for sustainability and the need for formal and informal controls to reinforce one another (Durden, 2008). In other words, controls need to exist in certain configurations for these to be effective in promoting sustainable thinking due to the inherent dependencies and complementarities that may exist among different control types (Sandelin, 2008).

Similar to the existing management control and business strategy literature, the review also provided similar inferences about the proactive role strategy plays in control design and use (Langfield-Smith, 1997). It was observed that controls differed in their design complexities by differences in sustainability strategic pursuits (Epstein and Wisner, 2005; Perego and Hartmann, 2006; der Woerd and den Brink, 2004; Azzone and Noci, 1998). A higher level of sustainability strategies was associated with more complex control designs. For instance, the PMS attributes of informativeness and sophistication increased as a result of proactive strategic pursuit (Perego and Hartmann, 2009). Even at the same level of strategic pursuit, different control designs were observed in Mexican factories by Epstein and Wisner (2005). These observations indicate that different organisations may choose to rely on different control types or put different emphasis for pursuing a given strategic orientation. By exploring control designs for different strategy types in practice, we would be better able to understand the relationship between controls for sustainability strategies. In other words, there is a need to study a range of controls holistically and explore if and how control arrangements differ amongst different organisations for the same strategy, if at all, and of the various strategic orientations.

However, only a small number of articles have focused on how sustainability strategy plays a role in control design, and even a smaller number have surveyed a large number of companies to provide measures of statistical significance (Epstein and Wisner, 2005; Perego and Hartmann, 2009). Additionally, although these studies demonstrate the role strategy plays in shaping controls, yet, the focus has been on a limited number of controls. For instance, Perego and Hartmann (2009) focused on PMS, der Woerd and den Brink (2004) on BSC, and Lock and Seele (2015) on structural arrangements. However, the case studies have provided the anecdotal evidence of some form of interdependencies existing amongst different controls and that a firm may choose to employ a number of controls to support sustainability. In other words, future studies need to consider a larger set of controls and explore how different strategic orientations influence the type, nature, relevance and emphases given to a set of controls. In the same vein, the low number of studies concentrating on strategic content have explored the attributes of a limited number of control designs for a given strategic outlook. We are yet to learn about the attributes of reward based systems and how strategic orientations shape such compensation systems although its relevance has been conceptually studied in the literature (Lothe and Myrtveit, 2003).

As discussed above, a number of learnings could be identified from the review of the literature, however, as noted previously, these might be assumed to be simplistic advancements of knowledge. Many such instances could be identified where the current literature falls short of reaching complexities observed within the extant management control and business strategy research, revealing the many gaps that are yet to be solved. To elaborate, the majority of publications have regarded controls passively or as a subordinate to sustainability strategy. By doing so, the field has undermined the abilities of controls to shape strategies which have been demonstrated within the extant management control literature (Abernethy and Brownell, 1999). However, the opportunity exists for researchers within this field to explore controls as a powerful mechanism of strategy formulation process. The gap is inherently due to the preoccupation of researchers within this field to explore and identify controls that are designed to implement strategies in practice or to prescribe means of implementing strategies. This necessitates the need to refer to strategy classifications and reflect on how strategies are formulated. By doing so, the proactive role of controls in strategy formulation could be identified and demonstrated. Furthermore, Simon's Lever of Control framework (1995) has already been applied in the study of sustainability strategy and control. The framework provides the means of unpacking the proactive nature of controls (specifically through its interactive use) to give rise to new strategies. On this note it is also important to consider Neugeber et al., (2016) concerns about the obsession of researchers considering strategy as a structured and planned process. The LOC framework could be applied to study the role of controls (again its proactive nature) in giving rise to emerging strategies. Moreover, the research has identified informal controls as significant means of raising awareness of CSR within organisations and additionally attributed organisational stakeholders as an important partner to facilitate the implementation of strategies (Rodrique et al., 2013). There is now the need to go beyond this and consider how interactive use of controls with employees may benefit firms in promoting bottom-up strategies.

