
Barriers to Implementation of Corporate Sustainability Strategies in South African ICT Companies

Yusuf Nabee

Student number: 9604972V

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg, 2016

ABSTRACT

Corporate sustainability is increasingly becoming an important discussion for companies. Some research suggests that ICT companies in South Africa lag their counterparts in the rest of the world and in other sectors. However, there has been very little research done to understand the reasons for this. This research therefore aims to understand the key enabling factors and the key barriers to the adoption and implementation of corporate sustainability strategies in South Africa. 18 Semi structured interviews were conducted representing 11 companies within the ICT sector in South Africa. Using thematic analysis, 8 factors were identified that influence the adoption and implementation of corporate sustainability strategies amongst ICT companies in South Africa. The key enablers were identified to be increasing market demand from customers and industry competition, as well as pressure from government through legislation. Key barriers were identified to include ineffective communication, lack of standardized holistic reporting for the sector, and lack of measurement of second and third order impact of the sector. The research further identified that while external factors are driving adoption, implementation is dependent on a number of internal variables including shareholder support and lack of a clearly defined and focused strategy. The research offers insight into the factors required to successfully adopt and implement corporate sustainability strategies in the ICT sector in South Africa and can be used by companies in the sector as well as stakeholders to improve corporate sustainability practices.

DECLARATION

I, Yusuf Nabee declare that this research report is my own, unaided work. It is submitted in partial fulfilment of the requirements of the degree of Master of Business Administration in the University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Yusuf Nabee

Signed at

On the 31st day of March 2016.

DEDICATION

I dedicate this research to my parents for their never ending support and for always pushing me to achieve more; to my wife for her patience and encouragement; and to my two children, Hafsa and Talha, for their support and always pointing out the simple solution as only children can.

ACKNOWLEDGEMENTS

I could not have completed this without the support and encouragement of many people:

- My family for their patience, encouragement, support and unwavering belief in me.
- My supervisor, Prof. Anthony Stacey, for his ongoing advice and guidance.
- Mrs Vanishree Pillay at the faculty office, for so efficiently dealing with all the urgent requests.
- To my friends – Naz, Mervyn, Janet, Sarah – for providing the guilt factor.
- To all the respondents who gave up their time to talk to me.

A big thank you to all of you.

Table of Contents

1	INTRODUCTION.....	9
1.1	Purpose of the Study.....	9
1.2	Context of the Study.....	9
1.3	Problem Statement.....	11
1.3.1	Sub-problem 1.....	11
1.3.2	Sub-problem 2.....	11
1.4	Significance of the Study.....	11
1.5	Delimitations of the Study.....	12
1.6	Definition of Terms.....	13
1.7	Assumptions.....	13
2	LITERATURE REVIEW.....	14
2.1	Introduction.....	14
2.2	Defining Corporate Sustainability.....	14
2.3	Corporate Sustainability and the ICT Sector.....	18
2.4	Motivation to Act on Corporate Sustainability.....	23
2.5	The South African Context.....	28
2.6	Corporate Sustainability Implementation in the South African ICT Sector.....	29
2.7	Barriers and Enablers.....	30
2.8	Conclusion of Literature Review.....	35
2.9	Research Questions.....	36
3	RESEARCH METHODOLOGY.....	37
3.1	Introduction.....	37
3.2	Methodology.....	37
3.3	Research Design.....	38
3.4	Population and Sample.....	38
3.4.1	Population.....	38
3.4.2	Sample and sampling method.....	39
3.5	Research Instrument.....	40
3.6	Procedure for Data Collection.....	40
3.7	Data analysis and interpretation.....	41
3.8	Limitations of Study.....	42

3.9	Validation and Reliability	43
3.9.1	External validity.....	43
3.9.2	Internal validity	44
3.9.3	Reliability.....	45
4	RESEARCH FINDINGS AND DISCUSSION OF RESULTS.....	46
4.1	Introduction	46
4.2	Respondents	46
4.3	Context: Assessment of Levels of Success	48
4.4	Factors influencing ability to adopt and implement corporate sustainability strategies	50
4.4.1	Clear and focused strategy	52
4.4.2	Shareholder support	55
4.4.3	Organisational support	57
4.4.4	Integration across organisation	59
4.4.5	Motivation to Act	61
4.4.6	Effective communication	67
4.4.7	Stakeholder pressure	70
4.4.8	Market pressure.....	72
4.4.9	Summary and Conclusion.....	74
4.5	Enablers and Barriers to Adoption and Implementation of Corporate Sustainability strategies.....	77
5	CONCLUSIONS AND RECOMMENDATIONS.....	80
5.1	Introduction	80
5.2	Summary of the research.....	80
5.2.1	The research problem restated	80
5.2.2	The research process	80
5.2.3	Conclusions	81
5.2.4	Recommendations	83
5.2.5	Suggestions for further research	84
6	REFERENCES.....	85
7	ANNEXURE A – RESEARCH INSTRUMENT.....	88

List of Tables

Table 1: Three Order Framework for ICT Impact (EITO, 2003)	21
Table 2: Mix of Respondents	39
Table 3: Summary of Respondents	47
Table 4: Respondents Assessment of Levels of Success Achieved	49
Table 5: Factors Identified From Research	51
Table 6: Summary of Factors Identified vs. Literature Review	75
Table 7: Enablers and Barriers Identified From Research.....	77

1 INTRODUCTION

1.1 Purpose of the Study

The purpose of this study is to identify the key barriers that affect the adoption and implementation of corporate sustainability strategies amongst ICT companies in South Africa. This will enable key stakeholders within the companies, the sector and the country to develop appropriate responses to ensure that the key elements required to enable ICT companies to implement corporate sustainability strategies are put in place.

1.2 Context of the Study

According to a 2005 research report, South African ICT companies lag their counterparts in other sectors and in other countries in reporting on corporate sustainability (Rafferty, 2007). This is further confirmed in a 2010 Ernst and Young survey on the level and quality of sustainability reporting, where the 6 ICT companies that were reviewed were classified as either adequate or perfunctory in their sustainability reporting (Ernst and Young, 2010). This suggests that ICT companies in South Africa have not done enough to implement corporate sustainability initiatives.

Given the significant socio-economic challenges in the country, and the environmental challenges faced across the planet, it is concerning that companies in such an important sector have done so little on the issue of sustainability. It is estimated that ICT accounts for over 2% of the world's carbon emissions and this is expected to grow as the penetration of ICT increases (EITO, 2003). Although most South African ICT companies believe they have a limited impact on the environment

(Rafferty, 2007), the combined direct and indirect effects of ICT have a substantial impact on the environment, both positive and negative (EITO, 2003).

ICT is also seen as a key enabler of social sustainability through initiatives to bridge the digital divide and increase access to information through e-services. This is also expected to reduce travel, reduce the need for material or physical products (dematerialisation), create new communities and fundamentally change the way we live and work (Fuchs, 2008). ICT is also seen as a key enabler of sustainability in other companies outside of the ICT sector by creating efficiencies through automation and by enabling data collection to monitor and manage sustainability performance (Fuchs, 2008). Sustainability though is not only about social upliftment. The business case for change within the ICT sector is driven by increased profit potential, reputational enhancement, ethical consideration as well as legal and regulatory compliance (Epstein & Roy, 2003; Okereke, 2007; Steger, 2004).

Considering the range of factors that should be driving ICT companies to adopt corporate sustainability initiatives, it remains unclear as to why South African ICT companies have been lagging in this regard. Part of it may be attributed to the context of doing business in South Africa which places huge emphasis on social upliftment already even in the absence of recently introduced triple bottom line reporting requirements. Alternatively, there could be other factors internal and external to the relevant companies that are resulting in the lack of action from companies in the sector.

It is within this context, that this research is undertaken. ICT plays a very important role in ensuring the ongoing development of South Africans and the sustainability of our environment. It is therefore necessary to understand the factors that are limiting progress on the sustainability front, in order to assist relevant stakeholders and decision makers to take appropriate action to create an environment where ICT companies can adopt and implement corporate sustainability strategies.

1.3 Problem Statement

To identify the key barriers and enablers for the adoption and implementation of corporate sustainability strategies amongst ICT companies in South Africa.

1.3.1 Sub-problem 1

The first sub-problem is to identify the key factors that affect the ability for South African ICT companies to successfully implement corporate sustainability strategies.

1.3.2 Sub-problem 2

The second sub-problem is to determine which factors are currently enablers and which are barriers to ICT companies in South Africa successfully implementing corporate sustainability strategies.

1.4 Significance of the Study

There is a global move towards more sustainable corporate practices. South Africa is no different and the issue of corporate sustainability has been given increased impetus with the recent introduction of integrated reporting into the King 3 governance framework. Despite this, however, there has been limited academic research conducted globally on the challenges faced by companies in introducing integrated corporate sustainability strategies.

In South Africa, there has been an extensive focus recently on sustainability reporting. Ernst and Young, KPMG and others publish regular reports on the level and quality of reporting amongst South African companies. There has also been at least one study conducted in 2005 on the level of environmental sustainability reporting within the ICT Sector in South Africa. While these reports highlight the poor

quality of sustainability reporting within the ICT sector, they do not attempt to determine the reasons why ICT companies lag behind

This research will aim to add to the growing body of research by identifying the key barriers that ICT companies face in implementing integrated sustainability strategies. By identifying ICT sector specific barriers, this research will enable policy makers, sector leaders and company leaders to develop appropriate responses to address the challenges currently faced in adopting and implementing sustainability strategies within the sector. In particular, it will enable policy makers and sector leaders to consider the need for customised approaches to corporate sustainability policies and strategies for the ICT sector. This will hopefully lead to an improvement in the level of implementation and reporting of integrated sustainability strategies within ICT companies in South Africa.

1.5 Delimitations of the Study

- The study is limited to companies that operate within the ICT sector in South Africa and have their base of operations in South Africa.
- The study only aims to identify those factors that companies believe are the key barriers and enablers to their ability to adopt and implement corporate sustainability strategies.
- The study only focuses on corporate sustainability strategy and specifically excludes general business strategy.
- The study does not aim to evaluate or critically assess the corporate sustainability strategies of these companies.
- The study does not aim to give an account of the sustainability initiatives undertaken by the companies included in the study.
- The study does not aim to make comparisons between the ICT sector and any other sector.

- The study does not aim to make comparisons between the relative levels of success of the companies included in the study and other companies.

1.6 Definition of Terms

ICT Sector	includes the Broadcasting, Electronics, Information Technology and Telecommunications sub-sectors as defined in the BBBEE Codes of Good Practice on Black Economic Empowerment
Sustainability	refers to the triple bottom line concept of balancing the needs of people, profit and planet
Factor	refers to anything that influences the decision or ability to act

1.7 Assumptions

- Companies in the ICT sector in South Africa have adopted some form of sustainability strategy or initiative.
- Respondents are aware of corporate sustainability as a concept, and will be able to comment meaningfully based on their understanding.
- The assessment that SA ICT companies lag their international counterparts holds true, and therefore there is room to improve and challenges to be addressed.
- Respondents will be honest and truthful in their responses to enable accurate conclusions to be reached.

2 LITERATURE REVIEW

2.1 Introduction

A review of relevant literature is provided in this section with an aim to gain a better understanding of the definition of corporate sustainability, the relevance of corporate sustainability to the ICT sector, the level of adoption of corporate sustainability amongst South African ICT companies, and to identify any potential enablers and barriers to the adoption and implementation of corporate sustainability strategies.

2.2 Defining Corporate Sustainability

The concept of sustainability is not new. Mebratu (1998) and Mitcham (1995) trace the precursors to the concept of sustainability and sustainable development back to ancient religious and philosophical beliefs that promoted the concept that man must live in harmony with the universe. The first economic theory that recognised that scarcity of resources presented a limit to growth can be traced back to Thomas Maltus in the eighteenth century (Mebratu, 1998). Other sustainability concepts also emerged in the 1960s and 1970s through various publications all highlighting the need for development and environmental issues to be considered concurrently as development can only be sustained if the environment was able to support it (Mebratu, 1998). The issue of sustainability was however pushed onto the mainstream political agenda when the Brundtland commission published “Our Common Future” in 1987 (Mebratu, 1998). This report contained two key concepts: 1) The concept of “needs” and particularly that the needs of the poor must be prioritised and 2) the concept of limitations on the environment’s ability to meet the needs of the current and future generations (Brundtland & Khalid, 1987). Many authors credit the 1987 definition of sustainable development as the catalyst for the attention given to the issue of sustainability since then as it was vague enough to be

widely accepted (Marshall & Toffel, 2005; Mebratu, 1998; Mitcham, 1995). Since 1987 however, as academics, businesses and policy makers tried to define the concept of sustainable definition, numerous definitions and interpretations for the concept emerged leading to a point today where there is no acceptable consensus definition for sustainable development (Mebratu, 1998).

So why is the concept of sustainability so difficult to define? As a concept, corporate sustainability is based on the premise that the traditional growth and profit-maximisation model is no longer relevant (Wilson, 2003). It suggests that in addition to ensuring the continued growth and sustainability of the company, companies should also pursue developmental goals to ensure the continued sustainability of society and the environment as well (Wilson, 2003). These principles of sustainability have in many ways been practiced by companies in some form or the other either through their financial management practices or through their corporate social investments. However, the recent emphasis has been on a balanced approach to sustainability that incorporates all elements in a single integrated view of a company's sustainability.

