

https://dspace.org/

The effect of motivations for ecological responsiveness (ER) on intrapreneurship in South Africa

Christos, Cayley

2017

http://hdl.handle.net/10539/23432

Christos, Cayley (2017) The effect of motivations for ecological responsiveness (ER) on intrapreneurship in South Africa, University of the Witwatersrand, Johannesburg, <http://hdl.handle.net/10539/23432>

Downloaded from a DSpace repository. https://dspace.org/

The effect of motivations for ecological responsiveness (ER) on Intrapreneurship in South Africa

Submitted by: Cayley Christos

Supervised by: Dr Robert Venter

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 Master of Management in Entrepreneurship and New Venture Creation

Johannesburg, 2017

ABSTRACT

This research report is based on the motivations for ecological responsiveness as identified by Bansal and Roth (2000). It considers the resultant actions of different motivations for ecological responsiveness (ER), and their ability to moderate the relationship between ER and Intrapreneurship in South Africa. The study adopted a deductive positivist paradigm that assumed an ecocentric approach to management and organisational research.

A quantitative, cross-sectional research design was employed and the use of both primary data collection from surveys and secondary data collection from websites and annual reports were utilised in order to determine the existence of relationships between the variables of ecological responsiveness and intrapreneurship, and the moderating variables of legitimation, competitiveness and ecological responsibility.

Multiple regression analysis was used to statistically test the relationship between the independent variable of ecological responsiveness and the dependent variable of intrapreneurship, as well as the moderating effect of the variables listed above. The population of this study was employees with management/supervisory positions within financial institutions of South Africa. It was required that these organisations were listed and had accessible or publically available annual reports in order for content analysis to be conducted. The final sample consisted of 210 management level employees who were in the majority employed at 3 different large, listed, South African banks.

This study found support for hypothesized relationships between ecological responsiveness and intrapreneurship, as well as the positive moderating effect of the motive of ecological responsibility on this relationship. Results pertaining to the moderating effect of legitimation and competitive motives were not supported. In addition, the study found support for the proposed relationship between an organisations ecological qualitative content analysis (QCA) score and the level of ecological responsibility perception in the organisation. The general findings contribute to research in the field of motivations for environmental corporate social responsibility (ECSR) and the resulting actions.

DECLARATION

I, Cayley Christos, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in Entrepreneurship and New Venture Creation in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

_____

Cayley Christos

Signed at ……

On the ……. day of ……..... 2017

ACKNOWLEDGEMENTS

I would like to thank first and foremost the incredible team of lecturers at Wits Business School that assisted us and shared their tremendous knowledge with us. Without their strong input this research could not have been attempted. In particular I would like to thank my supervisor, Dr Robert Venter, for his support and direction throughout the research process.

I would like to thank Wilderness Safaris for their patience, understanding and support while I have undertaken my postgraduate studies, as well as the companies and individuals who assisted me with filling out questionnaires and made their annual reports publicly accessible. Public availability of reports is vital in assisting the growth of academic research, particularly in the field of corporate entrepreneurship.

Finally I would like to thank my mother, Karen Christos, and my sister, Ally Christos, for their unwavering support throughout this journey.

Table of Contents

ABSTRACT i

DECLARATION ii

ACKNOWLEDGEMENTS iii

LIST OF TABLES vii

LIST OF FIGURES viii

CHAPTER 1: INTRODUCTION 1

1.1 Research focus and aim 2

1.2 Research purpose statement 3

1.3 Theoretical base of study 3

1.4 Contextual base of study 5

1.5 Problem statement 6

1.5.1 Main Problem: 6

1.5.2 Sub-Problems: 6

1.6 Definition of key terms 7

1.7 Contribution of the study. 9

1.8 Delimitations of the study 9

1.9 Assumptions of the study 10

1.10 Outline of the study 11

1.11 Conclusion 11

CHAPTER 2: LITERATURE REVIEW 12

2.1 Introduction 12

2.2 Understanding Environmental Corporate Social Responsibility and Intrapreneurship's role in its implementation. 14

2.3 Legitimation, competitiveness, and ecological responsibility as motives for ecological responsiveness 24

2.3.1 Legitimation 25

2.3.2 Competitiveness 28

2.3.3 Ecological responsibility 31

2.4 Towards the development of testable hypothesis and propositions, between ER and Intrapreneurship 36

2.4.1 Conceptual Model of the relationship between ER and Intrapreneurship 36

2.4.2 Ecological Responsiveness and Intrapreneurship 37

2.4.3 Competitiveness as a motive for ecological responsiveness 38

2.4.4 Legitimacy as a motive for ecological responsiveness 39

2.4.5 Social Responsibility as a motive for ecological responsiveness 41

2.4.6 Summary of Hypothesis 42

2.5 Proposition development 42

2.6 Conclusion 45

CHAPTER 3: RESEARCH METHODOLOGY 46

3.1 Introduction.....46

3.2 Research Paradigm 47

3.3 Research Design 48

3.4 Population and Sample.....48

3.4.1 Population 49

3.4.2 Sample and Sampling Method.....49

3.5 The research Instrument 51

3.6 Procedure for data collection.....53

3.7 Data Analysis.....54

3.8 Validity and Reliability of research design 55

3.8.1 External Validity 55

3.8.2 Internal Validity.....55

3.8.3 Reliability.....56

3.8.4 Pilot testing of survey 57

3.8.5 Alpha score comparison across studies.....58

3.9 Limitations.....58

3.10 Ethics.....59

3.11 Conclusion 59

CHAPTER 4: PRESENTATION OF RESULTS 60

4.1 Introduction.....60

4.2 Descriptive Statistical Results 60

4.3 Measurement scale validity, reliability and Pearson's Correlations 66

4.3.1 Scale validity 66

4.3.2 Scale reliability 70

4.3.3 Pearson's correlations 70

4.4 Results pertaining to Hypothesis and Propositions 72

4.4.1 Hypothesis 1a (H1a) and Hypothesis 2a (H2a) 72

4.4.2 Hypothesis 2b (H2b): 74

4.4.3 Hypothesis 2c (H2c) 76

4.4.4 Proposition 1 (P1) and Proposition 2 (P2) 79

4.5 Summary of Hypothesis results 83

4.6 Conclusion 84

CHAPTER 5: DISCUSSION OF THE RESULTS 85

5.1 Introduction 85

5.2 Demographic profile of respondents 86

5.3 Discussion of Hypothesis 87

5.3.1 H1a: There is a positive relationship between ecological responsiveness and intrapreneurship 87

5.3.2 H2a: The motivator of competitiveness positively moderates the relationship between ER and Intrapreneurship 88

5.3.3 Hypothesis H2b: Legitimacy as a motivation for ER positively moderates the relationship between ER and Intrapreneurship. 89

5.3.4 Hypothesis H2c: Social Responsibility as a motivation for ER positively moderates the relationship between ER and Intrapreneurship 91

5.4 Comparison of research findings 92

5.5 Discussion pertaining to Proposition 94

5.5.1 Proposition 1: The relationship between an organisations QCA score, and the organisations level of corporate responsibility environmental innovation action is positively correlated 94

5.5.2 Proposition 2: The relationship between an organisations QCA score, and the organisations perceived level of the ecological responsibility motive is positively correlated 95

5.6 Conclusion 97

CHAPTER 6: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS 98

6.1 Introduction 98

6.2 Research Findings 99

6.3 Implications and Recommendations 101

6.4 Limitations of research 103

6.5 Suggestions for further ECSR research 103

6.6 Conclusion 104

REFERENCES 105

Appendix A: Survey Research Instrument 111

Appendix B: MM Research Consent Form 119

Appendix C: Content Analysis instrument 121

Appendix D: Consistency Matrix 124

LIST OF TABLES

Table 1: Definition of key terms used in this study……..7

Table 2: Approximate Profile of respondents.……45

Table 3: Comparison of alpha scores……58

Table 4: Institution……..61

Table 5: Age group……..61

Table 6: Gender……..62

Table 7: Employment Level……..62

Table 8: One-way analysis of variance by bank……..63

Table 9: Multiple comparisons for environmental innovation by bank 65

Table 10: KMO and Bartlett's test ……66

Table 11: Scale item composition, total variance explained and factor loadings……68

Table 12: Scale Reliability……70

Table 13: Descriptive Stats and Pearsons Correlation……71

Table 14: Moderation equations with Intrapreneurship as dependent variable, Environmental Innovation independent variable and Competitiveness as moderating variable Scale Reliability……73

Table 15: Moderation equations with Intrapreneurship as dependent variable, Environmental Innovation independent variable and Legitimation as moderating variable……75

Table 16: Moderation equations with Intrapreneurship as dependent variable, Environmental Innovation independent variable and Social

Responsibility as moderating variable……. 77

Table 17: Content Analysis……..80

Table 18: Summary of Hypotheses.……..83

Table 19: Study comparisons for importance of motivations for ER….93

LIST OF FIGURES

Figure 1: The RaMoNe pyramid of rationale, morals, and needs…….21

Figure 2: business continuum: the relationship between the priority given to environmental issues as business goals and the market effect of the business……..22

Figure 3: Conceptual model……..36

Figure 4: Moderating effect of Social responsibility on relationship between Environmental Innovation and Intrapreneurship……79

CHAPTER 1: INTRODUCTION

As we become more aware of the consequences of the depleting natural resources in our environment, it has become increasingly important for organisations to become Ecologically Responsive. Studies in Environmental Corporate Social Responsibility (ECSR) have gained popularity over the last few decades as managers are recognising ECSR's ability to not only create growth through product and procedure innovation, but also to act as a driver for intrapreneurship (Miles, Munilla, & Darroch, 2009). Management research has been historically confined by a fractured epistemology, one that divorces nature and environmental concern from humanity and business (Gladwin, Kennelly, & Krause, 1995). A restoration of the relationship between environmental concern and business is necessary if management studies are to encourage ecologically sustainable organisations.