Once controls are recognised as playing a proactive role within sustainability literature, the level of complexity of research within this field could be further enhanced by investigating if a two-way relationship exists between control and sustainability strategy (Kober et al., 2007). Longitudinal case studies that are yet to gain grounding could be the means of investigating the strategy-control lifecycle, and the role controls have played in strategic progression, and the role strategies played in control design and use.

Furthermore, similar to the observations by Langfield-Smith (1997, p. 226), a focus on a narrow range of controls and the variations in the types of controls researched limits the

"development of a coherent body of knowledge". The variations in the types of controls researched also inhibit comparisons between different studies. The ad hoc selection of controls may be attributed to the lack of control frameworks guiding research.

Owing to the exploratory nature of the field, currently, the focus has been on discovering the different types of controls for sustainability. However, advancements within the existing management control field could be relied upon to extend knowledge within this area by focusing on complex aspects. For instance, different control package frameworks that have been developed could be applied to transcend simple discovery type cases and providing a structured approach to derive knowledge and make further advancements within the field (Malmi and Brown, 2008).

Future studies may focus on advancing knowledge of controlling for sustainability strategies by incorporating a control package perspective to seek an understanding of how a number of controls (i.e. from a broad control perspective) are designed and used shaped by a given contextual factor, in this case, sustainability strategy. Additionally, a common focus on environmental strategy has been observed from the review sample (Benitez-Amado and Walczuch, 2012; Berrone and Gomez-mejia, 2009; Perego and Hartmann, 2009). However, firms are increasingly paying attention to other aspects of sustainability or responsibility extending beyond environmental dimension to include social responsibilities too (Morsing and Oswald, 2009). Furthermore, noting the tendency of previous research within the field to concentrate on a limited number of cases, future research may also rely on the strengths of mixed methods research to capture the differences in control design complexities for firms pursuing different strategic orientations.

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Controlling for Sustainability Strategies: Empirical Evidence from the UK

Author Details

Author 1 Name: Mr Biswaraj Ghosh

University/Institution: Nottingham Business School

Town/City: Nottingham

Country: United Kingdom

Author 2 Name: Prof Dr Christian Herzig

University/Institution: Nottingham Business School

Town/City: Nottingham

Country: United Kingdom

Author 3 Name: Prof Dr Musa Mangena

University/Institution: Nottingham Business School

Town/City: Nottingham

Country: United Kingdom

Corresponding author: Mr Biswaraj Ghosh **Corresponding Author's Email:** biswaraj.ghosh@ntu.ac.uk

Controlling for Sustainability Strategies: Empirical Evidence from the UK

Abstract: Research examining organisational commitment to sustainability is not new and have been typically investigated through a focus on corporate reporting practices and understanding the corporate rationale that drive sustainable behaviour (Junior et al., 2014; Lozano, 2015; Burritt et al., 2010). However, more recently, the assumption inherent in the extant literature that sustainability strategy adoption entails a seamless integration into corporate practices have been questioned (Morsing and Oswald, 2009). It is to this aspect that the study turns to. Broadly, this study posits that organisational commitment to sustainability may also be explored through the lenses of management controls. Specifically, this paper explores how large UK based companies are integrating sustainability issues informed by different strategic orientations within a broad range of management control mechanisms (Malmi and Brown, 2008; Hurt, 1995; Benn et al., 2014).

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Introduction

Research examining organisational commitment to sustainability is not new and have been typically investigated with a focus on corporate reporting practices and understanding the business rationale that drives sustainable behaviour (Junior et al., 2014; Lozano, 2015; Burritt et al., 2010). However, the assumption inherent in the extant literature that sustainability strategy adoption entails a seamless integration into corporate practices has been questioned (Morsing and Oswald, 2009). Furthermore, Bebbington (2007, p.6) observed that "if organisations are seeking to report on their contributions to sustainable development, one may expect that there are some internal mechanisms which guide activities towards this goal." It is this aspect that the study focuses on. Broadly, this study posits that organisational commitment to sustainability may also be explored through the lenses of management controls. Specifically, this research explores how large UK based companies are integrating sustainability issues informed by different strategic orientations within a broad range of management control mechanisms (Malmi and Brown, 2008; Hurt, 1995; Benn et al., 2014).