Sustainable development is defined as "development that meets the needs of current generations without compromising the ability of future generations to meet their needs" (Brundtland & Khalid, 1987). Although the definition has provided a useful frame of reference, critics of sustainable development argue that the definition is not useful in measuring sustainability of today's decisions as it is impossible to predict the needs of future generations (Marshall & Toffel, 2005). Other critics argue that the definition is too wide and therefore open to interpretation (Marshall & Toffel, 2005; Mebratu, 1998; Mitcham, 1995). This makes it difficult to operationalise within companies or to measure progress against (Marshall & Toffel, 2005). This suggests that while sustainable development is a useful concept, on its own or without further definition it is not sufficient to drive company action and leads to multiple interpretations of what an acceptable level of development is to be deemed sustainable.

The Dow Jones Sustainability Index defines corporate sustainability as “a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments” (Jones). Although this definition seems to be more relevant to business, it is not widely used outside of the Dow Jones Sustainability Index. Furthermore, the definition raises some questions about the ability to measure a company’s level of corporate sustainability. How do you define long-term to determine the appropriate period of measurement? Are the traditional measures of shareholder value still valid? Are shareholders the only stakeholders that the company needs to deliver returns to, and do they represent a wide enough variety of social interests to be able to balance social, environmental and economic considerations in determining value.

Marshall & Toffel (2005) summarise the difficulty in defining sustainability in a meaningful way by categorising the various ways in which the concept of sustainability has been used in a hierarchy of sustainability. The hierarchy highlights the fact that the concept of sustainability is dependent on the perspective from which it is being looked at and the context within which it is being evaluated (Marshall & Toffel, 2005). They suggest that different actions have different impacts ranging from threatening the human existence to affecting the value systems of society (Marshall & Toffel, 2005). They further argue that sustainability is a relative term dependent on which level of the hierarchy is being considered and that an action can be sustainable at one level but unsustainable at another level (Marshall & Toffel, 2005). Through this hierarchy the authors highlight that one of the biggest difficulties in defining sustainability is being able to determine whether only some levels of the hierarchy should be considered or if all should be considered (Marshall & Toffel, 2005). In other words, should the definition be wide enough to capture all possible perspectives of sustainability and possibly render the definition meaningless in its application or to limit the definition to only certain levels in the hierarchy and risk excluding important issues (Marshall & Toffel, 2005). This assertion is supported by Mitcham (1995) and Mebratu (1998) who both argue that in trying to confine the concept of sustainability to a practical definition, the concept could be diluted to such a point that it loses its meaning altogether. In fact, Wilson (2003) argues that

sustainable development is but just one part of a broader concept of corporate sustainability. He argues that the concept of corporate sustainability remains elusive primarily because it is an amalgamation of four different concepts (sustainable development, corporate social responsibility, stakeholder theory and accountability theory) which all bring different elements to the overall concept, thereby making it complex and difficult to define (Wilson, 2003).

It appears that current definitions of corporate sustainability are either too vague or too complex to be practically implemented as a useful measure of the sustainability practices of companies. So how does a company that wishes to adopt integrated sustainability practices determine an appropriate course of action? Recently there has been a lot of focus on defining the criteria against which a company would be measured and held accountable. This is expected to have the effect of providing some sort of framework within which companies can focus their efforts by forcing companies to measure and account for key elements of sustainability in much the same way as accounting standards define the measures of financial performance.

There have been attempts to standardise measurement and reporting on corporate sustainability. Several measurement and reporting frameworks have been developed with some of the popular ones being the Triple Bottom Line and the Global Reporting Initiative.

In South Africa, guidance is provided by the King 3 corporate governance framework which basis it's integrated reporting guidelines on the triple bottom line framework (King, 2010). While the Triple Bottom Line faces its criticisms, among them being the fact that bottom line measures of environmental and social performance are not as defined as economic performance as measured by accounting standards (Norman & MacDonald, 2004), it is one of the most widely adopted frameworks for corporate sustainability reporting in South Africa and therefore provides the best measure of corporate sustainability at this time.

In summary, although the concept of sustainability is not new, in the context of today's current business environment there is no consensus as to the definition of corporate sustainability. As a result, various definitions are used by companies as

their measure of sustainability and even within these definitions there are various interpretations as to what corporate sustainability means. Some of the most common terms used by companies include corporate social responsibility, corporate citizenship, sustainable development and corporate sustainability. Each of these concepts and definitions have their criticisms making it difficult to determine which one is the best for companies to use. In many cases the primary criticism is that the theoretical definitions are impractical for companies to implement or too vague and open to interpretation. One of the most common definitions that has been used is sustainable development as defined by the Brundtlandt commission. However, while the concept is widely accepted, there is no consensus of the definition. In the absence of a definition, reporting frameworks such as the King 3 governance framework in South Africa provide guidance as to the corporate sustainability performance of companies.

2.3 Corporate Sustainability and the ICT Sector

Although all companies should ensure that they balance all three elements of corporate sustainability, the levels of impact on social, environmental and economic stability differs depending on the nature of the business activity. Different industries therefore place greater emphasis on different components of sustainability. Resource intensive industries such as mining and energy, for example, place a greater emphasis on environmental sustainability due to their large consumption of natural resources and high levels of emissions. Financial services on the other hand place a greater emphasis on economic sustainability due to their high level of influence on economic activity. The health sector, however, places a greater emphasis on social upliftment due to their influence on the general well-being of society.

For the ICT sector, this distinction is not as clear. The provision of ICT services to people is largely seen as a key element of social upliftment (Sundén & Wicander, 2003). ICT companies have therefore traditionally emphasised social sustainability

over environmental sustainability. At the same time though, while the direct impact on the environment for the ICT sector is relatively small, the indirect impact is substantial (EITO, 2003; Janko & Vagasi, 2003). This realisation has now forced companies in this sector to place a substantial emphasis on environmental sustainability as well.

EITO (2003) uses a three order framework to classify the impact of ICT on sustainable development. This framework has been used by many authors in assessing the various impacts (direct and indirect) of ICT on the three pillars of sustainable development viz. environmental sustainability, social sustainability, and economic sustainability. According to EITO (2003) there are three levels of impacts that ICT has on the sustainable development:

1. First Order Impacts

First order impacts are based on the view that the production of ICT equipment has a minimal direct impact on the environment as many other industries. These are the impacts and opportunities created by the physical existence of ICT and the processes involved.

2. Second Order Impacts

Second order impacts are based on the view that the application of ICT has an indirect effect on other sectors. It could create efficiencies leading to “dematerialisation” (a reduction in the amount of natural resources needed to support human activity). These are the impacts and opportunities created by the ongoing use and application of ICT.

3. Third order Impacts

Third order impacts are based on the view that the widespread use of ICT by large numbers of people has the ability to change the nature of relationships. These are the impacts and opportunities created by the aggregated effects of large numbers of people using ICT over a long period of time.

Using the three-order framework, the various impacts and opportunities of ICT are summarised according to the “triple bottom line” of environment, social and economic.

Table 1: Three Order Framework for ICT Impact (EITO, 2003)

		Impacts/Opportunities Dimension		
		First Order	Second Order	Third Order
Sustainability Dimension	Description	<i>The impacts and opportunities by the physical existence of ICT and the processes involved</i>	<i>The impacts and opportunities by the ongoing use and application of ICT</i>	<i>The impacts and opportunities by the aggregated effects of large numbers of people using ICT over the medium to long term</i>
	Example	<i>Design, manufacture, operation and disposal of ICT</i>	<i>E-business</i>	<i>Changing nature of relationships between business and markets</i>
	Environmental	<ul style="list-style-type: none"> • Design and manufacture of ICT equipment • Operation of ICT equipment • Disposal of ICT Equipment 	<ul style="list-style-type: none"> • Increase and decrease in the use of transport • ICT in business systems • Virtualisation of material products • Effects on product lifetimes • Distribution and manipulation of environmental information 	<ul style="list-style-type: none"> • De-coupling economic growth and energy consumption • De-coupling economic growth and carbon emissions • Changing settlement patterns

		Impacts/Opportunities Dimension		
		First Order	Second Order	Third Order
Sustainability Dimension	Social	<ul style="list-style-type: none"> • Job creation • Digital divide 	<ul style="list-style-type: none"> • Access to information • Security challenges • Access to better service • New communities online • Popular protest online 	<ul style="list-style-type: none"> • Cultural homogeneity or cultural diversity • Building local communities • Building civic culture
	Economic	<ul style="list-style-type: none"> • Growth of ICT market • Ongoing investment in ICT and in ICT research and development • New types of organisations • Boom and bust 	<ul style="list-style-type: none"> • Application of ICT within businesses • New opportunities for SMEs • Financial markets • The relationship between business and market 	<ul style="list-style-type: none"> • ICT and the “new economy”: a new paradigm of growth • Exclusion or inclusion?

The above summary illustrates the wide range of impacts that ICT has on all three dimensions of the triple bottom line. Although some of the impacts are not necessarily understood, especially in regard to the third order impacts, ICT clearly has a high impact on all three sustainability dimensions and an important role to play in driving sustainability.

2.4 Motivation to Act on Corporate Sustainability

There are many reasons why companies should implement sustainability strategies.

1. Profit

Although seemingly counter-intuitive, sustainability activities such as carbon management or environmental management can drive cost reductions (Okereke, 2007). Companies like Shell and Alliance Boots report millions of pounds of cost savings as a result of carbon management activities (Okereke, 2007). Walmart has embarked on a drive to reduce 30% of energy use at its stores which will help reduce energy costs overall (Lash & Wellington, 2007). BP claims to have saved \$650million by reducing energy waste (Hoffman, 2005).

On the other side of the profit coin, companies can benefit from sustainability activities by identifying new market opportunities (Hoffman, 2005). This has manifested itself for example in the growth of industries focusing on green-house emissions reduction technologies, renewable energy and solar power (Hoffman, 2005). Companies that can recognise changing market trends arising from corporate sustainability initiatives can ensure they have an appropriate portfolio of products to meet the market needs of the future. In fact, in an in-depth study of over 130 companies conducted by the Forum for Corporate Sustainability Management at IMD, compelling economic reasons for the investment in sustainability activities were found in almost all companies (Steger, 2004).

For the ICT sector, the profit driver is relevant in three ways 1) as ICT services increase penetration in an effort to drive social sustainability, this can unlock new market opportunities and increase demand for ICT services; 2) The drive to seek more efficient production of ICT products can reduce cost in much the same way as in other sectors and 3) the drive by companies to increasingly invest in greener technologies creates a new market opportunities for greener products as companies replenish their ICT infrastructure (EITO, 2003; Janko & Vagasi, 2003).

2. Credibility and reputation

Many organisations are shifting their outlook on sustainability towards proactive participation in finding solutions to the sustainability challenges (Martin & Rice, 2009). In some cases this is in order to manage the risks of solutions being dictated through command and control policies, while for others it is about being able to gain first mover advantage. In order to do this effectively, they need to build credibility and “walk the talk” (Okereke, 2007). Companies like Shell and Associations of British Insurers publically promote their credentials in their reports, public statements and on their websites to establish themselves as credible contributors to the policy debates on sustainability (Okereke, 2007).

An improved reputation amongst key stakeholders could also have important benefits with key constituents such as communities, lobby groups and influential policy makers (Hoffman, 2005). This could assist the company in gaining support from these constituents on a variety of matters beyond just sustainability (Hoffman, 2005). Although difficult to quantify, the utilisation of lobby efforts to advance a company’s strategy has been utilised successfully by companies for a long time.

On the consumer front, however, the benefit of an improved reputation as a sustainability-driven company is not as easy to determine. Consumers may not really care about a company’s sustainability activities in making a purchasing decision (Steger, 2004). Despite this many companies believe that the benefits arising from an elevated reputation far outweigh the costs of the sustainability initiatives themselves (Hoffman, 2005). Companies like McDonalds for example have utilised actions around sustainability to improve its reputation amongst key lobby groups such as GreenPeace (Hoffman, 2005). The oil industry has also utilised industry wide efforts to improve its reputation amongst key stakeholders. In return the industry has faced much less criticism on key issues such as drilling (Hoffman, 2005).

For the ICT sector this is an important consideration as ICT services are increasingly seen as providing part of the solution for many companies' sustainability challenges and for many countries social sustainability challenges. ICT companies would therefore need to become important contributors to the debate on sustainability.

3. Pressure from stakeholders

While some would argue that many stakeholders are ambivalent to the issues of sustainability (Steger, 2004), there is also an increasing trend for key stakeholders demand that the companies they do business with have good sustainability practices. In some cases this is due to ethical considerations, particular value systems, or profit motivated. Shareholders are also increasingly taking all elements of sustainability into consideration in choosing where to place their investment. At the same time, managers and company procurement policies are factoring sustainability evaluation into their decisions in an effort to improve their own sustainability credentials (Sacchero & Molla, 2009) while consumers and employees are increasingly showing preferences for "brands that can demonstrate their sustainability credentials" (Grayson et al., 2008).