ECSR should be a key priority for organisations as sustainable markets have been found to be dependent on environmentally and socially responsible behaviour and activities. A fundamental concept within ECSR is the notion of triple bottom line reporting which encourages a monitoring of financial return on investment, as well as social and ecological returns. The paradigm of triple bottom line reporting is encapsulated in organisational strategy. This attempts to balance these three elements in a clear and audited reporting structure, giving equal value to financial, social and ecological business implications (Żak, 2015).

While experts have questioned the true value of the implementation of full triple bottom line reporting in organisations, they do agree that environmentally responsible practice is a vital part of long term business sustainability (Norman & MacDonald, 2004). Morrish, Miles, and Polonsky (2011), discuss the dangers of the global shortage of resources for organisations. They note that wasteful practice in both consumption and production are becoming a global issue that markets need to act on for organisational sustainability.

Organisational sustainability is being recognised as an upcoming “mega-trend” that needs to be incorporated into business practice at the strategic level (Müller & Pfleger, 2014). Whether this presents a need for triple bottom line reporting or ‘green’ corporate entrepreneurship (CE) within organisations is still debatable. However, what is clear is that there is a need for understanding the motives behind ecologically responsive behaviour for sustainable strategic planning.

1.1 Research focus and aim

The last few decades have produced a significant amount of research that investigates why companies take the decision to adopt ecologically responsive practices. While many of these studies have focused around the manufacturing industry, where implications of ecological responsiveness are highly visible (Bansal & Roth, 2000), more recent studies are beginning to focus on the environmental impact of service based industries where effects are less visible but do indeed exist (Allet, 2014; Brønn & Vidaver-Cohen, 2009; Hossain, Al Bir, Tarique, & Momen, 2016).

Research pertaining to motivations for ecological responsiveness is allowing organisations to better determine the effectiveness of certain internal management and control policies that are strategically linked to greater sustainable practice. In their review on motivations for why organisations go ‘green’, Bansal and Roth (2000) noted the significance of this type of research in the creation of ecological and sustainable markets for organisations, regardless of the industry. Further to this, they noted that not only was the motivation aspect of research important, but that interrogation into the associated level of ECSR actions of specific motivations was relevant.

Thus, important questions for academic and business research in this field to answer are: “why do organisations go ‘green’?” and “what are the corresponding outcomes related to each of these organizations motivations to do so?”. This understanding of motivations for ecologically responsive behaviour would enable organisations to more effectively align their environmental policies and practices. Understanding the resulting extent of ‘green’ practice from identified motivations could further ensure effective ‘green’ strategy creation (Hamann, Smith, Tashman, & Marshall, 2015).

In this study, questions of motivation for ecological responsiveness in the service sector will be examined in the context of financial institutions in South Africa. The aim of this study is to determine what motivations for ecological responsiveness show the strongest relationship with intrapreneurship. This will be done by looking specifically at motivations in South African financial institutions, and the level of ecological responsiveness that currently exists.

1.2 Research purpose statement

The purpose of this study is to determine the effect of different motivations for ecological responsiveness in South African financial institutions based on the level of ecological responsiveness actioned. Furthermore, this study attempts to determine if any of these motivations encourage 'green' or ecologically oriented intrapreneurial activity. While several studies have considered motivations for companies going 'green' (Allet, 2014; Isaak, 2002; Walley & Taylor, 2002) and the dominant motivation for responsiveness (Allet, 2014; Brønn & Vidaver-Cohen, 2009; Hamann et al., 2015), few have analysed the effect these different motivations have on the level of ecologically responsive action that follows. As such, there has been very little research on the effects these motivations have on how companies respond and, in turn, which of these motivations – if any – encourage corporate entrepreneurial activity.

1.3 Theoretical base of study

Research that examines organisations with specific regard to the natural environment has suggested that there is strain between ecocentric and anthropocentric organisational approaches. Gladwin et al. (1995) argue that anthropocentrism, a paradigm which is centralised around human interest, is the dominant paradigm in organisational study. Within this approach there is little to no regard for the natural environment, excluding when the purpose of the environment is to support the human organisational interests. An alternative ecocentric approach looks at a more integrated function of organisations with increased regard given to nature. Studies centred around motivations for ecological responsiveness in organisations thus demonstrate an ecocentric paradigmatic approach (Gladwin et al., 1995).

While several studies in recent years have begun to consider the environment and nature in business studies, the subject is still understudied when likened to other topics within organisational and management studies. Studies that have delved into the relationship between organisations and their impact on the natural environment have predominantly been qualitative in nature (Brønn & Vidaver-Cohen, 2009).

This study centres itself ecocentrically and considers theories on ecological responsiveness while interpreting their effect on corporate entrepreneurial (CE) or intrapreneurial initiatives. Motivations for why organisations partake in ECSR activities have played a major role in corporate environmental research. While there are many different motivations that have been identified in past studies, this paper will, in particular, look at the three motivations for ecological responsiveness as identified by Bansal and Roth (2000) and applied later by Allet (2014) in their studies on corporate 'greening'. These motivations are namely: competitiveness, legitimation and social responsibility.

In addressing the lack of quantitative information in ecocentric studies, this study makes use of a motivations survey and quantitative content analysis. Content analysis in this form has been used in several studies to determine the ecological responsiveness of organisations (Clarkson, Li, Richardson, & Vasvari, 2008; Rahman & Post, 2012; Trumpp, Endrikat, Zopf, & Guenther, 2015). The relationship between the disclosure of environmental practices in an organisations reporting and their environmental performance is shown to be positive in several studies (Rahman & Post, 2012) (Appendix C).

The level of ecological responsiveness will further be discussed with regards to the RaMoNe pyramid, as described by Ketola (2014). This pyramid classifies different levels of ECSR and the actions associated with each level. By using both content analysis and intrapreneurial focussed questionnaires, this study will identify an organisations positioning along this pyramid. Passive and responsive corporate responsibility takes place at the lowest level of the pyramid and is characterised by law abidance actions. The next levels are characterised by competitive behaviours and are classified as proactive CR. The top levels of the pyramid are entrepreneurial,

creative and embracing CR and are characterised by higher order actions of organisations.

1.4 Contextual base of study

This study considers the role of ECSR and its ability to stimulate intrapreneurship (Morrish et al., 2011) within financial institutions in the developing context of South Africa. According to Herrington and Kew (2016) in his South African review of the Global Entrepreneurship Monitor 2015/2016, South Africa has the most efficient financial market in Africa. As clear reporting and some degree of innovative practice is vital to the outcome of this study, the use of financial institutions in assessing motivations is deliberate.

The World Bank made strong recommendations in 2014 that banking and financial institutions must consider sustainable practice in their operations. Under this banner, mainly in developed countries, but to an increasing extent in developing economies, financial institutions are making significant contributions to lessening their overall impact on environmental concerns, particularly carbon emissions (Ganda & Ngwakwe, 2014).

'Green' banking came into existence due to the recent popularity of subjects such as sustainability, climate change, global warming and other environmental threats. 'Green' banking can be defined as an effort to ensure that banking activities do not contribute to environmental damage. As such, 'green' banking has been important in conceptualising the role of service oriented industries in ECSR (Hossain et al., 2016).

A 2014 study conducted on ECSR practices in South African banks, noted that significant carbon reduction and energy specific efficiencies have been implemented in most listed South African banking institutions as per recommendations. However, many 'green' practices are still outstanding with a clear lack of innovative practice being seen. Expertise in this field are outstanding in the full adoption of environmentally attuned technologies. As a result of this there has been an increased desire for improved environmental research (Ganda & Ngwakwe, 2014).

Bansal and Roth (2000) have noted that a combined motivation for ‘green’ practice, specifically competitiveness and ecological responsibility, most often led to innovations in organisations. It is important to note that the GEM report found South Africans to be strongly opposed to failure. This is often a deterministic factor in the below average adoption of entrepreneurial practice in the country, as innovation often assumes a high risk environment (Herrington & Kew, 2016). It is thus imperative to determine what policy or organisational behaviour implementation would encourage organisations to accept environmental innovation as a core component of their existing organisational strategy.

Identifying existing motivations in South African institutions is an important tool in beginning to understand and develop ‘green’ strategy.

1.5 Problem statement

1.5.1 Main Problem:

Assess the relationship between ecological responsiveness and intrapreneurship and the effect of the moderating variables of competitiveness, legitimacy and social responsibility motivations on environmental intrapreneurship initiatives. Identify ways to increase entrepreneurial ecological responsiveness in South African financial institutions.

1.5.2 Sub-Problems:

Sub-problem 1:
Assess the relationship between ecological responsiveness and intrapreneurship.

Sub-problem 2:
Evaluate the effect of the moderating variables of competitiveness, legitimacy and social responsibility motivations on Ecopreneurial initiatives.

Sub-problem 3:
Identify ways to increase entrepreneurial ecological responsiveness in South African financial institutions.

1.6 Definition of key terms

In order to ensure consistent understanding of key terms in this study, the table below provides definitions and their referenced sources as required.