Literature Review: Key Observations

Our current knowledge of controls for sustainability strategy is still limited and remains largely informed through a combination of conceptual and empirical studies (Maas and Reniers, 2014; Petrini and Pozzebon, 2009; Journeault et al., 2016; James et al., 1999; Sundin et al., 2010). For instance, several frameworks have been advanced to guide management on how to implement sustainability strategies, albeit remaining prescriptive in nature (Panapanaan et al., 2003; Maon et al., 2009; Cramer, 2005). The frameworks refer to a number of control mechanisms commonly found in practice (Malmi and Brown, 2008). Other conceptual papers focus on the relevance of different control mechanisms including rewards and compensation (Lothe and Myrtveit, 2003) and performance measurement systems as means of controlling for sustainability strategies (Figge et al., 2002; Azzone and Noci, 1998).

The empirical studies mostly undertaken through the case based approach primarily concentrating on a small number of case organisations, have focused on a range of issues but often remaining descriptive in nature. For instance, the empirical studies have highlighted the inherent problems associated with incongruent control systems (Norris and O'Dwyer, 2004); the need for both formal and informal controls (Durden, 2008; Riccaboni and Leone, 2010) and the significance of hybrid measurement systems to promote sustainable decision making (Leo´n-Soriano et al., 2010; van der Woerd and van der Brink, 2004; Dias-Sardinha et al., 2007). However, there is a lack of theoretical underpinning with case studies as these mostly focused on concept illustration as opposed to theoretical illustration or development (Keating, 1995), while identifying controls in firms known for their sustainability credentials (Procter & Gamble as a case study).

Additionally, the majority of the empirical articles focussed on the strategic process perspective and primarily explored controls supporting strategy implementation (Chenhall, 2005) with only a handful of studies exploring how strategic content influences control designs for sustainability (Epstein and Wisner, 2005; Maxwell et al., 1997; Perego and Hartmann, 2009; Gates and Germain, 2010; van der Woerd and van der Brink, 2004; Shaukat et al., 2016; Berrone and Gomez-mejia, 2009).

Moreover, there is a tendency of strategic content research to focus on a narrow view of controls (Perego and Hartmann, 2009; Shaukat et al., 2016; Berrone and Gomez-mejia, 2009) with the notable exception of

Epstein and Wisner (2005). Within the extant management control literature, a narrow focus on controls to study control-strategy relationship has received heavy criticism owing to the overly simplistic linear approach. It fails to take into account the other elements of an overall control package resulting in "less than definitive [and tentative] results" leading onto erroneous inferences (Fisher, 1998, p. 55; see also Otley, 1980; Chenhall,

2003). This research considers different strategic approaches to sustainability (Benn et al., 2014) through a holistic perspective of controls (Malmi and Brown, 2008).

Sustainability Strategy

Benn et al. (2014) have advanced a phase-based model that captures six different stages that corporations *may* go through to reach "full sustainability". A phase-based model has been selected in this study considering the limitations of static models in that such models neither capture the gradual development of sustainability over time nor acknowledge the "growing responsiveness" of firms with regards to its social and environmental positioning (Kolk and Mauser, 2002, p. 15). Each phase is distinct in the sense that it captures how an organisation treats "the human and natural resources" it manages (Benn et al., 2014, p. 42). The model explains value consequence (erosion, preservation, creation) in each phase. The final two phases that focus on value addition from sustainable actions informing competitive advantage rely on higher order efficiencies achieved through the generation of firm-level capability and capacities (Hart, 1995). Proactive strategies are path dependent on the firm's capacity to augment relational capital by building meaningful relations with diverse stakeholder groups whilst internalising their perspectives in decision making, developing a shared vision, invoking company-wide learning, pre-empting changes in external institutional environment, investing resources in R&D as well as continuously improving and innovating (Hart, 1995; Sharma and Vredenburg, 1998; Shrivastava, 1995; Katsoulakos and Katsoulacos, 2007; Banerjee, 1998). On the contrary, reactive, compliance and efficiency based strategies remain isolated from the overall strategic direction pursued by the firm with mostly department specific initiatives based on short-term goals that are easily imitable by competitors. Based on these observations, the study assumes that there will be differences in how management controls are designed based on different strategic orientations. For instance, Perego and Hartmann (2009) found firms relying on more sophisticated performance measurement systems to control for proactive environmental strategies. The research thus expects to observe different control configurations existing in natural settings informed by different strategic approaches (Bedford and Malmi, 2015).