For the ICT sector, this is particularly relevant. As ICT is a key enabler of sustainability strategies in other sectors, customers are increasingly demanding more environmentally friendly products. This is becoming an important consideration in the business case for IT investment (Kuo, 2010; Piotrowicz & Cuthbertson, 2009; Sacchero & Molla, 2009). From a social development perspective, the second order impacts of reducing travel through the improvement of broadband infrastructure or introduction of e-services is seen as a key element to reduce greenhouse emissions from transport (Dodd, 2007; Yi & Thomas, 2007).

4. Fiduciary obligation and regulatory compliance

Chief Executives are increasingly considering climate change and sustainability as a matter of fiduciary concern (Hoffman, 2005). As leaders of their organisations they believe that, even in the absence of shareholder pressure, they need to ensure that the risks or possible advantages arising out of sustainability issues such as climate change need to be fully assessed and appropriate action needs to be taken to ensure that their companies are appropriately positioned and not disadvantaged in the long run (Hoffman, 2005).

Similarly companies in many cases need to take action on sustainability matters to ensure compliance with regulations. These regulations are sometimes directly compelling organisations to take specific actions (for example as part of a licence to operate) or indirectly by compelling companies to report on their activities to stakeholders.

ICT companies face the same decisions as any other companies in this regard and therefore increasingly need to factor the issue of sustainability into their strategies to ensure that the company is well positioned to deliver returns to shareholders or that companies can secure licences to operate (in the telecommunications environment for example).

5. Risk Management

Companies that are motivated by risk management fall into two categories. The first category take action to mitigate against the possible risks that may arise by not doing anything (Okereke, 2007). While others take action to mitigate against the direct risks associated with sustainability issues (Okereke, 2007). The level of risk management may depend on the nature of the business or even the location of a company's operations. Increased floods and natural disasters arising out of climate change activities could result in an increase in insurance claims. Swiss re, a multinational insurance company, on the other hand takes a more drastic view

arguing that the repercussions of climate change could have far reaching effects which will ripple into the worldwide economy and therefore the risk of not doing anything is too high (Hoffman, 2005).

Lash and Wellington (2007) identify 5 different types of risks that climate change could present. Appropriate strategies can help companies address these risks and develop competitive advantage through the management of these risks. These risks include regulatory risk, supply chain risk, product and technology risk, litigation risk and physical risk. All these risks could equally apply to the broader concept of sustainability.

For the ICT sector, risk management is an important motivator. The recent tsunami in Japan, for example, caused a supply shortage of silicon for chipsets which in turn affected the supply of a variety of ICT devices around the world.

6. Ethical considerations

Apart from the traditional business perspective, there is the ethical consideration. Some companies are genuinely concerned about the impact they have on the environment and society at large and want to do the right thing (Okereke, 2007). While it is difficult to determine the extent to which companies are truly motivated by ethical considerations, there CEOs who have begun to agree that ethics is not necessarily incompatible with business strategies to maximise profits (Husted & Allen, 2000). With the recent financial crisis, the issue of morals and ethics as a key feature of sustainable business has also become an important point of debate.

In summary, there is a business case for companies to implement corporate sustainability strategies. Although in some cases, the benefits and costs are not as easy to quantify but there are a variety of compelling reasons to adopt sustainability strategies. Although the relevance of the reasons may vary by sector, country and company, it does seem to make business sense for companies in the ICT sector to implement sustainability strategies.

2.5 The South African Context

Although there may be compelling business reasons for ICT companies in South Africa to invest in sustainability activities, the focus of their strategy will depend on the unique context within which they operate. South Africa is faced with significant socio-economic issues. Crime rates are amongst the highest in the world and there is a widening gap between the rich and poor – South Africa has one of the highest Gini coefficients in the world (Herbst, 2005). The injustices created by apartheid are still in the process of being corrected and poverty, education and health remain a serious challenge, while South Africa has a relatively low broadband penetration rate, even amongst similar developing countries. At the same time, South Africa is often regarded as the economic hub of Africa, has a very mature economy and financial system and has high penetration of mobile communication. At an international level, there are several South African companies listed on international exchanges, South Africa has recently been accepted into BRIC (Brazil, Russia, India and China), and is a signatory to the Kyoto Protocol.

In many ways, South Africa has been innovative and forward-thinking in its approach to sustainability. The King III governance framework is one of the first in the world to provide for integrated reporting on social, economic and environmental performance. Due to the history of the country, many of South Africa's policies and company practices have already incorporated the concept of social justice and social sustainability through a wide variety of policy goals such as Black Economic Empowerment and Employment Equity. At the same time, South Africa has adopted a carbon tax regime in an aim to reduce greenhouse gas emissions.

It is within this context that South African ICT companies operate and their approach to sustainability will to some extent be driven by this context. While more developed countries around the world place a significant emphasis on environmental sustainability, for South Africa the balance between social sustainability and environmental sustainability may be more pronounced.

2.6 Corporate Sustainability Implementation in the South African ICT Sector

Although there has been a fair amount of academic and other research published on the level and quality of sustainability reporting amongst South African companies, there has been no research done on the level of adoption and implementation of integrated sustainability strategies within South Africa.

In terms of environmental reporting, South African ICT companies lag their counterparts in other sectors in the adoption and implementation of sustainable development strategies (Ernst and Young, 2010; Rafferty, 2007). A 2005 study conducted by Rafferty (2007) found that very little is being done by South African ICT companies in terms of environmental reporting. Most of the companies reviewed felt that they had very little impact on the environment and therefore did not feel the need to report extensively (Rafferty, 2007). Comparatively, the 6 international ICT companies reviewed showed a much higher level of environmental reporting (Rafferty, 2007). This would suggest that there is a low level of adoption and implementation of environmental management strategies let alone integrated sustainable development strategies within South African ICT organisations. It could, however, be argued that at the time of the study, the demand for integrated reporting or extensive environmental reporting was not high. King II encouraged triple bottom line, while the JSE's Sustainability Reporting Index had only just been introduced. King III requirements for integrated reporting were only introduced in 2009.

However, a 2010 Ernst and Young survey of South African companies had a similar finding. The 6 ICT companies that were reviewed were rated as having "adequate" or "perfunctory" reporting in regard to integrated reporting on the triple bottom line (Ernst and Young, 2010). Furthermore, although there was some progress being made, ICT companies were still found to be lagging their counterparts in other sectors in regard to both the level and quality of reporting (Ernst and Young, 2010).

This again would suggest that South African ICT companies have done very little in the area of sustainable development.

2.7 Barriers and Enablers

Considering that there are a large number of motivators for ICT companies to implement sustainable development strategies, why then are South African ICT companies lagging behind their counterparts in the adoption and implementation of sustainability strategies?

Seidel, Recker, Pimmer, & vom Brocke (2010) suggest that companies can successfully adopt sustainability practices if they have the following in place:

1. A well defined strategy with strategic targets

Integrating elements of sustainability into the overall corporate strategy ensures that the organisational focus includes a balance between economic profits and environmental and social sustainability. It also ensures that the strategy is driven from the top. The inclusion of performance metrics at corporate level support this and shift the focus of the organisation to drive sustainability performance.

2. Organisational support across the business

This includes top management support, inclusion across all areas of the business as well as bottom up support. This ensures that the implementation of the strategy is driven from all parts of the organisation and ensures the commitment of individuals within the organisation to the strategy.

3. Motivation (both intrinsic and extrinsic)

Intrinsic motivation ensures that individuals have a personal interest in ensuring the success of the strategy. However, this is not enough. Specific

incentives related to the implementation of sustainable business practices were also seen as important to ensure accountability.

4. Traceability through information systems that enable effective monitoring and data collection

Traceability refers to the need to ensure transparency and measurement. This is critical to ensure monitoring and reporting. Specifically, IT was seen as a key enabler to ensure that relevant data was collected across the organisation in order to enable progress measurement and accountability.

The study was, however, based on a single case study of an IT organisation and therefore the findings cannot be generalised (Seidel et al., 2010).

A “worldwide” study on the implementation of sustainability strategies conducted by Harmon, Fairfield and Behson (2009) identified at least three similar enablers viz. support from top management, integration across the organisation, an integrated strategy, and defined metrics. In addition, Harmon et al. (2009) also identified the following enablers:

1. Systems alignment

The systems and processes across the organisation are aligned around sustainability. This enables the full integration of sustainability across the organisation.

2. Values

Sustainability is a value that is practiced in the organisation or integrated into the value system of the organisation. This enables the organisation to drive a change of behaviour and culture within the organisation.

3. Stakeholder engagement

The sustainability strategy of the organisation is an outcome of engagement with key stakeholders. This ensures support for the sustainability initiatives from all key stakeholders.

Barriers to implementation of sustainability strategies were also identified in the same study. These include:

1. Internal deficiencies

These include a lack of awareness and understanding, general risk aversion, unclear or weak business case, and lack of specific ideas on what to do.

2. Insufficient stakeholder demand

This relates to the lack of demand for sustainability initiatives from a wide range of key stakeholders including suppliers, customers, employees and shareholders. If key stakeholders do not see value in the company's sustainability strategy, then there is not enough motivation for the company to act.

Grayson et al. (2008) identified 10 enablers to becoming a sustainability-driven innovator. These include many of the same elements identified by Seidel et al. (2010) and Harmon et al. (2009). In addition, Grayson et al. (2008) also identified the following:

1. The need to set up appropriate governance structures

This could be a dedicated Board committee that would drive the monitoring of the strategy implementation and ensure management accountability.

2. The need to build in sustainability innovation into the skill set and values

By doing this, the organisation will ensure that innovative and new solutions are found to drive implementation of the sustainability strategy.

3. Developing a network with other sustainability driven organisations.

Through building networks with like-minded organisations, the company can learn about new innovations and participate in the debate around sustainability.

Kolk and Levy (2001) identified that major oil companies have been successful by putting in place dedicated structures and people to drive sustainability across the organisation. They argue that this is a key element to ensuring that the sustainability strategy is managed and integrated.

In his study of 100 FTSE 100 Companies in the UK, Okereke (2007) identified three barriers to implementing successful carbon management strategies. These include:

- 1. Lack of strong policy framework**
- 2. Uncertainty about government's action**
- 3. Uncertainty about marketplace**

Companies highlighted that without a strong, clear, long-term policy framework, they were unable to make long-term decisions about their climate management strategies (Okereke, 2007). Companies do not want to make long-term investments without certainty that these investments would not be wasted (Okereke, 2007). They also argued that the lack of policy certainty has created confusion about the course of action current and future government's would take, and how they would be able to interact with other economies outside of their domestic economy (Okereke, 2007). However, while policy certainty would provide some assurance, the reaction of the market to climate management initiatives was unclear (Okereke, 2007). Companies

were concerned that their initiatives would not be adequately rewarded by the market place (Okereke, 2007).

Another study found similar results. Companies that successfully implemented sustainable development initiatives were able to build a business case for sustainable development actions and therefore were able to justify their investments with a lot more certainty (Steger, 2004). Companies that were unable to build a business case found the concept of sustainable development too complex and difficult to understand and that they were unable to measure and quantify the costs and benefits in many cases (Steger, 2004). Companies that were able to manage the qualitative aspects of the business case were found to be more progressive (Steger, 2004).

A second challenge that companies faced was the uncertainty and often mixed reactions to sustainable development from stakeholders (Steger, 2004) Some stakeholders are ambivalent to the company's sustainable development initiatives while others support the initiatives but do not necessarily reward the company (Steger, 2004).

Companies also faced with internal barriers similar to those identified by Seidel et al. (2010) and Harmon et al. (2009). These included lack of knowledge of sustainability by managers, lack of organisational support in general and from key departments and the lack of integration across the value chain, including suppliers, partners and customers (Steger, 2004).

In summary, there are a number of elements that need to be in place for companies to successfully implement sustainable development strategies. These include:

- A well defined, integrated and clearly understood strategy

- Well defined and measurable metrics supported by systems and structures to collect data and monitor progress
- Leadership from the top and support and integration across the organisation
- Political certainty
- Sufficient motivation to act supported by a clear business case
- Support from all key stakeholders

2.8 Conclusion of Literature Review

Corporate sustainability in its broad sense is a relatively new concept that has only been given significant attention over the past decade as suppliers, customers, regulatory and other stakeholders demand increased transparency and accountability from companies on their performance against the triple bottom line. Although many companies have in some way or the other incorporated social responsibility initiatives or environmental management initiatives within their companies, these have not been fully integrated into the overall strategy of the company or elevated to the same level of financial and economic sustainability issues.

In fact, relatively few companies have been able to effectively integrate sustainability strategies into their overall strategy and culture. This suggests that the integration of corporate sustainability into mainstream strategy and reporting is likely to take a long time.

At sector and country level, however, there are differences in the level of adoption and implementation of sustainability strategies. For the ICT sector in particular, the level of adoption has been lagging other sectors such as mining, energy and financial services.

In South Africa, ICT companies have not been as effective in implementing integrated sustainability strategies as their counterparts in other sectors. While most companies are aware of the need to integrate social and environmental sustainability

components into their strategy, this has not easily translated into clear actions. This is despite the introduction of integrated reporting requirements into governance frameworks for South African companies through the King 3 governance framework.