Table 1: Definition of key terms used in this study

TERM	DEFINITION	SOURCE
Intrapreneurship	Entrepreneurship is a human creative act which creates value by exploiting an opportunity that uses a unique blend of resources. As such, intrapreneurship describes the act of entrepreneurship within an existing organization.	(M. H. Morris, Lewis, & Sexton, 1994; Stevenson & Carlos Jarrillo-Mossi, 1986; Timmons & Spinelli, 2008) (Damanpour, 1991)
Ecopreneurship	Ecopreneurship entails unique, market-orientated and personality driven value creation through the formation of innovative environmental products and processes. Ecopreneurship differs from other forms of corporate environmental development by the company's strong commitment to the environment and its aspiration for growth.	(Schaltegger, 2002)
Ecological Responsiveness (ER)	ER is not what is required by an organisation, but is rather a set of initiatives that reduce the organisations ecological footprint. This is achieved through policy, process and product	(Bansal & Roth, 2000)

	changes. These include waste management, reducing energy consumption, and implementation of environmental management systems (EMS).	
Environmental Corporate Social Responsibility (ECSR)	ECSR is defined as organisational activities, compliant and preventative, that limit the negative environmental impact of organisations while maximising productivity and efficiency of resources.	(Mazurkiewicz, 2004; Rahman & Post, 2012)
'Green' Banking	'Green' Banking refers to the banking business conducted in such a way as to mitigate external carbon emissions and internal carbon footprint. This conduct is put forward in order to make the business more environmentally responsive. The term also refers to the use of inclusive banking strategies to promote sustainable economic development.	(Ahmad, Zayed, & Harun, 2013; Bahl, 2012; D. Meena et al., 2013)
Triple Bottom Line	Triple bottom line reporting was first described by John Elkington in 1994. He proceeded with an article in 1998 that fully described the phenomenon as three independent reporting bottom lines. A traditional financial bottom line, a social/people oriented bottom line and an environmentally responsible bottom line.	(Elkington, 1994, 1997; Żak, 2015)

1.7 Contribution of the study.

While environmental responsibility has been theorized for many years, most studies have primarily focused on ECSR within developed economies (Bansal & Roth, 2000; Hörisch, 2015; Morrish et al., 2011). Studies on ECSR in developing economies have focused largely on South East Asia, South America and India (Allet, 2014; Driver, Saunders, & Guenther, 2011). However, the study of ECSR and its effect on intrapreneurship in South Africa, particularly within large established organisations, is mostly absent from academic studies. Thus, this study presents a significant step in addressing this gap in literature. It further contributes to the development of literature around resulting actions of different motivations for ECSR, as many prior studies have only addressed this by using a qualitative inductive approach, specifically through the use of interviews.

1.8 Delimitations of the study

This study is delimited to how South African financial institutions view their role in environmentally sound practice. As only listed companies with publically available reporting structures could be included in the sample frame, a predisposed leaning toward regulatory compliance and stakeholder obedience will be observed in the practices of these institutions.

Herrington and Kew (2015) note that most countries within Sub-Saharan Africa are factor driven which would result in poor development of financial institutions. However, this is countered in South Africa by the high level of financial industry efficiencies. As such, financial institutions in South Africa that are represented on the Johannesburg stock exchange (JSE) have been included in the sample of this research report.

While efforts have been made to make the survey nationally available, the survey results are predominantly from Johannesburg, further implicating a greater level of efficiency in selected financial environments.

Subsidiary institutions have been considered as members of parent holding companies as per the JSE listings.

1.9 Assumptions of the study

This research was conducted with various assumptions having been made. These are outlined below:

Survey respondents in the survey portion of data collection are representative of management level and are thus decision-making members of South African financial institutions. The assumption is that, at this level of organisational employment, the respondent has a reasonable understanding of organisational practice. To mitigate error or inaccuracy, respondents were asked to provide demographic information that identifies the level of occupation within selected financial organisations.

In making use of motivations for ecological responsiveness as identified by Bansal and Roth (2000), we assume that these three determinants provide value in assessing ecologically based behaviours and the resultant activities. The use of these three motives (Competitiveness, Legitimacy and Social responsibility) in current literature provides a basis for legitimation of these factors in the current study.

The quantitative content analysis model adopted for use in this research has been successfully implemented in several studies with a resultant positive relationship between the amount of reported environmental practice and actual environmental practice. This is thus assumed to validate the instruments use as a determinate of organisational environmental practice. Content analysis can thus be relied on as a measurement tool to determine the ecological responsiveness of an organisation (Rahman & Post, 2012).

1.10 Outline of the study

This study, as is apparent in a positivist paradigmatic approach, assumes that theory must be verified empirically through observations. As this is achieved through a deductive approach to theory testing, a large portion of this study is a review on existing literature.

Thus the outline of the study is as follows:
A literature review will be conducted in depth, in order to develop hypothesis and propositions for testing. This will be followed by a methodology chapter, which will provide a framework for methods used, in order to address the research questions presented in this study. The next chapters will give a presentation of the research results, a discussion of the results, and finally, conclusions, implications and recommendations drawn from the research.

1.11 Conclusion

Aside from the assumptions and delimitations outlined, this study provides an attempt to address research gaps regarding motivations for ecological responsiveness and the resultant environmental practices existing within South African financial institutions.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

In recent decades innovations have proved to profoundly change businesses and the societies in which they operate. Smart phones, wireless internet and applications have had more effect on the world than most government policies and legal manifestoes (Schaltegger & Wagner, 2011). It is with this understanding that organisational and business research of the future recognises that environmental corporate social responsibility (ECSR) needs entrepreneurs within organisations to create sustainable innovations as part of their central business activities. These innovations must allow for both profitability and environmental protection.

Schumpeter (1976) alluded to the importance of 'creative destruction', a process of creating new production procedures and using new resources to enhance organisational value. This can be equally applied to studies of ECSR and the creative destruction of existing business products, processes and production, to create those that are environmentally sound and responsive to current stakeholder and shareholder expectations.

Research on ecological responsiveness, particularly within the corporate environment, has gained popularity since the 1960s and was validated by Freeman's stakeholder theory created in the early 1980s. The theory states that corporations have responsibilities to their shareholders and stakeholders and cannot exist in a vacuum (Hannan & Freeman, 1984). As an ecocentric paradigmatic approach to organisational research has gained momentum amongst researchers and practitioners, an adherence to stakeholder theory has become increasingly relevant (Gladwin et al., 1995).

In recent findings, theorists concur that organisations need to focus on more than just economic viability and need to become environmentally responsive in order to adhere to stakeholder expectations and protect the resources of our planet (Bahl, 2012; Müller & Pfleger, 2014; Nwagbara & Reid, 2013).

Most efforts by organisations to become ecologically responsive, focus on an implementation and improvement strategy. Their actions often only incrementally improve on existing 'green' products and processes. Within this scope of change, organisations are missing vital ecologically sustainable opportunities that might be presented through the use of Schumpeter's creative destruction approach to organisational development (Hart & Milstein, 1999). The uncomfortable process of creative destruction, and thus ecological innovation in organisations, has proven to be an important undertaking for organisations. Reduced resource usage, as well as energy and waste disposal methods are becoming important elements of long term business sustainability (Hart & Milstein, 1999). The ability to recognise motivations for why organisations take this step is thus a relevant topic of research (Bansal & Roth, 2000).

Although many theorists have touched on the relative importance of the different motivators for an organisations ER and the resultant initiatives that stem from these motivations (Ahmad et al., 2013; Allet, 2014; Bansal & Roth, 2000), particularly when comparing developed and developing economies, there are few studies that have analysed this proposed relationship in depth. This study will look to two quantitative analysis methods for measuring ER in order to draw assumptions on the relationship between motivations and ER levels of action (Appendix C).

This literature review aims to highlight relationships between motivations for ecological responsiveness and different levels of corporate entrepreneurial ecological activity. Motivations for ER have been explored by two key theorists of 'green' motivations: Bansal and Roth (2000) and later Allet (2014). Their discussions and research on why organisations become ecologically responsive is important, both in the matters on which they concur, and those matters to which they draw separate conclusions. The following review will provide context by looking at South Africa as a developing country that exhibits a high level of financial institutional progress (Herrington & Kew, 2016). In order to tie ecological responsiveness back to the initial topic of innovation, this study will analyse the organisations' ecologically responsive actions on a pyramid for ecological responsiveness as considered by Ansoff and McDonnell (1990), as well as more recent authors such as Heikkurinen (2010) and Ketola (2014).

2.2 Understanding Environmental Corporate Social Responsibility and Intrapreneurship's role in its implementation.

This study considers two important topics – Environmental Corporate Social Responsibility (ECSR) or an organisations ecological responsiveness, and intrapreneurship. While both topics have been studied extensively in the literature (Allet, 2014; Antoncic & Hisrich, 2001; Bansal & Roth, 2000; Colwell & Joshi, 2013; Nayager & Van Vuuren, 2015; Zahra & Covin, 1995), very few studies have examined whether ecological responsiveness has a relationship with entrepreneurial activity within organisations.

One of the difficulties with understanding ECSR and the role intrapreneurship plays is that the literature is divided on the definition of an entrepreneurial organisation. Exacerbating this difficulty, is the many different terms for entrepreneurial behavior within existing organisations. Expressions such as corporate entrepreneurship (Dess & Lumpkin, 2005; Guth & Ginsberg, 1990; Schollhammer, 1982), corporate venturing (McGrath, Venkataraman, & MacMillan, 1992), intrapreneurship (Antoncic & Hisrich, 2001, 2004; Auer Antoncic & Antoncic, 2011), organisational innovation (Damanpour, 1991) and entrepreneurial strategy making (Dess & Lumpkin, 2005), have been used in academic literature to label entrepreneurial activity in firms (Antoncic & Hisrich, 2001). Each of these terms denotes a different form of internal entrepreneurial activity.