The Control Package Framework

The current study relies upon Malmi and Brown (2008) control package framework to explore a broad range of controls for sustainability strategies in a structured and systematic way. Although conceptually derived, the model provides a parsimonious way to explore controls for sustainability holistically. The model incorporates several control mechanisms categorised broadly as cultural, planning, cybernetics, rewards and administrative controls. The range of controls included in this model closely shadow the types of controls observed in the reviewed literature. One of the key strengths of the model is that it captures both informal and formal controls, not included in other control packages that have been advanced (e.g. Simons, 1995). The significance of both formal and informal controls have been observed in prior studies

(Norris and O'Dwyer, 2004; Durden, 2008). The model thus provides effective means of exploring a broad range of controls including culture, budgets, rewards as well as organisational design and governance structures designed to match prevalent sustainability strategic orientations.

The notion of control package has been empirically studied previously albeit from a business strategy perspective (e.g. Bedford and Malmi, 2015; Sandelin, 2008; Abernethy and Chua, 1996). The package concept relates to studying controls from a holistic perspective, exploring control configurations (Bedford and Malmi, 2015), package effectiveness (Sandelin, 2008; Bedford et al., 2016), control couplings (Abernethy and Chua, 1996) and control substitutability and complementarity (Sandelin, 2008). This study explores the existence of control configurations found in natural settings informed by certain sustainability strategic orientations (Benn et al., 2014; Bedford and Malmi, 2015).

Theoretical Premise

Unlike the tendency of previous research to ignore theoretical premise explaining the link between strategy and control (e.g. Morsing and Oswald, 2009; Riccaboni and Leone, 2009; Dias-Sardinha et al., 2007), this study explores controls for sustainability strategies through the lens of configurational congruency *fit* (Gerdin and Greve, 2004). By focussing on a configurational perspective of fit, the study overcomes the limitations of the narrow reductionist view that assumes controls operate independently of one another (Chenhall, 2003; Bedford and Malmi, 2015). On the contrary, the study promotes the view that controls typically function in a package of diverse control elements amidst interdependencies (Abernethy and Chua, 1996; Sandelin, 2008).

Methodology

An exploratory qualitative approach was used to understand organisational level approach to designing controls for different sustainability strategies in nine large UK based manufacturing firms (Greenhalgh and Taylor, 2009; Luft and Shields, 2003). The interpretive stance was adopted with the objective of obtaining a first-hand account of controls for sustainability strategies based on the experiences and understandings of individuals who are at the core of sustainable decision making in firms (Creswell, 2009). A professional networking site, LinkedIn, provided the platform to recruit participants. Out of 103 participants invited to participate, nine eventually took part. Data obtained from interviews with the nine "elite" respondents (including Sustainability Directors, Global Sustainability/CSR Managers and Leads) was complemented by relying on information available on corporate websites and external reports. The average duration of the interviews was 66 minutes, and interviews ranged between 51 and 87 minutes. Owing to practical constraints, Skype-based phone interviews were conducted (Knox and Burkard, 2009). A focused semi-structured interview style was adopted where the criteria of specificity and focus were fulfilled with the use of an interview guide (Fossey et al., 2002; Merton and Kendall, 1946; Flick, 2002). Interviewees were encouraged to provide examples where possible to fulfil the criteria of range (Flick, 2002). Two pilot interviews were also undertaken but were not considered for the subsequent analysis. All interviews were audio-recorded and transcribed for subsequent analysis. A CAQDAS application, NVivo facilitated the analytical procedure based on coding technique leading to the thematic analysis (Creswell, 2009).