There are a number of elements that need to be in place for an organisation to be successful at implementing corporate sustainability strategies. Some of these are enablers while others are barriers currently. If ICT organisations in South Africa are going to be successful at implementing corporate sustainability strategies in an integrated manner, then factors such as developing an integrated strategy with metrics for measurement, ensuring all round organisational support, developing a clear business case and getting stakeholder support will need to be put in place.

2.9 Research Questions

1. What are the key factors that influence the ability for South African ICT companies to adopt and implement corporate sustainability strategies?
2. Which of these are barriers and enablers that impact on the ability for South African ICT companies to adopt and implement corporate sustainability strategies?

3 RESEARCH METHODOLOGY

3.1 Introduction

In this section, the methodology used for the research is described. The chosen methodology is outlined supported by literature. This is followed by a description of the research design, the sample chosen, the data collection process and the method used to analyse the data. Issues of reliability and validity of the chosen research methodology are also addressed.

3.2 Methodology

The purpose of this research is to identify the barriers to adoption and implementation of corporate sustainability strategies in ICT companies in South Africa. To achieve this objective, the research aims to understand the barriers as experienced by the people responsible for adoption and implementation of sustainability strategies within the companies. The research will therefore use a qualitative research methodology.

Qualitative research is premised on the idea that meaning is socially constructed by individuals and their interaction with their world, and that they interpret events in their world based on context at specific points in time (Merriam, 2002). Researchers using this method are therefore concerned in understanding those interpretations at particular points in time and in a particular context (Merriam, 2002). This methodology allows the researcher to collect rich data and gain deep understanding based on human experiences (Jackson, Drummond, & Camara, 2007). However, this also means that the research is not generalisable to a larger population (Jackson et al., 2007). Qualitative research is also premised on the basis that the researcher is the primary instrument for data collection (Merriam, 2002). This allows the researcher to be adaptive and develop understanding as the research progresses

and as data is collected (Hancock, Ockleford, & Windridge, 1998; Merriam, 2002). However this also introduces the potential for researcher bias. Merriam (2002) however, argues that rather than trying to eliminate the bias, it should be monitored and managed.

Since the primary goal of this research is to gain an understanding of the sustainability practices of companies based on the experiences of the respondents, qualitative research was determined to be an appropriate research methodology for this study.

3.3 Research Design

The research design is an interpretive study. This design is applicable due to its emphasis on the experience and interpretation of the respondents experience to gain a deeper understanding (Creswell, 2012). It enables the researcher to gain insight and interpret reality, rather than just merely providing an account of the experience (Creswell, 2012; Seymour, 2012).

3.4 Population and Sample

3.4.1 Population

The population included all ICT companies that have their base of operations in South Africa. ICT companies will be identified as those companies that are classified into any one of the following categories:

1. Broadcasting
2. Electronics
3. Information Technology
4. Telecommunications

The categories were based on the definition of ICT as included in the BBBEE codes legislated within South Africa.

The targeted respondents included sustainability managers, CSI managers, and executives who were tasked with oversight or management of sustainability initiatives, or had direct knowledge of sustainability initiatives within their companies due to their senior role within the company.

3.4.2 Sample and sampling method

A purposive sample of 11 companies was selected from the identified population. This was much lower than the targeted sample of 20 companies. The sample includes 6 broadcasters, 3 telecommunication companies, 1 IT company and 1 Software Engineering company. This is against a goal to have a mix of companies across all subsectors as outlined in Table 2 below. The sample aimed to have a mix of small, medium and large companies. An illustration of the proposed mix and achieved mix (marked in red in brackets) is provided below:

Table 2: Mix of Respondents

	Small	Medium	Large
Software	1	1	1 (1)
Telecommunications Equipment		1	1
Computer Services	1	1	1 (1)
Internet		1	1
Computer Hardware	1	1	1
Fixed Telecommunications		1 (1)	1
Mobile Telecommunications		1	1 (2)
Media and Broadcasting	1 (1)	1	1 (5)

3.5 Research Instrument

The data collection method used was semi-structured interviews. Semi-structured interviews are a suitable tool in interpretive qualitative research (Merriam, 2002). Semi-structured interviews enable the researcher to explore experiences and allows for flexibility to seek more information as the interview progresses based on the responses given by the respondent (Jackson et al., 2007). This provides an opportunity for the researcher to gain a deeper understanding and for the respondent to expand on answers as the interview progresses (Hancock et al., 1998; Jackson et al., 2007).

Semi-structured interviews involve using a questionnaire that is part structured and part unstructured with the large part of the questionnaire guided by a list of questions that are flexible in both order and wording (Merriam, 2002). An advantage of this is that allows the researcher clarify information and obtain more complete information. It also allows the researcher to adapt for different experiences amongst respondents and to add to the knowledge base as the study progresses, drawing on insights gained from previous interviews (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Disadvantages of semi-structured interviews are that they may not be easily comparable between respondents due to the flexible nature of the questionnaire, and also could result in researcher bias (Merriam, 2002).

The interview guide is included in Annexure A. The questions were based on the insights from the literature review.

3.6 Procedure for Data Collection

The semi-structured interviews were conducted in a face-to-face format. Respondents were identified through desktop research, references as well as from the researcher's personal network. Respondents were contacted by telephone or email. This was followed up with a brief explanation of the aim of the interview and

appointments were scheduled based on availability. One-hour interviews were scheduled with each respondent.

Interviews were conducted at a venue selected by the respondents. Where permission was granted, interviews were recorded. Two respondents declined to be recorded, and most respondents requested that they remain anonymous. Interviews were conversational in nature allowing for a free-flow of discussion. Detailed hand written notes were taken by the researcher to aid in the analysis.

One respondent was unavailable but agreed to answer questions via email. Questions were emailed and responses were provided by email.

3.7 Data analysis and interpretation

A thematic analysis of the interviews was conducted to identify key themes. Thematic analysis is a method for identifying, analysing and reporting patterns within the data (Clarke & Braun, 2014). It involves a search for themes that are identified as being important to the description of the phenomenon (Clarke & Braun, 2014). This method has a number of advantages including its flexibility to analyse data in different ways, its ability to go beyond the surface of the data, and its usefulness in highlighting similarities and differences across the data (Clarke & Braun, 2014).

Miller and Crabtree (1999) identify three styles of analysis depending on the level of predefined categories for interpretation viz. intuitive, data-based and theory-based. Intuitive is the least influenced by pre-defined categories while theory-based is the most (Miller & Crabtree, 1999). Clarke and Braun (2014) refer to this as inductive or theoretical analysis. Inductive refers to a bottom analysis where themes are generated from the data (Clarke & Braun, 2014). Theoretical analysis is a top down analysis where themes are generated based on the researcher's own understanding of the theory (Clarke & Braun, 2014). Inductive results in a much richer description of the overall data as it does not try to fit into a pre-existing (Clarke & Braun, 2014).

Theoretical analysis results in a more detailed description of an aspect of the data as it links the data to pre-conceived themes (Clarke & Braun, 2014).

For this research, an intuitive analysis was conducted on the data to identify the themes (categories) within the data. Analysis was done simultaneously with data collection. This allowed the researcher to make adjustments along the way, to test emerging concepts and themes, and to gather more reliable and valid data as the study progressed (Merriam, 2002; Morse et al., 2002). Data was coded to identify patterns in the data by identifying important moments and coding these into themes before the actual process of interpretation (Boyatzis, 1998). This was done using the hand-written notes of the researcher and the recordings of interviews. Interviews were not transcribed. Themes were then developed into categories and clustered into central themes which were identified as the factors. The process was iterative and data was revisited several times to ensure that the themes were reflective of the original data and experience (Fereday & Muir-Cochrane, 2006).

3.8 Limitations of Study

Due to the small sample size and the qualitative nature of the research, the results cannot to be generalised for the sector. Further, due to the large variety of different types of companies with different service offerings, there may be differences between the sub-categories within the sector. This research study is not able to reliably identify these differences due to the small sample size.

The study also relies on the respondents being truthful. This cannot be guaranteed as there is always a possibility that a respondent withholds information due to confidentiality or other reasons, or supplies untruthful information. While attempts are made to guarantee respondents confidentiality and anonymity, as well as to verify information through other sources such as documents and reports or through clarification questions, there is no way to guarantee all responses are truthful.

3.9 Validation and Reliability

Validity refers to the truthfulness of findings, whereas reliability refers to the stability of findings (Whittemore, Chase, & Mandle, 2001). According to Lincoln and Guba (1985) external validity refers to the degree of transferability of the findings, internal validity refers to the credibility of the findings, and reliability refers to the dependability of the findings.

A process of verification was used to ensure reliability and validity. Verification is the process of checking, confirming, making sure, and being certain (Morse et al., 2002). It refers to the mechanisms used during the research process to incrementally contribute to ensuring reliability and validity (Morse et al., 2002). The iterative process together with the simultaneous data analysis process allowed for verification of concepts, testing of new concepts, and checking and rechecking of data to maintain reliability and validity (Morse et al., 2002).

A challenge with maintaining validity and reliability is the potential for researcher bias (Hancock et al., 1998; Johnson, 1997; Malterud, 2001; Merriam, 2002). Researcher bias results from selective observation and selective recording of information, and to allow the researcher's own personal views to affect how the data is interpreted (Johnson, 1997). Reflexivity was used as a technique to combat researcher bias. It requires a researcher to actively engage in critical self-reflection and to be self aware of the role they play in the research process (Johnson, 1997).

3.9.1 External validity

Due to the nature of the study being qualitative, the degree of transferability is limited. The data would be only transferable insofar as it provides a general guide as it would not be adjusted for the unique nature of the different organisations. The results would therefore only be transferable insofar as the user can adjust for the unique context within which the results will find relevance (Malterud, 2001).

3.9.2 Internal validity

There are different interpretations to internal validity. According to Malterud (2001) internal validity refers to whether the study investigates what it is meant to. Johnson (1997) describes internal validity as the degree to which a researcher is justified in concluding that an observed relationship is causal.

Maxwell (1992) however argues that the descriptive, interpretive and theoretical validity are more useful concepts of validity in interpretive qualitative research.

Descriptive validity refers to the accuracy in reporting facts (Johnson, 1997; Maxwell, 1992). This was maintained in the research through the use of a semi-structured questionnaire which allowed for probing of deeper information and examples. Where possible, multiple respondents from one company were interviewed to get different views on similar information. Interviews were also recorded to allow for accurate reflection of respondents views in the analysis. In some instances, further reports were provided by respondents which allowed for triangulation of data.

Interpretive validity refers to accurately portraying the meaning attached by participants to what is being studied (Johnson, 1997; Maxwell, 1992). This was maintained by conducting face to face interviews for most of the interviews, in an environment suitable for the respondent (mainly at their offices). This enabled the researcher to observe the respondents body language and to listen to their expressions to be able to gain a deeper understanding of meaning when interpreting results (Johnson, 1997). The results also use actual language from respondents to verify findings. Reflexivity was also used by the researcher to avoid researcher bias as far as possible (Johnson, 1997).

Theoretical validity refers to the degree that a theoretical explanation developed from the research study fits the data. The findings are validated by literature, and the semi-structured interview questionnaire was informed by outcomes from the

literature to ensure that the interviews result in data that supports the research question.

Although the research questionnaire was amended and adapted to improve reliability and validity as the study progressed (Morse et al., 2002), the main elements of the research questions were maintained.

3.9.3 Reliability

The relevance of reliability in qualitative research is disputed, with arguments that the ability to replicate a study or maintain consistent results is a construct of quantitative research and not qualitative research (Golafshani, 2003). The aim of qualitative research is to gain deep understanding based on views at a point in time. Therefore if reliability as defined by ability to replicate a study were a measure of quality, it would result in the qualitative research deemed to be no good (Golafshani, 2003). Lincoln and Guba (1985) suggest that in qualitative research validity cannot be established without reliability and therefore proving validity is sufficient to establish reliability.

If reliability is equated to dependability and consistency, then the question of truthfulness and the consistent application of the research tools arises as a measure of reliability in qualitative study (Lincoln & Guba, 1985). The researcher attempted to maintain reliability in this context by using the same core elements of the research instrument in all interviews, triangulation of data with reports and multiple respondents from the same company where possible, as well as ensuring that respondents had some knowledge about the topic before the interviews were conducted and were of a senior enough level to have sufficient experience and knowledge of the sustainability practices within the company.

-

4 RESEARCH FINDINGS AND DISCUSSION OF RESULTS

4.1 Introduction

This chapter presents the results from the interviews conducted. The results are also discussed and analysed with reference to the enablers and barriers also identified in the literature review. The chapter concludes with a summary of the findings and recommendations.

The structure of this section is as follows:

1. A discussion on the respondents included in the study.
2. A summary of the levels of success in adoption and implementation of corporate sustainability strategies based on the interviews conducted. This provides the context for the analysis of the factors identified through the interviews.
3. A summary and discussion of the factors that influence the adoption and implementation of corporate sustainability strategies based on the interviews conducted.
4. A summary and discussion of the key factors that were identified as enablers and barriers based on analysis of the factors identified, and their application within the different companies represented.
5. Conclusions and recommendations arising from the research.