Corporate venturing as a 'form', for example, is well described in the literature as any activity that generates new groupings of resources by creating products, capabilities or markets that are not currently employed or created in the current activities of the organisation (Covin & Miles, 1999; McGrath et al., 1992). Another form of organisational entrepreneurship is observed where entrepreneurial behavior and practice, generally embracing innovation, exists within the entire organisation. This 'form' is discussed by authors as entrepreneurial posture (Covin & Miles, 1999), entrepreneurial strategy making, entrepreneurial orientation (Dess & Lumpkin, 2005), and corporate entrepreneurship (Covin & Miles, 1999). Intrapreneurship as a form, is also linked to innovation and the improvement of economic performance within the existing business as described by authors such as Menon and Menon (1997) and McDougall, Shane, and Oviatt (1994). However, it differs in that it is primarily a tactical

mode of entrepreneurship that is driven, not by the organisation as a whole, but rather by an individual. Taking these three forms of organisational entrepreneurship into account, Walley and Stubbs (2000) have argued that entrepreneurial change in existing firms cannot be described by focusing solely on the role of the individual nor exclusively on the structures within the organisation. Thus, a more intertwined view of the individual, the organisation and appropriate action must be considered.

While there are significant dissimilarities in the description of entrepreneurial organisational activity amongst researchers, particularly regarding what actions must be existent in order to say that an organisation has acted entrepreneurially, research by Lumpkin and Dess (1996) has helped to define the scope of an entrepreneurial orientation. Their research has found that the features of internal entrepreneurship include: proactive behaviours, competitiveness, product/service or process innovation, new business venturing and organisational self-renewal. Similarly, Antoncic and Hisrich (2004) looked to Schumpeterian theories of creative destruction to identify four dimensions of internal entrepreneurship. The first identified dimension is the pursuit of new business that relates to an organisations current activity including new business venturing. The second dimension is the creation of new products, services, processes or technologies, relating to the Lumpkin and Dess (1996) feature of innovation. The third, emphasises innovation at the strategic level that brings about complete organisational change, which relates to the feature of self-renewal. The fourth and final dimension reveals the role of top management orientation in the pursuit of internal entrepreneurial activity.

The position taken by Covin and Miles (1999) is that despite these many features, there is a common thread linking entrepreneurial organisations. This is the existence of innovation. This is in harmony with the statement by Gumpert and Stevenson (1985) that innovation is the "heart of entrepreneurship." It is accurate to understand then that without innovation taking place in organisations, there is no corporate entrepreneurship. The position taken in this paper mimics that of Covin and Miles (1999), in that innovative practice is required for corporate entrepreneurship to have taken place.

The natural environment was largely absent from business decision making until the 1970's. The few environmental regulations that existed were limited in scope and did not carry any noncompliance penalties. This suggested the regulations were guidelines for improvement and not important corporative initiatives. The result was that regulation and stakeholder expectations of the time provided little motivation for organisations to behave in an ecologically responsive manner (Menon & Menon, 1997).

Post 1970, however, weak but present environmental regulations began to emerge in business environments (Menon & Menon, 1997). This is what Varadarajan and Menon (1988) have dubbed 'mandated corporate responsibility'. This resulted in early 'green-washing' techniques as described by Menon and Menon (1997), for example, vehicle industries using emission control mechanisms instead of creating vehicles that were more efficient and non-polluting. Mandated corporate responsibility is evident in organisations that consider environmental corporate social responsibility as a peripheral aspect of their business. Actions including the establishment and implementations of regulation and standards for environmental management are evident in these organisations and are often monitored by legal departments. Schaltegger (2002), in his framework for ECSR, classes 'environmental administration' as the very lowest form of environmental responsiveness.

It is only since the 1990s that environmental issues have begun to play a genuine role in organisations. Increased consumer interest, global warming awareness, natural crises and greater governmental regulation has made the strategic level consideration of ECSR vital for sustainable business operations (Lampikoski, Westerlund, Rajala, & Möller, 2014). ECSR is characterised by actions of ecological responsiveness. These actions are described as a set of initiatives or processes that decrease an organisations ecological footprint and limit their environmental impact (Bansal & Roth, 2000; Rahman & Post, 2012). ECSR activity has thus shifted from pure compliance and 'greenwashing' organisational action, to more proactive and innovative ecologically responsive actions.

Various papers within management and business fields of study have shown that corporate entrepreneurship effectively creates viable competitive advantage within organisations (Antoncic & Hisrich, 2004; Auer Antoncic & Antoncic, 2011; Zahra & Covin, 1995). However, authors, such as McGrath et al. (1992), have noted that the prevailing measure of success is financial. This is specifically linked to return on investment. They further argue that this does not encapsulate many of the positive outcomes, outside of financial measure, that entrepreneurial activity inside of the organisation creates. McGrath et al. (1992) noted early on that poor financial performance for entrepreneurial activities in organisations could be a casualty of the shortened timeframe in which studies have to evaluate them. Considering this, more recent authors have linked CE with long term improvement in financial performance (Antoncic & Hisrich, 2004; Auer Antoncic & Antoncic, 2011; Zahra & Covin, 1995).

Despite the time lag often apparent in financial gains from corporate entrepreneurship, CE is still recognised by researchers as an important factor in sustainable business growth. Several authors have demonstrated CE's role in transforming corporations, markets and industries at large (Covin & Miles, 1999; Dess & Lumpkin, 2005; Guth & Ginsberg, 1990; Schollhammer, 1982). In fact – triple bottom line reporting was born from the need to recognise more than just financial implications of business operations (Elkington, 1994, 1997).

The concept of three different but equally important measures of organisational success was first theorised by Elkington (1994). He proposed that organisations needed to measure social, environmental and financial 'profits' achieved by the organisation. The concept of triple bottom line structures in organisations is important in that it reinforces the need for companies to recognise their role in socio-economic development (Żak, 2015). Recent authors such as Kunz (2016), have indicated that, in excess of 80% of Fortune, 500 companies reported on environmental corporate social responsibility. This is indicative of increased stakeholder interest in organisations taking steps to measure their social and environmental impacts. Triple bottom line reporting is a tool for organisations to validate their commitment to address the expectation that organisations are participating in and managing ECSR (Kunz, 2016).

Entrepreneurship's part in the triple bottom line concept is to address the disparity between financially viable organisations and environmental and social values. Organisations have begun to recognise the role of ecological innovations for sustainable business development. These innovations need to be driven by champions of an environmental outlook that are purposefully making environmental goals the core of their business operations (Schaltegger, 2002).

While pioneering research has concentrated on individuals and champions who create start-up companies that, from birth, focus on using environmental goals to achieve financial prosperity, balanced with social and environmental innovative practice (Dixon & Clifford, 2007; Schaltegger, 2002), recent authors have suggested that environmentally focused individuals would play an equal role in existing organisations. Theorists such as Figge, Hahn, Schaltegger, and Wagner (2002); Keogh and Polonsky (1998); Sharma and Vredenburg (1998) and Schaltegger (2002), were some of the first authors to discuss corporate environmental affairs with an entrepreneurial orientation. These environmentally focused individuals have been labelled by authors as 'ecopreneurs'. Ecopreneurs use innovation to produce new products, services, processes and techniques that reduce environmental impact (Dixon & Clifford, 2007; Schaltegger, 2002).

The literature suggests that there is significant disparity between the opinion of authors on the ability of ecopreneurship in large organisations and ecopreneurship in small or emerging businesses, to create genuine transformation through sustainable and green development (Hockerts & Wüstenhagen, 2010; Hörisch, 2015; Schaltegger & Wagner, 2011). While authors such as Schaltegger and Wagner (2011) and Hörisch (2015) believe that larger organisations are restricted in their ability to create fundamental, transformative green innovations due to their investment in current organisational operations, authors such as Hockerts and Wüstenhagen (2010) argue that large existing organisations may use the ideas generated by idealistic ecopreneurs in new ventures to create larger and more widely permeating innovations of their own. The research by Hockerts and Wüstenhagen (2010) labels organisations as either 'greening giants' or 'emerging Davids'. He puts forward the notion that the increased resource capacity of 'greening giants' allows them to take ecopreneurial initiatives up on a larger scale.

As organisational leaders often have a strong influence on the strategic orientation of an organisation, Schaltegger (2002) had concluded that ecopreneurship is vital for sustainability within an existing organisation. The author notes that because the goals of organisational success and environmental sustainability are not solely the goals of new ventures, ecopreneurship can be equally applied to any organisation, whether new or established. Therefore, ecopreneurship is simply defined as value creation through innovative environmental products, services and processes. Environmental Intrapreneurship is thus an important subgroup of ecopreneurship that represents considerable change and growth in an existing organisation. This growth is established through sustainable environmental innovation. Ecopreneurship and other forms of environmental organisational action is separated by a clear commitment to the environment paired with a strong desire for business growth.

It has long been understood by authors that the implementation of entrepreneurial practice is particularly effective within hostile environments (Covin & Miles, 1999; Dess & Lumpkin, 2005; Guth & Ginsberg, 1990; Schollhammer, 1982). Today's hostile environments are largely tied to the rapidly increasing cost of energy and resources. Public concern on issues such as climate change is at an all-time high and many consumers and governments are demanding more corporate social and environmental responsibility (Żak, 2015). Resultant of this is a drive by management and executives to reduce environmental impacts while simultaneously improving services, products and production capabilities in order to improve the sustainable financial performance of the organisation (Miles et al., 2009). There are many factors that influence management approach to environmental sustainability issues (Bansal & Roth, 2000), these will be discussed in detail in the coming sections.