Findings and Discussion

Five major themes emerged from the initial analysis of the interview data. Firstly, the relevance of the control package model to explore controls for sustainability strategies from a holistic perspective in conjunction with Benn et al. (2014) sustainability phase framework was confirmed. Each of the control mechanisms identified in the model was observed to play a role in empirical settings albeit with different levels of significance attached to them. For instance, cultural controls received high emphasis in most of the firms whereas rewards received the least emphasis as a mode of control. Cultural controls were mobilised for a number of reasons including the need to create/sustain a collective understanding of sustainability, empower and engage employees at different organisational levels to drive the sustainability agenda and to promote an organic approach towards sustainability internally (Chenhall, 2003; Chung and Parker, 2008; Arjalies and Mundy, 2013).The emphasis on cultural control is further illuminated by the amount of significance attached to it by those companies that are progressing towards a proactive phase further demonstrating the proactive role controls play in strategic progression (Kober et al., 2007). Without the cognitive underpinning, such strategic progression may not be feasible as sustainability needed to be promoted by the organisation holistically without remaining the responsibility of a few but practised collectively (Hart, 1995; Shrivastava, 1995). Overall, however, all firms included within the sample relied upon a combination of both formal and informal controls contradicting Crutzen et al., (2017) findings.

Secondly, the analysis indicated the existence of interdependencies amongst different controls (Grabner and Moers, 2013; Otley, 1980). For instance, the effectiveness of performance measurement systems was found to be dependent on cultural controls as one interviewee asserted "*without the right the culture and the behaviours, KPIs are pointless.*" In the same vein, proactive firms were found to rely on financially quantified sustainability performance data to promote a shared understanding of sustainability (Arjalies and Mundy, 2013; Azzone and Noci, 1998). Moreover, budgetary control for sustainability is dependent on cultural controls as the expectation is for units/functions to plan sustainability-oriented capital outlays as part of their annual budgetary cycle. Without the cognitive underpinning of sustainability and its relationship with business, unit driven budgetary controls would be ineffective. A range of other dependencies and complementarities were observed between different control mechanisms.

Thirdly, the analysis revealed the presence of distinctive control patterns informed by different strategic settings (Bedford and Malmi, 2015). As a sharp contrast between the firm pursuing an efficiency based strategy and those at the proactive stage, the former relied on basic performance measurement systems that did not generate financially quantified sustainability performance data, did not mobilise rewards systems, budgetary controls at the unit level was lacking and sustainability values were still getting embedded within the cultural control mechanisms.

Furthermore, the data provide evidence of equifinality (Sandelin, 2008). In other words, different control configurations were identified leading to the same outcome (strategic proactivity). For instance, there was one proactive firm within the sample where sustainability goals were not translated into quantifiable targets but were based on the premise of continuous improvement. Whereas in other proactive firms, strategic planning systems were designed to include both long and short term goals quantified in tangible targets. Nonetheless, the differences in control approaches led to the same outcome regarding achieving strategic proactivity.

Finally, it was apparent from the interviews, that sustainability professionals were playing a key role in promoting sustainability internally. Acting as advisors and internal consultants, the sustainability professionals assumed the role of facilitators of organisational learning in the firm currently transitioning from the efficiency stage. The focus was on transferring knowledge of sustainability to develop the internal knowledge base (Gond et al., 2012). In contrast, sustainability professionals in organisations that have reached the proactive stage, the role as functional integrators received more prominence ensuring functions do not operate in silos (Moon et al., 2011).

Conclusion

The study promotes the view that assessing organisational commitment to sustainable practice can be undertaken by exploring the extent to which management controls reflect the sustainability strategic orientation. The research provides evidence of not only the role sustainability strategy play in the design of a number of management controls traditionally found in practice but also the proactive role controls play informing strategic progression. The evidence indicates the significance attached to cultural controls as part of the overall control package irrespective of the strategic orientation in controlling for sustainability. Furthermore, the significant role of internal sustainability professionals in the context of the overall structural design to control sustainability is highlighted.

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