4.2 Respondents

A total of 19 responses were included as part of this study, representing 11 different companies in the ICT sector in South Africa. Semi-structured interviews were conducted with 18 respondents, with one respondent choosing to respond by email due to availability constraints. 18 respondents were directly associated with specific

companies in the ICT sector. One respondent was from an industry body and was included as a means of triangulation and verification of the data.

All of the respondents were at senior management or executive level and were involved in some level of management of sustainability. Many respondents requested some level of confidentiality and this posed a challenge for analysis. Consequently company names have been excluded, and all names and titles of respondents have been excluded. Further, direct quotes have not been attributed to individuals in order to maintain confidentiality.

A summary of the sample is included in Table 3 below:

Table 3: Summary of Respondents

Company	Sub-sector	Level of Respondent
A	Broadcaster	Executive
A	Broadcaster	Executive
A	Broadcaster	Executive
B	Broadcaster	Executive
B	Broadcaster	Executive
C	Broadcast Platform	Executive
D	Telecommunications	Senior management
E	Telecommunications	Senior management
F	Broadcaster/Media	Executive
F	Broadcaster/Media	Executive
F	Broadcaster/Media	Executive
G	Broadcaster/Media	Executive
G	Broadcaster/Media	Executive
H	Telecommunications	Executive
I	IT Hardware and services	Senior Management
J	Software Engineering and Broadcast Technology	Senior Consultant

Company	Sub-sector	Level of Respondent
K	Broadcaster	Senior Management
K	Broadcaster	Senior Management
L	Industry Body	Executive

The sample achieved skews towards broadcasting and therefore does not provide a full representation of the ICT sector. This was largely due to availability of respondents, and is probably also as a result of an element of researcher bias in the sampling since the researcher is in the broadcast sector.

However, with a total of 18 respondents and 11 companies there is sufficient level of data to identify themes and draw conclusions related to the research problem.

4.3 Context: Assessment of Levels of Success

To provide context to the discussion, it was necessary to gain some understanding of how successful the companies included in the research were with regard to corporate sustainability strategy implementation. Not all companies included in the study produced sustainability reports, and therefore this was excluded as a means of assessment. Respondents were therefore asked to provide some level of assessment of how successful they believe they were in the adoption and implementation of corporate sustainability strategies in their companies.

This context was important to assess the factors that they believed contributed to the success or challenges they faced in adoption or implementation of corporate sustainability strategies within their companies depending on their perception as to whether their companies were successful or not at corporate sustainability.

All the respondents interviewed indicated that they had adopted some level of corporate sustainability strategy within their companies. Levels of success amongst

respondents were generally described as “limited”, “average”, “good, but could be better” and “very good, but could do more”.

A summary of the levels of success achieved is provided in Table 4 below. Where there was more than one respondent from a company, the description is based on the researcher’s own assessment based on the aggregate of the interviews conducted. No critical analysis of the validity of these assessments was conducted and full reliance was placed on the assessment provided by the respondents.

Table 4: Respondents Assessment of Levels of Success Achieved

Company	Estimated Level of Success	Comment
Broadcaster (G)	V. Good	“We have done pretty well. This is built into our strategy so it becomes part of almost everything we do”
Broadcaster (B)	Good	“We do a lot, but there is always room to do more. Overall, I think we are doing a good job in terms of social responsibility initiatives but we could probably do more on the environmental aspects”
Broadcaster (F)	Average	“Everyone in the business does a bit, and is aware of the need. However, we don’t have a co-ordinated approach...if we did, we could do a lot more”
Broadcaster (A)	V. Good	“Our primary focus is not profit, it is about benefit to the public. Social responsibility is built into the DNA of our business”

Company	Estimated Level of Success	Comment
Broadcaster (K)	Good	"We are results driven. We do what we need to do to comply."
Telecommunications (D)	Good	"We do a lot but we can definitely improve. We have learnt lessons..."
Telecommunications (E)	Good	
IT Company (I)	V. Good	"We are doing a lot on both the environmental side and the social responsibility side. We have dedicated people driving these and it is built into our business approach, even in how we deal with our clients"
Software Engineering Company (J)	Limited	"Its about compliance and risk. We focus on environment and education, but it's all about managing our risk"

4.4 Factors influencing ability to adopt and implement corporate sustainability strategies

The interviews were analysed to identify key themes or factors that influence the level of adoption and implementation of corporate sustainability strategies amongst the companies represented.

A total of 8 factors were identified through the research. A distinction is made between internal and external factors, with a total of 6 internal factors and 2 external factors. Internal factors refer to those factors that are within the control of the company itself. These are generally company specific and influenced by decisions taken by the company. External factors refer to those factors which are outside of the

control of the company. These are generally industry or country specific, and are influenced by the market itself. For each factor, there are a number of underlying contributing factors that were also identified through the thematic analysis. These are summarised in Table 5 below.

Table 5: Factors Identified From Research

Key Factors	Contributing Elements
INTERNAL FACTORS	
<i>Clear and focused strategy</i>	<ul style="list-style-type: none"> • Clear understanding of what corporate sustainability means • Clear areas of focus • Time horizon • Monitoring and evaluation
<i>Shareholder support</i>	<ul style="list-style-type: none"> • Shareholder expectations • Shareholder values
<i>Organisational support</i>	<ul style="list-style-type: none"> • Management support • Employee support
<i>Integration across the organisation</i>	<ul style="list-style-type: none"> • Integration of sustainability strategy into mainstream business strategy • Systems and processes
<i>Motivation to act</i>	<ul style="list-style-type: none"> • Organizational culture and values • Business case • Risk management
<i>Effectiveness of communication</i>	<ul style="list-style-type: none"> • Reporting and measurement • Stakeholder identification • Reputation management

Key Factors	Contributing Elements
EXTERNAL FACTORS	
<i>Stakeholder pressure</i>	<ul style="list-style-type: none"> • Policy and regulatory requirements • Shareholder pressure • Reputation
<i>Market pressure</i>	<ul style="list-style-type: none"> • Customer demands • Peer pressure/industry competition

4.4.1 Clear and focused strategy

Description

The focus of the organization in terms of sustainable development must be clearly defined. There are numerous ways in which a company can approach sustainable development, especially in regard to corporate social responsibility initiatives. It is important that from the outset there is a clear focus that guides the approach that the company takes, and the areas which it will focus on. Once this is clear, it becomes easier to motivate and adopt a strategy that can be integrated with the overall business strategy, as well as to measure and evaluate progress.

Discussion

There is no clear definition of corporate sustainability, and this was highlighted by the various definitions provided by respondents when asked about their understanding of what corporate sustainability means. This is not unexpected considering that it is a complex term which is an amalgamation of different concepts (Wilson, 2003). They referred to a wide range of concepts and references in trying to define corporate sustainability and the basis on which their company approaches corporate sustainability strategy. Without a clear definition it is difficult to develop a clear strategic focus (Baumgartner, 2014). Companies need to be able to define clearly

what corporate sustainability means for them. In other words in the absence of a clear definition, sustainability needs to be defined based on the companies' unique perspective and context (Marshall & Toffel, 2005). This allows them to be more effective in being able to define a strategy that is suitable for their business. Whereas those that had no clear definition highlighted that their approach tended to be ad hoc and opportunistic and often resulted in short-term impact.

“We can’t do everything, we have to pick our area of focus. For us, its education, and everyone in the business is aware of this. This is where we can have maximum impact...we don’t have much impact on the environment so it makes no sense to put too much effort there.”

Similarly, a clear focus (irrespective of whether this included a wide or narrow range of sustainability initiatives) was important to ensure initiatives were sustained over a long period of time. A clear time horizon needs to be defined to ensure that initiatives are sustainable, and are given sufficient time to make a real impact. The longer the time horizon the more ambitious the goals can be (Baumgartner, 2014). Sometimes this is in conflict with the planning horizons of the company itself or for the sector. (Baumgartner, 2014) suggests that any sustainability strategy, as per any business strategy, needs to identify the desired goal and an effective date to achieve the goal by.

“We focus only on short-term...very reactive. And then projects don’t last. We need a long-term strategy that makes a difference to people’s lives. We only focus on what benefits us in the short-term.”

In particular, where there was a clear focus, companies were better able to put in place systems and processes to support the sustainability initiatives. This included

putting in place appropriate structures and measurement and reporting processes to ensure that progress against the strategy is monitored and evaluated on a regular basis. This view is supported by (Marshall & Toffel, 2005) who argue the definition of sustainable development is too wide and this makes it difficult to operationalise within companies or to measure progress against. If the sustainability goals are not clearly defined then it creates difficulty to co-ordinate functions within the organisation to deliver on these goals (Windolph, Harms, & Schaltegger, 2014).

“We define our areas of focus clearly and put the tracking systems in place. Then when I need information for a report I am able to get it ... even the smallest contribution I will be able to include in my report.”

A clear and well-defined strategy is also necessary to determine where to allocate resources. Corporate sustainability initiatives take time, effort and money to execute. Defining a clear strategy makes it easier to determine how many resources will be required and where these resources should be deployed. Depending on the focus of the strategy, different corporate functions may be required to manage the delivery of the strategy (Windolph et al., 2014). For example if the focus is on reputation and stakeholder management, then the PR or corporate affairs function may be tasked with the management of sustainability initiatives (Windolph et al., 2014).

“Our goal is to make a difference to local communities. We utilise funding from the business to build sustainable communities. That is our end-goal.”

4.4.2 Shareholder support

Description

Implementing sustainability projects takes commitment of resources (both financial and management time), and therefore shareholder support is critical as this cannot always be justified by a clear business case. Shareholders also set the strategic direction of the company and the investment approach through their representations on the Board. If they are supportive of the strategy this enables management to have the flexibility to be able to make investments in corporate sustainability initiatives.

Discussion

Shareholder support was identified as one of the most critical factors to drive adoption of a corporate sustainability strategy. Many respondents indicated that the approach taken and the level of investment is primarily dictated by the shareholders. In some cases, this manifests as pressure from shareholders onto management to develop, reduce or enhance the company's corporate sustainability strategy. The first step must be the willingness of top-level leadership to implement a corporate sustainability (Baumgartner, 2014).

“Our corporate sustainability focus is filtered from our shareholders through our Board. There is a strong emphasis at shareholder level on education, and this filters down right through to staff. We have our own areas of focus but we take the lead from our shareholders.”

There seemed to be a direct link between the company's ability to adopt and implement a sustainability strategy and the shareholders own values and

expectations. In fact, ethical leadership has been identified in the literature as one of the internal drivers for the successful introduction and institutionalisation of change (Lozano, 2015). Shareholders that have issues of sustainability built into their own value systems and strategies expect management to deliver not only financial returns but also on corporate sustainability. This enhances management's ability to embark on new sustainability projects or to expand their strategy and the level of support received from shareholders, especially when it is difficult to justify these purely in financial terms. At the same time companies that had better integration into their overall business strategy and across their organization highlighted that they are able to achieve this because they have the support of their leadership. Leadership support is a key driver for implementation of sustainability strategies (Lozano, 2015).

“We have a strong history of corporate social responsibility at shareholder level. They expect us to have this included in our business strategy anyway. This does not mean we don't have to deliver financial returns to our shareholders...”

Shareholder support for management is also required. Some respondents argued that while shareholders set the tone and approach, and may even apply pressure onto management, they also need to be fully supportive of management to get on with it. It is not always possible to collect the data, or measure the impact particularly in the ICT sector where the impact may be indirect, and therefore management needs the flexibility to make decisions and the trust of the shareholder that all elements of the Triple Bottom Line will be taken care of.

“One of our biggest enablers is that we have autonomy...”

Others however, argue that if there is not sufficient attention applied at Board and shareholder level then corporate sustainability will always be sacrificed in favour of higher profits. This may however, be linked to the incentive structure of the company as well as the underlying values of the company. Although most Boards have committees to provide oversight of sustainability activities, these are often only related to governance requirements and ensuring compliance. However when Boards start to integrate sustainability into the strategic role of Boards then they are able to take a proactive role and set the strategic direction for sustainability initiatives (Klettner, Clarke, & Boersma, 2014).

“The discussion at the Board level is about compliance. At management level it is about sustainable impact.”

4.4.3 Organisational support

Description

If shareholders are mainly responsible for setting the direction and approach, then management support is critical to define a clear strategy, and employee support is critical to implement the strategy. There has to be complete buy-in of the strategy across the organisation. Once there is buy-in, corporate sustainability becomes a natural part of the organisation day to day activities.

Discussion

Management and employees need to work together to implement the corporate sustainability strategy. It needs to be broken down into manageable projects that are implemented at various parts of the organisation, or it needs to be given the necessary focus within each business unit or division. This can only be achieved if everyone in the organisation understands the strategy and believes in it.

“Leadership support is critical. They must lead by example and there must be consistent communication...”