By identifying the factors that influence ecological responsiveness of organisations we can better understand why some organisations have a reactive responsiveness or partake in "green-washing", while others are more proactive and engage in more innovative environmental strategies (Allet, 2014). Thus, the ability to quantitatively measure ECSR has been a strong theme in research since the early 2000s, with many of these looking at performance based metrics (Clarkson et al., 2008). In a study by Morrish et al. (2011) it was concluded that while ecological responsiveness can

stimulate intrapreneurship, a large majority of companies in New Zealand only used ECSR as a promotional tool.

The ReMoNe pyramid maps out where organisations currently are with regard to ECSR, but also what actions the company is taking to achieve this. This pyramid is helpful in linking motivations and company actions, as discussed in other literature (Allet, 2014; Bansal & Roth, 2000), and applying it to the levels of ecological responsiveness as outlined in the pyramid (Ketola, 2014). These six levels of corporate responsibility application and effect, had been previously alluded to in other literature (Heikkurinen, 2010), but have since adopted the idea of ‘Embracing ER’. Embracing ER is still idealistic in many ways, nevertheless it has been adopted and detailed in a six-tiered pyramid.

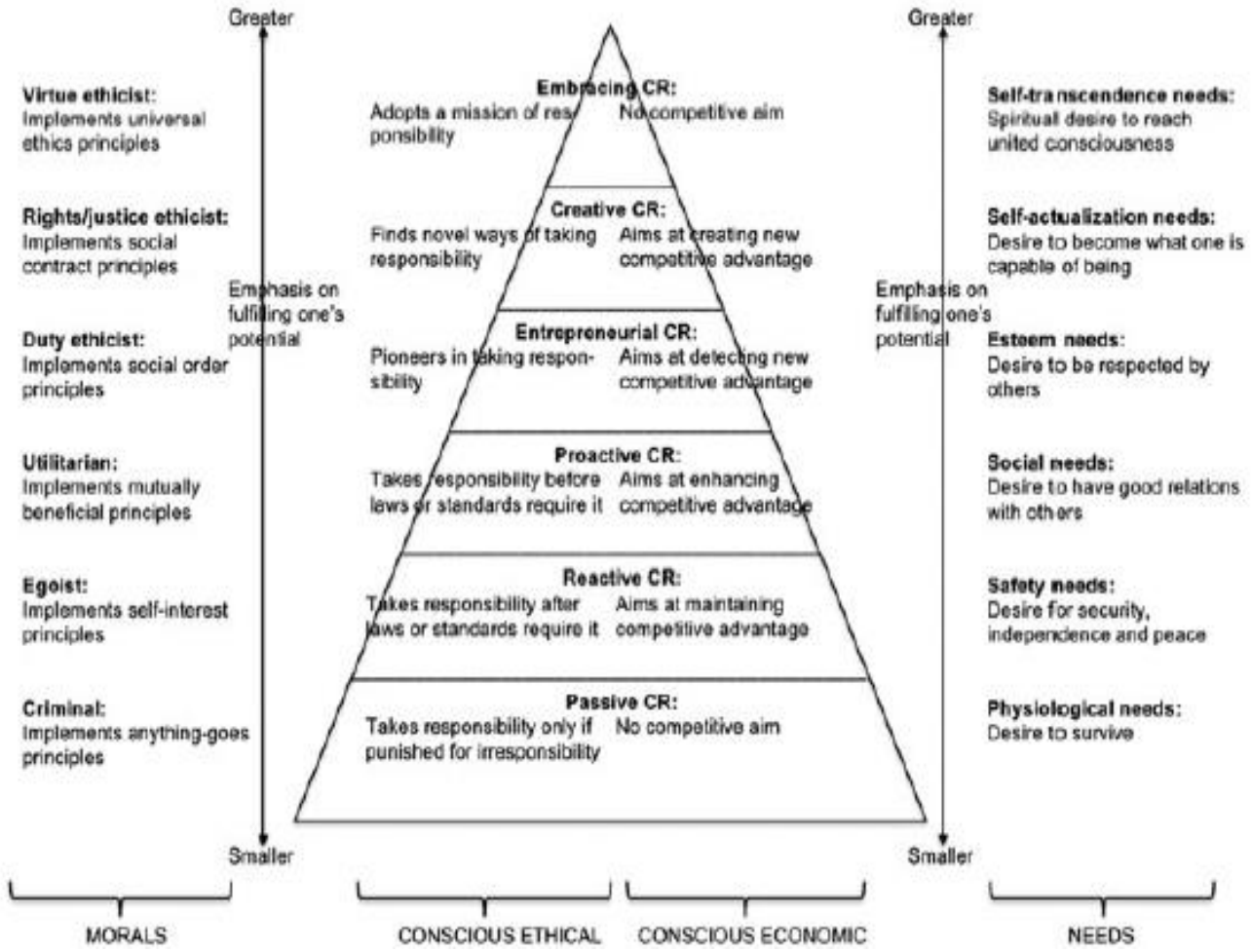

Figure 1: The RaMoNe pyramid of rationale, morals and needs. (Ketola, 2014; p.234)

The higher levels of the ReMoNE pyramid suggest an all-encompassing ecological responsiveness that is characterised by innovation. Ecological responsiveness as described by Bansal and Roth (2000) and later by Rahman and Post (2012) and Allet (2014), as being an organisation's initiative for reducing their environmental impact, could vary in its application and effect. This suggests that a set of green innovations that dramatically improve an organisation's environmental standings and have a large and far reaching impact, would represent the penultimate level of ECSR.

This study recognises that ecological responsiveness, taking the form of internal corporate ecopreneurship, represents the highest level of ECSR in organisations. While both Schaltegger (2002) and Ketola (2014) recognise entrepreneurial corporate responsibility as higher order actions, Ketola (2014) demonstrates a further two levels of creative and embracing ER. The pyramid suggests the novel idea of an 'embracing ecological responsiveness', which has no economic or competitive aim, encapsulating pure virtue ethics. While in theory this depicts an untainted and idealistic organisational goal, in practice almost all organisations operate at lower levels of corporate responsibility. Further to this, the second tier of the pyramid, representing creative CR, suggests innovative and novel ecologically responsive actions. This study accepts then that entrepreneurial CR and creative CR are in harmony with Schaltegger (2002) framework for ecopreneurship, where ecopreneurship is represented as the highest level of ECSR. Schaltegger (2002) presents the relationship between the high priority of environmental issues in organisational strategy and the overall market influence of the organisation in figure 2 below:

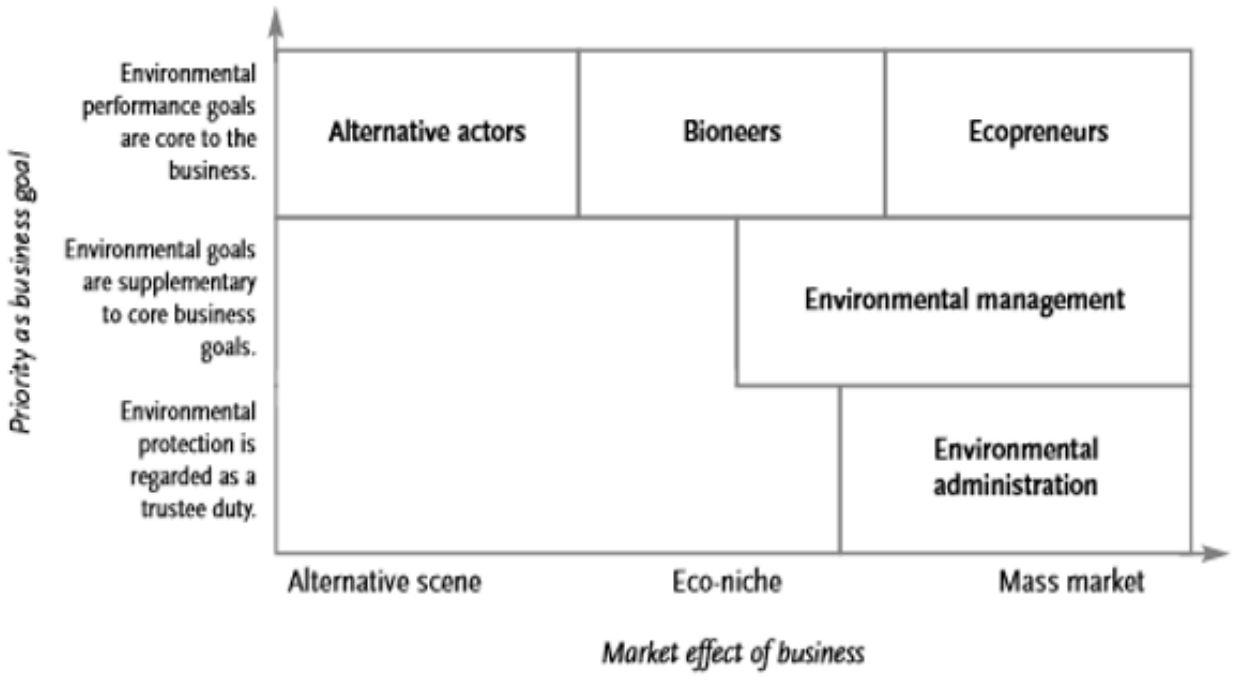

Figure 2: business continuum: the relationship between the priority given to environmental issues as business goals and the market effect of the business. (Schaltegger, 2002; p.49)

In order to understand how these levels of ECSR relate to service and banking industries, we examine the construct in relation to Katrin Kaeufers “five levels of socially responsible and green banking” (Kaeufer, 2010).