One respondent highlighted that increasingly initiatives are being discovered within the organization that are being driven at lower levels in the organization because employees understand and support the sustainability strategy, and more importantly believe that they can make a contribution to the success of the strategy. Employee’s understanding of corporate sustainability is influenced by the culture of the company and employees awareness of the company’s corporate sustainability practices (Linnenluecke, Russell, & Griffiths, 2009). A combination of high awareness of sustainability practices and integration of indicators into performance management results in a more holistic understanding of corporate sustainability amongst employees (Linnenluecke et al., 2009).

To gain support across the organisation, there needs to be a well-defined strategy and an effective communication of the strategy across the organisation. Staff needs to understand how this affects them, and how it benefits the company. Successful implementation and integration cannot be achieved without the full buy-in of staff (Baumgartner, 2014). There are a number of ways in which staff buy-in can be achieved including linking sustainability to incentives, incorporating sustainability into the values of the organisation, allowing staff to be involved in setting the sustainability agenda, as well as screening for particular values and behaviours at the recruitment process itself. In fact the adoption of corporate social responsibility initiatives can in itself be a motivator for staff to join the organisation or stay with the organisation, and can even have a positive impact on overall staff performance (Choi & Yu, 2014; Mueller, Hattrup, Spiess, & Lin-Hi, 2012).

“A key challenge for us is that employees don’t have line of sight of their direct contribution.”

Incentives and rewards in particular can be a useful tool to get employee support (Seidel et al., 2010). This not only motivates everyone across the organisation to ensure implementation of sustainability initiatives, but also highlights the level of importance placed on sustainability across the organization (Seidel et al., 2010). In this research, organisations that built sustainability to some extent into the performance management system of the organization tended to have more success at implementation.

4.4.4 Integration across organisation

Description

Integration across the organisation refers to the need to align and integrate the strategy with the systems and processes in the organization. Development of the strategy is not enough to ensure success – the necessary tools need to be made available to enable implementation of the strategy and reporting on progress. If the key systems and processes in the organisation are aligned, the strategy is much more easily integrated into the day to day operations of the business. This results in better implementation of the strategy, and a more responsive organisation. Ultimately corporate sustainability should be integrated into the business strategy of the organisation.

Discussion

In this research, companies that were able to ensure integration across the organization tended to rate the implementation of their strategy as very good. They highlighted that the more integration they managed to achieve, the more buy-in they

received from all internal stakeholders, and the better they were able to integrate the sustainability strategy into the overall strategy of the organization. Integration was not only limited to financial and reporting systems, but also includes performance management systems and processes, strategy development and financial planning processes, as well as management oversight systems and processes.

“...integrated into our day to day processes, even when we approach clients.”

It is important to note that although many respondents indicated that they could improve their level of integration across the organisation, they did not necessarily believe that it was necessary to have a dedicated person driving sustainability across the organization to achieve the alignment, although this could be one way. In fact, some respondents highlighted that making one person responsible could have the opposite effect by relegating the sustainability strategy to be a separate strategy from the business strategy which becomes a barrier to integrating it into the overall business strategy. Most respondents agreed, however, that it was more important to ensure that it was given the necessary attention at an executive level, and was considered part of the business strategy rather than a separate strategy.

“we don’t have a separate CSI manager ...it’s in our strategy, built into the way of business...part of what we do.”

“...differentiate between a role and a process. We have a process to manage and report on our activities – we don’t need a dedicated role.”

In order to successfully develop and implement sustainability activities, it needs a combination of organizational structure, management processes, and org culture to get an integrated view of sustainability management (Baumgartner, 2014). This also

requires different levels of focus at different levels of management to identify, implement, control and review sustainability activities (Baumgartner, 2014).

4.4.5 Motivation to Act

Description

There are a number of different reasons that companies are motivated to adopt a sustainability strategy. These include ethical reasons, financial reasons and compliance reasons. However companies that act because of ethical reasons see to be more successful at the adoption and implementation of corporate sustainability initiatives. They are able to naturally drive a culture that embraces the idea of corporate sustainability (i.e. motivation beyond profit) and as a result gain buy-in across the organisation and with external stakeholders. This makes it easier to motivate investments, and to implement new initiatives. In the ICT sector this is particularly important as the impact of ICT companies is often not direct but indirect, and difficult to quantify in terms of direct financial benefit.

Discussion

There were several different motives for companies to adopt and implement corporate sustainability strategies, and this was a major contributing factor towards the scope and approach to their strategy. In particular three different motives were identified based on the interviews conducted.

1. Profit driven

Some respondents defined corporate sustainability in the context of delivering shareholder value and ensuring commercial viability through long-term profit generation. For these companies, corporate sustainability was primarily about

financial success, and any initiatives related to corporate social responsibility or environmental sustainability had to have a direct link to profit. This is characterized either by the ability to open up new market opportunity (new products and services) or by addressing risks to the future profitability of the business that may materialize if sustainability issues are not addressed. The business case is primarily about contribution to profit (or reducing losses).

“Our focus is profit. As long as we operate within the requirements of the law, we will always go for profit.”

For companies that fall into this category, the main elements of their corporate sustainability strategy included:

1. Risk management
2. Compliance
3. Stakeholder management
4. New business opportunities

The initiatives undertaken as part of these strategies were mostly directly aligned to the specific business – in other words, initiatives were designed to drive direct benefit back to the company. For example, initiatives to drive community upliftment focused on developing skills within the community that could directly benefit the company or specifically satisfy key stakeholders that had material influence on the short-term or long-term success of the company; or the risk of non-compliance may result in fines which reduce profitability; or that by investing in developing a new environmentally friendly product they could open up a new market opportunity.

Success for these companies was defined based on how much the initiatives they undertook have enhanced or impacted their profitability and their ability to provide returns to their shareholders on a continuous basis.

2. Values driven

Several respondents defined sustainability in the context of being a “good corporate citizen”. This relates to ensuring good governance and accountability to all stakeholders, and in particular not to be seen to be exploitative as it executes its business. Companies falling in this category undertake corporate social responsibility or environmental sustainability activities not because they have to, but because they want to. They strive for a “win-win” relationship with all stakeholders. The business case is about doing the right thing, which provides an indirect benefit to the profit line.

“We want to be a caring corporate. It comes from our values. It’s about principle. We do things because we want to, because we believe we can add value to the country and to the communities we operate in. Yes, we know we get benefit indirectly but this is not the only reason we do it.”

For companies that fall into this category, the main elements of their corporate sustainability strategy seemed to include:

1. Community and society upliftment in general
2. Industry upliftment
3. Social activism
4. Regulatory compliance and good governance
5. Brand value

The initiatives undertaken as part of these strategies are not always directly linked to the business activities of the company concerned. For example, community upliftment initiatives focused on supporting national initiatives around drought relief or education, or supporting local communities to clean up the litter in their community, or driving consumers to action around environmental awareness, or helping to reduce crime. None of these initiatives may necessarily have a direct business benefit for the company itself. The primary goal is to be responsive to the needs and concerns of their customers, which will indirectly drive brand value and loyalty and maintain their relevance to their customers.

“if it is important to my audiences, then it is important to me”.

This approach was particularly prevalent amongst 4 of the broadcasters included in the research, with each of them highlighting that they have a unique ability to influence perceptions and behavior, and therefore they have to use this power responsibly to drive positive change. At least one other respondent indicated that due to its leading market position it has a unique ability to influence positive change amongst its customers.

These companies defined their level of success based on their ability to make a real difference and remain relevant to their customers on an ongoing basis, while still maintaining their brand relevance and providing returns to their shareholders.

3. Compliance driven

Some respondents defined corporate sustainability in terms of good governance and compliance. For these companies, their corporate sustainability strategy is driven by the regulatory and fiduciary reporting

frameworks and requirements (such as King 3 and BBBEE). Companies that fall into this category undertake corporate social responsibility or environmental sustainability activities largely because they have to, or because they believe that they have a fiduciary obligation to do so. The business case is about staying in business and eliminating costs of non-compliance, which provides a direct benefit to the company.

For companies that fall into this category, the main elements of their corporate sustainability strategy seemed to include:

1. Risk management
2. Regulatory compliance and good governance
3. Reporting
4. Stakeholder management
5. Reputation management

These companies defined success by their ability to ensure compliance with their regulatory and fiduciary obligations on an ongoing basis, while still providing returns to their shareholders.

While all these motivations include an element of ensuring returns to shareholders, companies that were values-driven were able to do significantly more. The idea of “beyond profit” was built into their culture and values, and therefore it was easier for them to mobilise the organisation and key stakeholders around sustainability initiatives. This view is supported by Graafland and Van De Ven (2006) who show from their study of 111 Dutch firms that a strategic motivation is not enough to guarantee CSR activity, while a moral motivation is more likely to result in a stronger participation in CSR activity.

Two key elements that stood out amongst these companies was their ability to innovate around ways to drive sustainability initiatives without necessarily seeking additional financial resources, and their ability to pursue projects that have an indirect benefit to them. This might be explained by the fact that because they undertake social responsibility initiatives as a principle issue, they do not always have to justify the investment on financial terms. There is an inherent belief that the indirect benefits to the profit line will flow; that being ethical is not necessarily incompatible with business strategies to maximise profits (Husted & Allen, 2000).

“We have never been asked to produce a business case. Maybe that will change, but everyone knows that we need to do this.”

“In the South African context, there is really no need to motivate for CSI. There are so many problems in the country and there are regulatory requirements. I don’t need to provide a business case, but I have put in place reporting and metrics to monitor progress.”

However, despite there not always being a need to justify investments through a clear business case, companies that indicated that sustainability was built into the values of their organization also seemed to be able to do more with less. They highlighted that lack of financial resources was not always a constraint, as there was a natural tendency across the organization to find ways to deliver on the projects they were passionate about because they believed in it.

“Yes we can do more...it’s not about money. There are other ways...we have airtime...we can use our programming...if we believe in something we just need to be innovative.”

This research identified three main motives and outlined some of the impacts these motivations have on the approach taken by the company. In the literature review a total of 6 motivations were outlined based on a review of different literature. A number of studies have also focused specifically on the motivations for companies to embark on social sustainability strategy development and implementation. In summary, it is clear that the motivation to act is a key driver of organisation behaviour in regards to corporate sustainability strategy. Ganescu (2012) argues that different CSR strategies are suitable for different companies, and that companies choose their strategy based on the attitude of the organization towards sustainability values and on their degree of implementation, resulting in a passive, reactive or proactive strategy. Windolph et al. (2014) argues that the motive to act (be it to gain legitimacy amongst stakeholders, market success or internal improvement) determines which corporate functions take the lead in driving implementation and management of the sustainability strategy.

4.4.6 *Effective communication*

Description

To successfully implement the strategy, it needs to be effectively communicated to all stakeholders. This includes communication internally and externally. This enables the organization to get feedback from stakeholders, as well as to gain buy-in and support from all stakeholders. In order to communicate effectively, however, there needs to be information available – different stakeholders require different pieces of information. Therefore data collection and measurement is critical in order to clearly articulate what is being done and the impact of the initiatives undertaken.

Discussion

Most respondents interviewed highlighted that if they were able to communicate better, they believed that they would get more support for and benefit from their

sustainability initiatives. Sustainability strategies need to have a holistic communication plan – there are multiple stakeholders that would benefit from knowing about the sustainability initiatives, and the company would benefit from letting them know (Dawkins, 2005). The communication is not limited to just PR or regulatory reporting. Internal reporting to staff, management and shareholders is critical to gain buy-in and evaluate progress; communication to regulators and policy makers is critical to help shape the regulatory landscape; communication to customers enables improved brand loyalty as well as opportunity to identify opportunities to collaborate and develop new products and services.

“We pro-actively provide reports to the Board. We make sure we collect the data points so we can proactively report. This ensures we get buy-in.”

However, one of the main challenges with improving communication is collecting the information that needs to be communicated. In particular, there is no easy way to understand the secondary impact of what ICT companies do. To put in place the data collection and measurement systems will be very costly and is likely not worth the investment.

“We know we do a lot more ...but we don’t collect the data so we can’t report. And how can we measure the indirect impact of what we do...it’s huge. If we undertake an initiative to bring awareness around climate change and we get 100,000 people to actively do something about it, how would we know – we can’t measure that.”

A particular issue that was evident from the interviews is that many of the companies that are values-driven do much more than they report on. However, many of these initiatives are about principle or making a difference and there is no desire to “brag”

about it. While these companies acknowledge that they could gain a lot by communicating more effectively to key stakeholders, they believe that by doing this they would go against their values and lose integrity and would also detract resources towards communication, and away from the actual work to be done. This view is to some extent supported by Baumgartner (2014) who found that companies may be reluctant to communicate as this may create negative perceptions about their intentions and attract criticism.

“We can gain far more if we were willing to take the credit.”

“If it’s about creating perceptions, then we will be caught out. It needs to be real...it needs to be ingrained in the culture. It’s not about blowing our trumpet.”

At the same time though, being able to prove impact was a key driver to being able to release more resources to do more.

“Once we were able to show some success, we gained more support and more resources were allocated to do more. It is a difficult one...”

Overall, companies that had good communication were perceived to be doing more than their competitors. Dawkins (2005) finds that communication is an underutilised tool, and can be equally powerful in being able to build credibility amongst internal and external stakeholders. However it should be included in mainstream communications and have a holistic communication plan in order to be effective (Dawkins, 2005).

4.4.7 Stakeholder pressure

Description

South Africa as a country has a unique context with many socio-economic problems. This manifests itself through legislation such as BBBEE and regulations such as local content quotas and licence conditions to bridge the digital divide which compel business to make a vital contribution towards the development of the country. This not only has the effect of driving action from companies, but also to a large extent directs where and in which areas this action should take place. At the same time, the socio-economic challenges are vast and policy makers and regulators are increasingly applying pressure on companies to make a higher contribution.

Discussion

All respondents indicated that one of the key drivers to act was the introduction of legislative requirements on BBBEE. However, many also indicated that while this provides the impetus and direction, it does not dictate the how and this is where companies need to be innovative. At shareholder level there is a definite focus on compliance because the risk of non-compliance is high. Therefore, even where shareholders are not inherently inclined to invest in sustainability, the pressure from stakeholders drives them to act. However, some organisations indicated that once they were able to show some success and show the business benefit, executives and shareholders started to realise that there could be value in the investment. This is supported by Dunphy's model which suggests that companies progress towards corporate sustainability goes through phases from rejection to ignorance to compliance to efficiency to proactive strategy to corporate sustainability (Holton, Glass, & Price, 2010).

“BBBEE opens the door, but what we do is in our hands. We can choose to just do a number of ad hoc projects and tick the box, or we can make the investment work for us.”

“achieving project success internally is a virtuous cycle, as people want to do more when they achieve successes...”

At the same time, respondents indicated that within their subsectors they have unique roles to play to, for example, create awareness as broadcasters or bridge the digital divide as telecommunication companies, and these do get reflected in their licence conditions and regulatory requirements. Broadcasters, for example, have regulatory quotas on how much local content they need to broadcast and telecommunication companies have licence conditions that require them to connect schools or create universal access to connectivity. Further, they went on to say that they recognise that they use public assets (national frequency spectrum) and therefore they have obligations that come with this.

A key finding of this research is that many companies indicated that they have or are starting to move to beyond just compliance with regulations and that there is a recognition that while legislation and regulation creates the obligation, there is a business benefit that arises from effectively implementing the compliance requirements. They also highlighted that regulators are constantly looking to add to the obligation and therefore there is a need to be more proactive to avoid further regulatory obligations. This view is supported by Martin and Rice (2009) who found that companies try to become more proactive to either manage the risk of further “command and control” policies or be gain first mover advantage. This could also yield important benefits to gain support from key stakeholders such as communities and influential policy makers (Hoffman, 2005).

“Initially it was just about compliance, but now it is strategic. Even if the quotas were not there, we would still do local content.”

4.4.8 Market pressure

Description

Customers (including audiences) place increasing demands on companies to do more in terms of environmental management and corporate social responsibility as they become increasingly aware of the issues faced in the country and the world. This pushes companies to do more in terms of corporate sustainability to benefit their own companies and enable others to do more in their specific areas of influence. The ICT sector is also a critical enabler for many companies to achieve their own sustainability goals, and this pushes companies to develop new products to help their customers. At the same time, competition drives all players to do more to try to gain competitive advantage.

Discussion

Most broadcasters identified pressure from audiences as a critical driver of their corporate sustainability initiatives. As audiences are increasingly connected and aware, they become increasingly demanding that companies they interact with are socially responsible and contribute to the upliftment of communities. They also rely on broadcasters and media companies to provide them with information and expose issues in their communities or in their environment, and to help them solve them by being able to mobilise action.

“This is important to our audiences and they are becoming increasingly aware. If we are to maintain our relevance to our audiences we have to reflect

their interests, needs...what's going on in their communities...and we have to be part of the solution as well."

Other companies also identified that they need to be responsive to their customer needs and this pushes them to develop new products, or to improve their own sustainability practices to secure business from their customers. As customers aim to improve their own sustainability practices, they increasingly rely on digital technology and services as an enabler. This pushes companies in the ICT sector to improve their own products by developing new environmentally friendly solutions for their customers or solutions to make their customers processes more efficient. This includes increasing connectivity to enable remote working, businesses to transact remotely, and to enable economic development by enabling rural communities to transact via mobile phones.

"With our clients it's a bit of a push and pull. They demand solutions from us, and we push our clients to be a good corporate citizen. So it is not always about money but finding the right solution for our clients."

"The use of mobile telephones...represents a unique opportunity to support the growth of cashless societies and help our customers to overcome some of the hurdles that exist in accessing and affordably using traditional banking services."

The level of industry activity around sustainability initiatives was also highlighted as a key motivator. Several respondents indicated that if their competitors are undertaking initiatives around sustainability, then they are more likely to do so as well, or more likely to reassess their own initiatives. This has the effect of not only increasing the amount of activity in the sector, but also increasing the quality of the initiatives undertaken.

“We are all doing something but if one of our competitors is doing something innovative, then we look at what we are doing and what we could do better so we are not left behind.”

This is linked to competitive advantage, with many respondents highlighting that increasingly social responsibility and environmental initiatives can be a source of competitive advantage to retain customers and build brand loyalty in a competitive market place. At minimum though, it is a necessity to get a seat at the table.

“If we are seen as a corporate that cares, and that we can make a difference then our clients stay with us.”

Customer demands was also identified by Lozano (2015) as a key driver of corporate sustainability activity. In his research, however he found that peer pressure was a low motivator (Lozano, 2015). A possible reason for this variation is that his research was conducted amongst industrial companies with a very business to business focus, while the companies included in this research are very engaged directly with consumers. Their activities are therefore very visible to the public and to their competitors, and they are judged often in real-time by their customers relative to their competitors.

4.4.9 Summary and Conclusion

In summary, a total of 8 factors were identified that have an influence on the ability for companies in the study to adopt and implement corporate sustainability strategies in South Africa. All of the factors are consistent with the literature findings, which through various studies, have identified similar factors. These are summarised in the

table below. The level and nature of influence may differ based on the unique context of each company, the industry and the country. However, the scope of this research did not aim to determine the relative level of influence.

Table 6: Summary of Factors Identified vs. Literature Review

Key Factors	Contributing Elements	Factors Identified in Literature
INTERNAL FACTORS		
<i>Clear and focused strategy</i>	<ul style="list-style-type: none"> • Clear understanding of what corporate sustainability means • Clear areas of focus • Time horizon • Monitoring and evaluation 	<ul style="list-style-type: none"> • A well-defined strategy with strategic targets (Seidel et al., 2010) • Organisational support across the business (Seidel et al., 2010) • Motivation (intrinsic and extrinsic) (Seidel et al., 2010) • Traceability through information systems that enable effective monitoring and data collection (Seidel et al., 2010) • Systems alignment (Grayson et al., 2008; Harmon, Fairfield, & Behson, 2009)
<i>Shareholder support</i>	<ul style="list-style-type: none"> • Shareholder expectations • Shareholder values 	
<i>Organisational support</i>	<ul style="list-style-type: none"> • Management support • Employee support 	
<i>Integration across the organisation</i>	<ul style="list-style-type: none"> • Integration of sustainability strategy into mainstream business strategy • Systems and processes 	

Key Factors	Contributing Elements	Factors Identified in Literature
INTERNAL FACTORS		
<i>Motivation to act</i>	<ul style="list-style-type: none"> • Organizational culture and values • Business case • Risk management 	<ul style="list-style-type: none"> • Values (Grayson et al., 2008; Harmon et al., 2009) • Stakeholder engagement (Harmon et al., 2009)
<i>Effectiveness of communication</i>	<ul style="list-style-type: none"> • Reporting and measurement • Stakeholder identification • Reputation management 	<ul style="list-style-type: none"> • Internal deficiencies (Harmon et al., 2009) • Stakeholder demand (Grayson et al., 2008; Harmon et al., 2009)
EXTERNAL FACTORS		
<i>Stakeholder pressure</i>	<ul style="list-style-type: none"> • Policy and regulatory requirements • Shareholder pressure • Reputation 	<ul style="list-style-type: none"> • Governance structures (Grayson et al., 2008) • Innovation (Grayson et al., 2008)
<i>Market pressure</i>	<ul style="list-style-type: none"> • Customer demands • Peer pressure/industry competition 	<ul style="list-style-type: none"> • Developing a network with other organisations (Grayson et al., 2008) • Policy framework and market certainty (Okereke, 2007) • Business case (Lozano, 2015) • Leadership (Lozano, 2015) • Market demand/customer demand (Lozano, 2015)

4.5 Enablers and Barriers to Adoption and Implementation of Corporate Sustainability strategies

In this section the factors which are barriers and those which are enablers are identified, based on the factors identified in the previous section. Although the research set out to identify a common set of factors that are enablers or barriers across the sector, two categories of results were determined:

1. Certain factors identified as enablers or barriers were largely common across respondents and can be generalized. These are mostly external factors and relate mostly to the adoption of sustainability strategies in the sector.
2. Certain factors identified are enablers for some companies and barriers for others. These are mostly internal factors and relate to largely to the ability to successfully implement sustainability strategies within companies.

Common Factors

Table 7: Enablers and Barriers Identified From Research

Enablers	Barriers
Defined policy and regulatory requirements	Lack of clear definition and standardisation of reporting
Increasing pressure from customers	Lack of measurement tools for second and third order impact
Industry competition/peer pressure	Insufficient communication to key stakeholders (at sector level)

These findings are consistent with the literature. In particular, Lozano (2015) identified that the key external drivers for corporate sustainability action in companies were reputation, customer demands and expectations and regulation and legislation. The findings of this research differ in that peer pressure was identified as a key enabler in this study, while in his study peer pressure was rated as a

secondary driver (Lozano, 2015). This is explained by the fact that this study skewed towards broadcasting which is a competitive space and the efforts of companies are very visible, whereas Lozano (2015) was conducted in the industrial sector which is mostly business to business and out of the public eye.

The findings also differ from the findings of Harmon et al. (2009) who identified insufficient stakeholder demand as a barrier. However, in this study stakeholder demand has been identified as the key enablers across govt. and regulators, customers and industry participants. This is explained by the market context of South Africa where there are clear socio-economic needs that are incorporated into legislative requirements, as well as by the fact that Harmon et al. (2009) study was conducted in 2009. Since then there has been a much greater awareness of the issues of sustainability.

The barriers identified seem to be sector specific and company specific, and therefore are not clearly identified in the literature that was reviewed. Company specific barriers are discussed separately below. However, since there seems to be sufficient market demand, the key barriers seem to be how companies adopt and implement the requirements, as well as how to effectively measure and report on the impact the sector has. From the interviews conducted, it is evident that the impact of sustainability initiatives (specifically social responsibility initiatives) is potentially much higher, but there is no effective means to measure this impact and report to stakeholders.

Company Specific Factors

Although a number of factors that influence the adoption and implementation of sustainability strategies were identified in the previous section, the following factors were identified as the key enabling factors for companies to be able to successfully

implement corporate sustainability strategies. These were the key differentiating factors between those companies that assessed their level of success as very good.

1. Clarity of strategy (supported by clear understanding of the motivation to act)
2. Shareholder support
3. Integration across the organization
4. Values and culture
5. Effective communication

Each of these factors has been explained in detail in the previous section. These findings are consistent with the literature. Seidel et al. (2010) identified that companies that successfully adopt sustainability practices if they have a well-defined strategy. Harmon et al. (2009) on the other hand identified that systems alignment, values and stakeholder engagement were critical success factors, and leadership was identified by Lozano (2015) as a key driver of success.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this section, the research problem and research process are recapped, and the conclusions of the research are outlined. These are linked to the original problem statement to confirm that the conclusions reached address the research problem. Recommendations are made to enhance the sustainability strategies of companies in the ICT sector in South Africa. The section concludes with suggestions for further research.

5.2 Summary of the research

5.2.1 The research problem restated

The purpose of this research was to identify the key barriers and enablers for the adoption and implementation of corporate sustainability strategies amongst ICT companies in South Africa.

5.2.2 The research process

Based on the literature review, two research questions were developed to answer the research problem. An interpretive qualitative research study was conducted to gain an understanding of the factors that influenced companies in the sector to adopt and implement corporate sustainability strategies in South Africa based on the experiences of respondents. 18 semi-structured interviews were conducted representing 11 companies in the sector. A thematic analysis was conducted based on the interviews and themes were identified to resolve the research problem.

5.2.3 Conclusions

There are 8 key factors that influence the ability of companies in the ICT sector in South Africa to adopt and implement corporate sustainability strategies in South Africa. These include internal and external factors.

Internal factors include having a clear and focused strategy, level of shareholder support, level of organisational support, level of integration across the organisation, the motivation to act and effectiveness of communication. External factors include level of stakeholder pressure and level of market pressure.

A key enabler for progress within the sector in adopting and implementing corporate sustainability strategies is the market pressure from customers and peers within the sector, as well as from the government in terms of legislative requirements. There is therefore sufficient demand from the market to ensure that corporate sustainability is given the necessary attention.