Level 1: The first and most basic level of green banking, where banks partake in PR activities that are unrelated to the core business of the organisation. This is most often referred to in organisational research as greenwashing. Most banks exist and have existed at this level of ECSR for long periods of time.

Level 2: This level is noted in banking organisations when ‘green’ products or activities are added to existing products and activities. This is evident in a small portion of total banking activity and are often resultant of a reactionary response to stakeholder pressures.

Level 3: At this level, environmental and social values and practices permeate most products and activities in the bank’s portfolio. The core focus of greening becomes a part of systematic organisational practice, driven by management.

Level 4: Requires the entire banking ecosystem, from product and process through to clients and environments, to participate in a sustainable green transformation. It is characterised by strategic ecosystem innovation.

Level 5: While level four is strategic, level five has an intentional primary purpose to create social and green impact. The bank represents a “hybrid” organisation whose purpose is addressing the fundamental issue of sustainability by creating ecosystem wide innovations (Kaeufer, 2010).

These levels clearly relate to Ketola’s (2014) ReMoNe Pyramid, depicting an agreement amongst authors on visible levels of ecological responsiveness. This further cements the idea that these levels are apparent regardless of industry. Their application in banking is thus relevant. As this study seeks to find a relationship between ecological responsiveness and higher level entrepreneurial action (most often driven by an individual), it will discuss corporate entrepreneurship as intrapreneurship.

2.3 Legitimation, competitiveness and ecological responsibility as motives for ecological responsiveness

The topic of why organisations adopt ecologically responsive policies and practices is important in organisational research today. Topics exploring ethics, social responsibility and environmental awareness in organisations are increasingly popular amongst mainstream management researchers and top ranked management journals. Brønn and Vidaver-Cohen (2009) noted that studies in this field are no longer questioning if ECSR is effective, but rather what influences organisations to adopt increasingly robust ECSR actions.

While several authors in the nineties, in concurrence with the popularity of studies in corporate environmental relations, identified drivers for ECSR change and organisational 'greening' such as compliance, globalisation, competitive advantage, ethical motives, top management push and stakeholder pressures (Carroll, 1999; Hart, 1995; Hoffman, 1999; Visser, 2005), few were able to clearly illustrate the moderating effect of these motives on ecological responsiveness. Another aspect of greening motivation absent from prior literature was that of whether motives where mutually exclusive or could affect ecological responsiveness in combination (Bansal & Roth, 2000). Their identified motives also often overlap as is evident in the literature. For example, Hart (1995) identifies strategies for improved reputation, increased cost efficiency of processes and larger market reach for improved products as different motivators for an organisation responding to preservation of the environment. Bansal and Roth (2000) streamline these motivations and many other similar ones into a single motive of competitiveness as all of the above signify a desire to achieve competitive advantage.

The model of ecological responsiveness developed by Bansal and Roth (2000), identifies three key motives for why organisations adopt ECSR practices. This model has proved to be an influential platform for corporate environmental studies. By applying analytical induction within their data analysis, three significant drivers for ecological responsiveness were identified: the first motive responded to drivers such as stakeholder pressures and reputation. This falls under the banner of legitimation.

Competitiveness as a motive speaks to the drivers of strategic and economic benefits for an organisation through ER activity. The final motive discusses the ability of individuals to create change in organisations through their personal passions and social responsibility.

The model used by Bansal and Roth (2000) is effective in that its constructs are developed using existing literature on organisational drivers for ecological responsiveness. The model identifies those motives in prior studies that represented an ecological response from organisations. The model is highly applicable and has further been empirically tested and made use of in subsequent studies, such as those by Allet (2014); Allet and Hudon (2015) and Brønn and Vidaver-Cohen (2009). Its main motives identified for ecological responsiveness have also been applied in South African based studies on SME greening (Hamann et al., 2015).

2.3.1 Legitimation

Legitimation as a motive for ER is outlined in terms of legitimacy theory. Legitimacy theory stresses that organisations must ensure that they are perceived to operate within the interests and values of the society in which they exist and are thus expected to behave in a manner that is deemed both legal and “legitimate” (Guthrie & Parker, 1989). The theory emphasises that impression management is vital for organisations in order to remain viable. It further decrees that actions such as ECSR disclosure through corporate reporting can improve legitimacy (Deegan, 2006; Hossain et al., 2016). However, Guthrie and Parker (1989) argue in their study on the relationship between legitimacy theory and disclosure that research provided inconclusive evidence of a relationship between legitimacy theory and organisational environmental disclosures. This suggests that legitimation is not a strong motive for ECSR activities.

Recent research has challenged this by suggesting that there is a positive relationship between ECSR disclosures and actual firm ECSR performance, suggesting that legitimacy may provide a motivation for actual ECSR action (Clarkson et al., 2008; Rahman & Post, 2012). Bansal and Roth (2000) similarly associate legitimation with environmental corporate initiatives linked to regulatory compliance and impression management.

Authors have argued, however, that if organisations are motivated entirely by legitimacy, there would be little evidence of them moving past minimum legal requirements for ECSR (Bansal & Roth, 2000; Porter, 2000). On the contrary, Brønn and Vidaver-Cohen (2009) suggest that the reputational effect of partaking in ECSR initiatives is progressively positive. Present social values have increasingly persuaded organisations to pursue ecologically responsive actions in order to maintain stakeholder support. They comment that as organisations raise ECSR standards, other organisations are so compelled to again increase their ECSR activity, creating a positive upward trend that may exceed basic legal requirements. Hamann et al. (2015) further found that regulation is necessary for ecological responsiveness as it encourages compliance – the first step towards increased ECSR activity. This implies that legitimacy acts as an important motivator for organisations to become ecologically responsive.

The role of legitimacy is confirmed in the service and banking industry. Studies suggest that banks adopt green practices in order to improve the image of the bank (Meena, 2013). This represents legitimacy as a motive for banks becoming ecologically responsive. While Kaeufer (2010) made similar statements in her earlier research, it was noted that these reactionary and image driven responses only provided banks with a social and environmental level two output. This means that while legitimacy is an important motive for ECSR, the resultant action is often little more than is required to improve public image and ensure organisational survival.

In the South African context Visser (2005) notes the importance of legislation in setting an expansive country-wide tone for addressing ECSR. While much of the organisational legislative transformation in South Africa has been heavily focused on social corporate responsibilities, environmental policy is growing in significance. This was evident in a KPMG (1997) survey completed by some major South African organisations. The results showed that 83% of organisations felt that legal pressure and government policies were the biggest drivers for ecological responsiveness. Unfortunately, while legitimacy should stand as a driver of change in South Africa, poor enforcement of regulation and policy, due to capacity issues within administrative

offices in government, hampers its ability to drive significant change (Sonnenberg & Hamann, 2006; Visser, 2005).

While this confirms the role of legitimacy as a driver, Visser (2005), argues that a change in attitude has become apparent over the last twelve years. The dominant motivation for ECSR is now leaning towards ideas that ECSR activities make good business sense and are fundamentally 'the right thing to do'. This suggests that not only a change in attitude but also the idea that ECSR is useful for organisational reputation.

Morris (2016), however, warns that the use of ECSR to support the reputational need of organisations should be used with caution. ECSR has a positive relationship with organisational reputation when there is no existing negative perception or predicament facing the organisation. In the case that the organisation is already facing negative perception, ECSR initiatives are often perceived as hypocritical reactions and the reputation of the organisation might be worsened. Regardless, it is clear that legitimation is a valid motive for analysis on why organisations, in particular financial institutions, become ecologically responsive.

Although the importance of legitimacy as a motive for ER is clear, as it can both coerce organisations into adopting ECSR practices and assist in the adoption process by giving financial rebates to organisations who comply (Paulraj, 2009), its effect on the ECSR actions of an organisation is limited. The study by Bansal and Roth (2000) demonstrated that a legitimation motive resulted in reactive, compliance actions. These actions almost always occurred due to an organisations efforts to avoid negative repercussions from government agencies and stakeholders and to ensure the survival of the organisation. ECSR actions related to legitimation aimed to meet standards through suggested actions or actions copied from already compliant firms. Similarly, Allet (2014) notes that legal pressure for environmental practice in developing economies is low. As such, organisations in the services and financial industry are seen to adopt only token environmental management practices in order to fulfil legal and stakeholder' requirements. This suggests that the legitimation motive does not result in proactive approaches to ECSR. Contextually, legal requirements for

organisations operating in the South African environment is low with the expectation for organisations to act at high levels of ER also being minimal.

2.3.2 Competitiveness

Bansal and Roth's (2000) second motive for ER is competiveness, which is outlined with reference to the resource based view described by Hart (1995). A resource based view suggests that competitive advantage is dependent on matching internal organisational capabilities with external environmental factors that affect organisational profitability (Hart, 1995). Organisations can only remain competitive if they use internal capabilities to meet society's demands, many of which are now presented as environmental and social goals. Brønn and Vidaver-Cohen (2009) suggest that organisations are often in positions of power which come with an expectation from society that the associated power will be used in what is considered a responsible manner. If the actions of organisations do not represent social and environmental responsibility, their power will be lost through a lack of stakeholder support, resulting in lost profits.

Research has shown that a competitiveness motive centres strongly on executive views which support a link between social initiative engagement and organisation profitability. Organisations take part in ECSR activities because executives believe that ECSR increases competitive advantage and thereby profits. This is achieved by protecting the organisation from expensive regulatory fines, providing new opportunities and improving organisational reputation (Allet, 2014; Bansal & Roth, 2000; Brønn & Vidaver-Cohen, 2009) .

Within the competitiveness motive, organisations adopt ECSR initiatives if they improve the profitability of the firm (Bansal & Roth, 2000). Research has shown a connection between innovation and long-term financial improvement in organisations (Antoncic & Hisrich, 2004; Auer Antoncic & Antoncic, 2011; Zahra & Covin, 1995). Competitiveness as a motivation should theoretically then result in innovative ECSR actions. Building on financial implications of innovation from authors such as Zahra and Covin (1995), Bansal and Roth (2000) propose that competiveness is connected with actions such as green marketing, green product and green process creation.

Bansal and Roth (2000) found that organisations that are motivated by competitiveness, did partake in innovative practices in order to create products, systems and processes that allowed them to improve their environmental image. This was done as an attempt to attain a better market position when seen as a secondary motive in conjunction with an ecological responsibility motiveMeena (2013), however, notes that competition driven actions such as creating innovative products that support green banking initiatives, cause a considerable financial drain on banks initially. This might result in an avoidance of expensive R&D processes that result in truly innovative and transformative initiatives for banks.

ECSR issues have a substantial impact on organisational profitability, not only because disregarding them might result in regulatory imposed fines but, more importantly, because by responding to them, organisations have the opportunity to create positive customer support for their activities. With that being said, Bansal and Roth (2000) indicate that competitive advantage is unlikely to be achieved where suppliers or customers do not attach adequate importance to the environmental or social issue being addressed.

Focus within the competitiveness motive has been found to concentrate on cost efficiencies, product differentiation and reduced energy, waste and material expenditure instead of major ECSR innovations. These ECSR actions are more cost efficient to achieve, but do not produce transformational or innovative products and processes that will have a dramatic effect on future profits of the organisation (Allet, 2014). Organisations that are motivated by competitiveness also tend to engage in highly visible environmental activities which ties in with their desire to use ecological responsiveness and ECSR activities as a tool for improved market share (Bansal & Roth, 2000).

Globalisation must be considered as an important topic within the competitiveness motive for ecological responsiveness. Looking at developing economies, it is important for organisations who want to encourage foreign investment or partnerships to conform to standards as laid out by investing economies. Results of this have been more robust sustainability reporting among South African organisations, as well as improvements in ECSR to be in line with international standards (Visser, 2005). These

standards and improvements ensure that organisations in developing economies stay competitive on an international scale. This is particularly relevant in the South African banking environment, where reporting is at an international standard and pressures from stakeholders are high.

Hart (1995), in his resourced based view of organisational competitiveness, emphasises the importance for 'organisations to compete for the future'. Organisations cannot rely solely on reactive actions to ensure competitive advantage but must strategically plan for future sources of competitive advantage. An ECSR perspective that encompasses strategic planning for the future can provide organisations with significant sustainable competitive advantage. Morris (2016) demonstrates that ECSR has progressed from side-line initiatives into a necessary core industry function. He argues that ECSR is a key mechanism for realising an organisations vision, mission and strategy, and it would thus be difficult to attain future organisational success without it. In a study of Bangladeshi banks, Hossain et al. (2016) stress that by financing environmental initiatives, banks have the opportunity to profit from a growing green technology sector. This can be achieved while simultaneously improving organisational reputation by showing support of corrective climate change initiatives. In fact, they go so far as to suggest that many future competitive advantage opportunities for banks, will be focused around demands for low carbon innovations.

It can be suggested what while competitiveness as a motivation for ECSR should result in innovative activities, it is often not the case. Paulraj (2009) proposes that organisations with a competitiveness motivation are often simultaneously motivated by ecological responsibility which allows for ECSR actions to have a more long term and innovative effect. The downside to a higher degree of competitiveness is that it deters organisations from engaging in costly environmental initiatives, even if they provide long term competitive advantage (Allet, 2014). The cost of organisations engaging in ECSR initiatives when competitiveness was the motive, was also noted as a deterrent in a South African Motives study conducted by Hamann et al. (2015). Hamann et al. (2015) further argued that when there was less available finance for an organisation, the first area of operations effected was environmental initiatives. In South Africa's factor-driven economy, this might have an even greater effect on a low appearance of proactive environmental actions.

2.3.3 Ecological responsibility

The third motive for ecological responsiveness, as identified by Bansal and Roth (2000), is ecological responsibility. This motive stems from research based findings, that a strong motive for organisations to be ecologically responsive is an internal sense of environmental obligation. Bansal and Roth (2000) suggest that this motive encourages philanthropic actions as well as a complete environmental culture focus.

ECSR that results from an ecological responsibility motive is strongly associated with organisational leadership. The ethical orientation of leaders within the organisation is often a direct determinant of the organisation's culture (Bansal & Roth, 2000). Theory shows that an organisational leader's environmental ethics can stem from several sources including formalised influences such as education (Morris, 2016), or more higher order, ideological influences, including ideas such as Hartwick's (1977) theory of intergenerational equity. Hartwick (1977) suggests that when natural resources are used it has a negative effect on long term consumption and output of organisations. As natural resources have a finite quality, it is vital to reduce resource use over time so as to allow the resource use versus time curve to approach zero as we stretch out toward infinity. In simple terms, it is a multi- generational concern of the highest priority, that innovations that can replace the need for natural resources and that have no negative effect on the environment, are established in organisations today.

Hamann et al. (2015) agrees with this concept in his paper on organisational greening. He notes that environmentally responsive organisations dedicate resources and time to the establishment of an organisational environmental ethic, driven by an unambiguous desire from top management to 'do the right thing for the future'. Organisations who comply with this mind-set recognise that their actions should not serve purely business purposes, but rather that business should serve human needs. This alters the organisational mission from egoist and self-serving to a justice ethicist and possibly even a virtue ethicist ethos (Ketola, 2014). These organisations that drive toward higher ethos levels dedicate their actions to the promotion of environmental and social rights. This speaks to the theory of justice and fairness which dictates that general rights need not be monitored by law if every situation is taken so as to be fair to all involved stakeholders.

Ketola (2014) uses the theory of justice to clarify stakeholder theory which was a prominent theory for the explanation of legitimation. The author indicates its use as a tool for actioning an ecologically responsive motive, by suggesting that organisations have fairness based obligations to shareholders. There is further suggestion that by incorporating a theory of justice into their response to these obligations, organisations could embrace a larger variety of stakeholders. As the organisation needs to be fair to a more diverse group of people, their ECSR actions will be characterised by, what Ketola has named, creative corporate responsiveness. However, for most existing organisations, basing their actions on a widespread fairness is a dauntingly difficult task and not one which many organisations are prepared to drive through deeper organisational change.

Unfortunately, for organisations to experiment with justice based theories, stakeholders need to have a high level of awareness and concern for environmental and social issues. Sonnenberg and Hamann (2006) found that in the South African context the majority of investing stakeholders had notably low levels of ecological cognisance and were less concerned about ECSR strategies. This situation is further characterised by a lack of shareholder activism. The authors note that in the South African environment ECSR, in particular the environmental aspect of ECSR, has little relevance in Africa and is considered a 'luxury concern'. Due to the low levels of stakeholder demand for ECSR actions, South Africa's ECSR scope is comparatively unsophisticated. As such, it will be suggested that, in the South African context, justice and stakeholder theories will have little relevance for the ecological responsibility motive of ECSR.

Allet (2014) found in her study that the greatest and most predictable variable for environmental performance was managerial attitude. In this case a leader or organisational management will champion the cause of ECSR and drive its implementation within the organisation. The findings of the study showed that highly responsive firms were almost always characterised by managers or leaders that had strong personal ethical beliefs. They further demonstrated an environmental awareness and knowledge that instilled a sense of ecologically steered stewardship. This outcome is consistent with prior research conducted by Lawrence and Morell

(1995) which showed evidence suggesting that organisational leadership was accountable for environmental viewpoints and resulting actions. A consequence of this was found to be the development of innovative ecological solutions, and not merely replication of existing 'greenwashing' techniques. This was confirmed in a South African based motives study by Hamann et al. (2015), who found that managers and owners had the greatest impact on ecological responses from organisations.

Owner driven ecological responsibility is shown in the literature to result in higher order actions (Allet, 2014; Bansal & Roth, 2000; Paulraj, 2009). In the qualitative study conducted by Bansal and Roth (2000), it was noted that managers associated their responses to ecological responsiveness with long term solutions to serious environmental concerns. These were often characterised by more thought out strategic organisational planning. They further found that organisations with an ecological responsibility motive did not respond by mimicking existing ECSR practices, but looked for more innovative responses to social and environmental problems. Financial implications of these actions became irrelevant if organisations believed that they were doing the right thing. Similarly Paulraj (2009) indicated that actions of ecologically responsive firms were characterised by higher levels of corporate environmental strategy than those with a competitiveness or legitimation motive. Organisations driven by ecological responsibility were shown to have a continuous development of product and process improvement so as to reduce their environmental impact, instead of single implementations. Allet (2014) concurred with these findings in her study on ECSR motivations for the micro finance sector. The study found that organisations with an ecological responsibility motive were more proactive in terms of environmental management. While Allet (2014) argued that most micro finance institutions did not view environmental issues as part of their direct organisational scope, it was noted that the industry could use innovative measures to encourage those seeking financial services to engage in greater environmental awareness. The lack of direct actions was often due to a lack of knowledge and skill with regard to addressing such issues in a service based industry. Regardless, the study confirmed that ecological responsibility was a dominant driver of ECSR and that in organisations where it was a dominant driver, this was characterised by more innovative and independent courses of action.