It also seems that there is already a lot of sustainability activity that occurs in the sector, but stakeholders aren't sufficiently aware of the level of activity because of lack of communication and a lack of understanding of the second and third order impact of the activities in the sector that have an enabling effect on other sectors and consumers directly. For example, by creating awareness and driving education, broadcasters make a significant indirect contribution to activate social change within communities; and similarly, by initiatives to bridge the digital divide and increasing connectivity, telecommunication companies make a significant impact on the economic development of small enterprises and in enabling entrepreneurship or

access to services. At a sector level, the economic value of the sustainability activities of the sector are not known.

Companies within the sector have achieved varying levels of success at implementing corporate sustainability activities. Key elements that have been identified from this research are required to be successful include having a clear and well defined strategy and focus, a clear motivation to act that is driven by an underlying ethical consideration, high levels of support from shareholders, high levels of integration of the sustainability strategy into the organisation, and an effective communication plan which includes the data to support the story of success. It is evident from the research that a key barrier to developing a well defined strategy is developing a clear definition for corporate sustainability. It is also evident that the motivation of the company to adopt corporate sustainability has a clear impact on the ability for the company to integrate sustainability into its core strategy which seems to be a precursor to success. This, however, is in turn driven by the underlying values and culture of the organisation which relies heavily on the approach of leadership, and in particular shareholders.

In summary, market demand and stakeholder pressure have created the impetus for companies in the sector to adopt and implement sustainability strategies. However, in order to understand the true impact of the sustainability activities of the sector there needs to be a clear reporting framework that cuts across the sector (or for each sub-sector) that includes all elements of sustainability, as well as a measurement approach to determine the second order effects of the sectors sustainability activities. Within the sector though, the level of success of each company is dependent on their specific approach and underlying motivation and values.

5.2.4 Recommendations

Based on the findings and conclusions, the following recommendations are made:

- In order for the sector to understand its full social and environmental impact, the second order impacts of its sustainability activities in these areas needs to be better understood. To achieve this, a standardised reporting and measurement tool is required that extends beyond the BBBEE requirements which cover only one element of sustainability.
- For companies to be successful at implementing sustainability, they need to have a number of enabling factors in place. These include:
 - having a clear and well defined strategy and focus,
 - a clear motivation to act that is driven by an underlying ethical consideration,
 - high levels of support from shareholders,
 - high levels of integration of the sustainability strategy into the organisation, and
 - an effective communication plan which includes the data to support the story of success.
- To develop a clear and focused sustainability strategy, companies will have to:
 - Develop its own definition of corporate sustainability taking into account the legislative requirements as only one aspect of this.
 - Clearly understand its motivation to act
 - Develop a strategic approach that suits the companies specific context
 - Clearly identify which specific areas it will focus on and develop a long-term sustainable strategy.
- Companies should not focus only on compliance as the goal, as there are business benefits to sustainability that can be achieved with a holistic

strategy. Each company will need to identify its own business case and the metrics that support the evaluation of its strategy. These metrics may not necessarily be quantifiable in financial terms.

5.2.5 *Suggestions for further research*

The following areas are identified as areas where further research should be considered:

1. Development of a framework to understand the second order impacts of the sustainability activities of the ICT sector in South Africa.
2. Conducting a wider study to determine if the findings in this research are applicable across the sector, and whether there are specific differences between the sub-sectors.
3. A comparative study should be done to determine the levels of sustainability activities across the sector, including an understanding of what sustainability activities are being conducted in the sector.

6 REFERENCES

- Baumgartner, R. J. (2014). Managing corporate sustainability and CSR: A conceptual framework combining values, strategies and instruments contributing to sustainable development. *Corporate Social Responsibility and Environmental Management*, 21(5), 258-271.
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*: Sage.
- Brundtland, G. H., & Khalid, M. (1987). Our common future.
- Choi, Y., & Yu, Y. (2014). The influence of perceived corporate sustainability practices on employees and organizational performance. *Sustainability*, 6(1), 348-364.
- Clarke, V., & Braun, V. (2014). Thematic analysis. *Encyclopedia of Critical Psychology* (pp. 1947-1952): Springer.
- Creswell, J. W. (2012). *Qualitative inquiry and research design: Choosing among five approaches*: Sage.
- Dawkins, J. (2005). Corporate responsibility: The communication challenge. *Journal of communication management*, 9(2), 108-119.
- Dodd, T. (2007). The role of broadband in the quest for environmental sustainability. *Telecommunications Journal of Australia*, 57(2/3), 28.1-28.12.
- EITO. (2003).
- Epstein, M. J., & Roy, M. J. (2003). Making the business case for sustainability. *Corporate Citizenship*, 79.
- Ernst and Young. (2010). *Excellence in Sustainability Reporting*. Retrieved from <http://www.ey.com/ZA/en/Services/Specialty-Services/Climate-Change-and-Sustainability-Services>
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International journal of qualitative methods*, 5(1), 80-92.
- Fuchs, C. (2008). The implications of new information and communication technologies for sustainability. *Environment, Development and Sustainability*, 10(3), 291-309.
- Ganescu, M. C. (2012). Corporate social responsibility, a strategy to create and consolidate sustainable businesses. *Theoretical and Applied Economics*, 11(11), 91.
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The qualitative report*, 8(4), 597-606.
- Graafland, J., & Van De Ven, B. (2006). Strategic and moral motivation for corporate social responsibility. *Journal of Corporate Citizenship*, 2006(22), 111-123.
- Grayson, D., Rodriguez, M. A., Lemon, M., Jin, Z., Slaughter, S., & Tay, S. (2008). A new mindset for corporate sustainability. Retrieved from <http://dspace.lib.cranfield.ac.uk/handle/1826/4161>
- Hancock, B., Ockleford, E., & Windridge, K. (1998). *An introduction to qualitative research: Trent focus group Nottingham*.
- Harmon, J., Fairfield, K. D., & Behson, S. (2009). *A comparative analysis of organizational sustainability strategy: Antecedents and performance outcomes perceived by US and Non-US based managers*. Paper presented at the Proceedings of the International Eastern Academy of Management Conference, Rio de Janeiro, Brazil.
- Herbst, J. (2005). Mbeki's South Africa. *Foreign Affairs*, 84(6), 93-105.
- Hoffman, A. J. (2005). Climate change strategy: The business logic behind voluntary greenhouse gas reductions. *California Management Review*, 47(3), 21-46.

- Holton, I., Glass, J., & Price, A. D. (2010). Managing for sustainability: findings from four company case studies in the UK precast concrete industry. *Journal of Cleaner Production*, 18(2), 152-160.
- Husted, B. W., & Allen, D. B. (2000). Is it ethical to use ethics as strategy? *Journal of Business Ethics*, 27(1), 21-31.
- Jackson, R. L., Drummond, D. K., & Camara, S. (2007). What is qualitative research? *Qualitative Research Reports in Communication*, 8(1), 21-28.
- Janko, A., & Vagasi, M. (2003). Challenges of sustainability and responses in ICT sector. *ITS presentation paper*.
- Johnson, R. B. (1997). Examining the validity structure of qualitative research. *Education*, 118(2), 282.
- Jones, D. (2011). Sustainability Indexes. *Dow Jones' Sustainability index*.
- King III Code of Governance, (2010).
- Klettner, A., Clarke, T., & Boersma, M. (2014). The governance of corporate sustainability: Empirical insights into the development, leadership and implementation of responsible business strategy. *Journal of Business Ethics*, 122(1), 145-165.
- Kolk, A., & Levy, D. (2001). Winds of Change::: Corporate Strategy, Climate change and Oil Multinationals. *European Management Journal*, 19(5), 501-509.
- Kuo, B. N. (2010). Organizational Green IT: It seems the bottom line rules.
- Lash, J., & Wellington, F. (2007). Competitive advantage on a warming planet. *Harvard Business Review*, 85(3), 94.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75): Sage.
- Linnenluecke, M. K., Russell, S. V., & Griffiths, A. (2009). Subcultures and sustainability practices: The impact on understanding corporate sustainability. *Business Strategy and the Environment*, 18(7), 432-452.
- Lozano, R. (2015). A holistic perspective on corporate sustainability drivers. *Corporate Social Responsibility and Environmental Management*, 22(1), 32-44.
- Malterud, K. (2001). Qualitative research: standards, challenges, and guidelines. *The Lancet*, 358(9280), 483-488.
- Marshall, J. D., & Toffel, M. W. (2005). Framing the elusive concept of sustainability: a sustainability hierarchy. *Environmental science & technology*, 39(3), 673-682.
- Martin, N., & Rice, J. (2009). Analysing emission intensive firms as regulatory stakeholders: a role for adaptable business strategy. *Business strategy and the environment*, 19(1), 64-75.
- Maxwell, J. (1992). Understanding and validity in qualitative research. *Harvard educational review*, 62(3), 279-301.
- Mebratu, D. (1998). Sustainability and sustainable development:: Historical and conceptual review. *Environmental Impact Assessment Review*, 18(6), 493-520.
- Merriam, S. B. (2002). Introduction to qualitative research. *Qualitative research in practice: Examples for discussion and analysis*, 1, 1-17.
- Miller, W. L., & Crabtree, B. F. (1999). Clinical research: a multimethod typology and qualitative roadmap. *Doing qualitative research*, 2.
- Mitcham, C. (1995). The concept of sustainable development: its origins and ambivalence. *Technology in Society*, 17(3), 311-326.
- Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International journal of qualitative methods*, 1(2), 13-22.
- Mueller, K., Hattrup, K., Spiess, S.-O., & Lin-Hi, N. (2012). The effects of corporate social responsibility on employees' affective commitment: A cross-cultural investigation. *Journal of Applied Psychology*, 97(6), 1186.

- Norman, W., & MacDonald, C. (2004). Getting to the bottom of "triple bottom line". *Business Ethics Quarterly*, 14(2), 243-262.
- Okereke, C. (2007). An Exploration of Motivations, Drivers and Barriers to Carbon Management: The UK FTSE 100. *European Management Journal*, 25(6), 475-486.
- Piotrowicz, W., & Cuthbertson, R. (2009). Sustainability—a new dimension in information systems evaluation. *Journal of Enterprise Information Management*, 22(5), 492-503.
- Rafferty, K. (2007). An investigation of the response of entities in the South African JSE ICT sector in 2005 to environmental sustainability reporting . Retrieved from <http://contentpro.seals.ac.za/iii/cpro/DigitalItemViewPage.external?sp=1003874>
- Sacchero, S. D., & Molla, A. (2009). Environmental Considerations In ICT Infrastructure Decision Making. *ACIS 2009 Proceedings*. Paper 2.
- Seidel, S., Recker, J. C., Pimmer, C., & vom Brocke, J. (2010). *Enablers and barriers to the organizational adoption of sustainable business practices*. Paper presented at the Proceeding of the 16th Americas conference on information systems: sustainable IT collaboration around the globe.
- Seymour, R. (2012). *Handbook of research methods on social entrepreneurship*: Edward Elgar Publishing.
- Steger, U. (2004). What is the Business Case for Corporate Sustainability? *Perspectives for Managers*, 2-4.
- Sundén, S., & Wicander, G. (2003). Bridging the Digital Divide-ICT Solutions Supporting Economic and Social Development for the Unseen Majority. *HumanIT*, 18-34.
- Whittemore, R., Chase, S. K., & Mandle, C. L. (2001). Validity in qualitative research. *Qualitative health research*, 11(4), 522-537.
- Wilson, M. (2003). Corporate sustainability: What is it and where does it come from. *Ivey Business Journal*, 67(6), 1-5.
- Windolph, S. E., Harms, D., & Schaltegger, S. (2014). Motivations for corporate sustainability management: contrasting survey results and implementation. *Corporate Social Responsibility and Environmental Management*, 21(5), 272-285.
- Yi, L., & Thomas, H. R. (2007). A review of research on the environmental impact of e-business and ICT. *Environment international*, 33(6), 841-849.

7 ANNEXURE A – RESEARCH INSTRUMENT

Section 1: General context questions	
At (company) are you implementing any sustainability initiatives	
What is your role in the implementation of these initiatives	
What kind of initiatives are you planning to or currently implementing?	
For how long have these been part of the company’s operations?	
In your view have these initiatives been successful?	
How would you rate your level of success in implementing sustainability initiatives?	
Section 2 : Factors that enable adoption of sustainability initiatives as understood by the respondent	
<p>What do you believe your company is doing that enables the successful implementation of sustainability strategies and initiatives?</p> <p>What other factors contribute to the company’s success? (Note: looking for factors external to the organization)</p> <p><i>If necessary provide prompts based on factors identified in the literature review.</i></p>	
Section 3 : Factors that hinder adoption of sustainability initiatives as understood by the respondent	
<p>What do you believe your company could do better/put in place to improve the level of success in implementing sustainability strategies and initiatives?</p> <p>What other factors do you believe could contribute to an improvement in the company’s sustainability implementation? (Note: looking for factors external to the organization)</p> <p><i>If necessary provide prompts based on factors identified in the literature review.</i></p>	

Key factors identified in literature review. Use to prompt respondents if needed.	
• Management support	
• Organizational Support	
• Financial Support	
• Alignment with the strategy	
• Support from key stakeholders	
• Alignment of the operations systems and processes	
• Clear government policy	
• Room for innovation	
• Measurable and accountable	
• Data available for monitoring progress	
• Clear business case to justify investment	