An important observation from ecological responsiveness motivation research, is that although dominant motivations can be seen to motivate organisations to go green, motivations can also be mixed (Allet, 2014; Bansal & Roth, 2000). Thus, as we consider the application of these dimensions to South African financial institutions, we can expect to find results that indicate either dominant or mixed motivations. What is relevant is the course of action inspired by the dominant motivation. The existence of a higher level of ecological responsibility as a dominant motive in an organisation should lead to more proactive and innovative actions, regardless of the mix of secondary or tertiary motivations present.

2.4 ECSR reporting and tools for analysis.

Allet (2014) noted in her research on why microfinance institutions go green, that there is a lack of knowledge on what actions result from different dominant drivers of ECSR. Furthermore, there is a lack of knowledge as to the level of ecological effectiveness achieved by these actions. It is with this in mind that we explore the use of an ECSR measurement, developed by Rahman and Post (2012), that is comprehensive enough for effective measurements but also simple in its methods, requiring only publically available data.

In line with changing stakeholder expectations around ECSR, organisations have used reporting in their annual reports and on websites to communicate their commitment to environmental and social challenges (Kunz, 2016). Disclosure and environmental reporting is most often enacted by organisations through voluntary disclosure. Voluntary disclosure theories, such as that developed by Verrecchia (1983), predict the relationship between an organisation's voluntary environmental disclosure and their environmental performance to show positive association. This is based upon the expectation that organisations who engage in higher levels of environmental activity will be more inclined to adopt more stringent environmental performance measures and thus report more thoroughly on actions. Organisations with poor environmental performance, however, will report on fewer ECSR measures.

Past research on ECSR measurement tools have noted shortcomings in ECSR reporting practice (Wiseman, 1982). This is often in relation to self-reporting and uncertainty regarding the relationship between formal environmental reporting from organisations and actual organisational environmental performance. While voluntary disclosure theories suggest that an association should be seen between environmental reporting and practice, researchers had failed to find links between disclosures and performance (Cho & Patten, 2007; Wiseman, 1982). Cho and Patten (2007) suggest that theories, such as legitimacy and stakeholder theory, predict a negative link between voluntary environmental disclosures and actual organisational environmental performance. As disclosures are often seen as a result of social and regulatory pressures, this implies that organisations that perform poorly in social and environmental areas will endeavour to improve their image through increased environmental reporting. Sonnenberg and Hamann (2006) noted similar concern for the self-reporting structure for ECSR activities in organisations. They note that while there have been considerable improvements to the sustainability reporting seen in South African organisations, voluntary disclosures still represent a subjective view of an organisations ECSR activity. For increased legitimacy of ECSR reporting Sonnenberg and Hamann (2006) suggest that organisations seek more robust third party monitoring of sustainability reports.

Clarkson et al. (2008), however, argue that negative relationships between environmental reporting and environmental performance, may be due to the research designs of prior studies. Many earlier studies of environmental reporting use the Wiseman (1982) tool for content analysis. This tool emphasises the financial results associated with ESCR. By focussing on financially based performance metrics, the tool allows for organisations with below average environmental performance to discuss financial achievements in their annual reports, giving them higher disclosure points regardless of actual environmental commitment. Clarkson et al. (2008) thus revisited the notion of the reporting/performance relationship. His research aided in the development of a content analysis tool that concentrated on organisational disclosure that were relevant to environmental commitment. By making use of an improved instrument, Clarkson et al. (2008) was able to attain greater approval for the positive relationship between disclosure and actual performance of an organisation’s environmental responsibility.

The ability to perform cross organisational comparisons is important in ECSR research, as it makes reliable and accurate information on environmental performance available to stakeholders. Rahman and Post (2012) improved on the instrument by Clarkson et al. (2008) by improving the validity of the instrument. The final instrument presented sections on Environmental Performance Indicators, Governance Data, and Credibility Data. As the instrument makes use of the most robustly explored ECSR reporting dimensions, and relies solely on publically available information, its usefulness in this research is relevant.

2.4 Towards the development of testable hypothesis and propositions, between ER and Intrapreneurship

2.4.1 Conceptual Model of the relationship between ER and Intrapreneurship

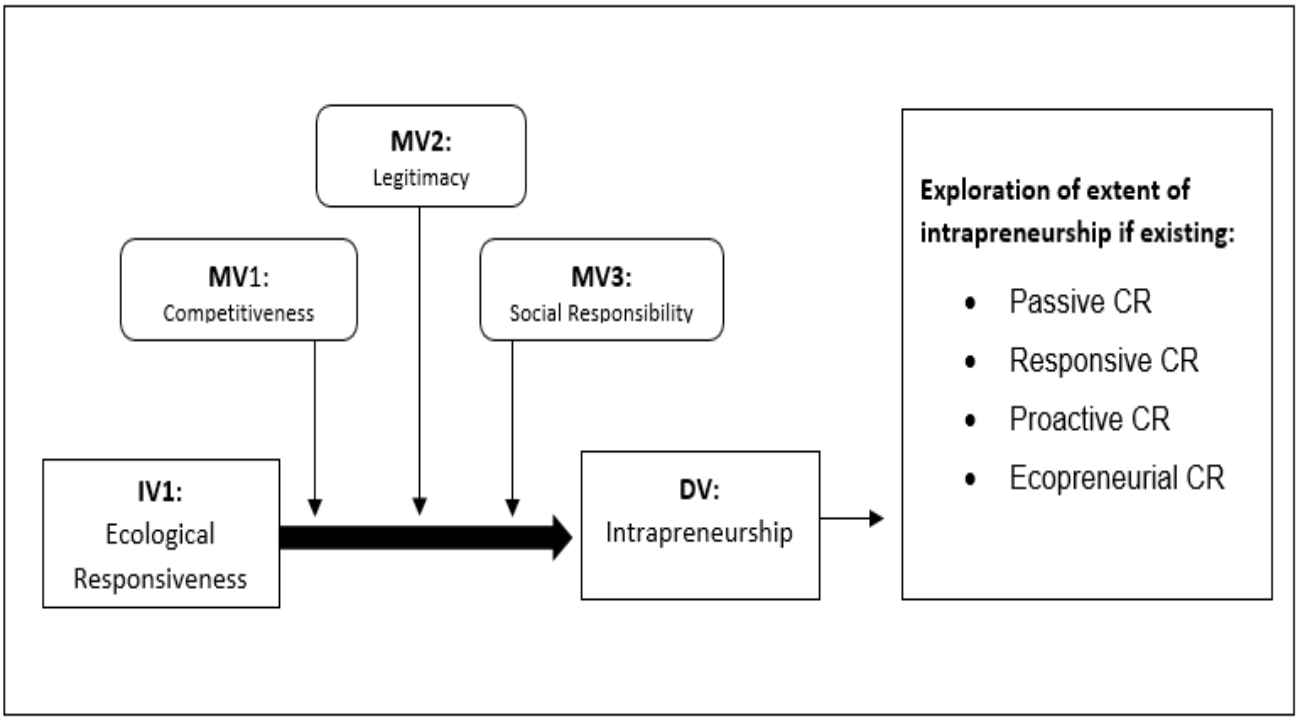

Figure 3: Conceptual model (Source: Authors work)

In exploring the relationship between ER and Intrapreneurship through the above literature review, a conceptual model was developed. This model takes into account the moderating variables of competitiveness, social responsibility and legitimacy on the relationship between ER and intrapreneurship, as well as a link to resultant levels of corporate responsibility. By developing a clear model for examination, hypothesis and propositions were evolved for study. This section clarifies the role of literature examined in the development of the hypothesis and propositions, and presents the final structures used in this study.

2.4.2 Ecological Responsiveness and Intrapreneurship

In their study, Bansal & Roth (2000) find that companies tend to develop a range of actions in response to different motives for ecological responsiveness. These vary from simple 'greenwashing' techniques, through to more innovative courses of action. While some authors, such as Morrish et al. (2011), note that ecological responsiveness has been shown to be a stimulus for corporate entrepreneurial activities, others have argued that ER seldom presents as innovation within organisations. Most often ECSR is used by organisations to improve reputation and encourage stakeholder investment (Rahman & Post, 2012).

Regardless, several authors concur that innovation, and thus intrapreneurship, represents the highest level of ECSR activity (Allet & Hudon, 2015; Bansal & Roth, 2000; Ketola, 2014; Schaltegger, 2002). This suggests that a relationship should exist between the two variables when statistically measured. In an effort to examine if a relationship exists in the South African environment, this research considers the review of the GEM report by Herrington and Kew (2016). The report notes that as South African organisations are primarily factor-driven, organisations are less inclined to focus on innovation. While high levels of innovation are not expected to be seen in this study, the relationship between the ecological responsiveness and intrapreneurship should still be apparent.

Based on this the first hypothesis set forward is:

Hypothesis 1a (H1a): There is a positive relationship between ecological responsiveness and intrapreneurship

2.4.3 Competitiveness as a motive for ecological responsiveness

A large amount of literature deals with the concept of whether it is financially viable for companies to go 'green', or more accurately whether corporate 'greening' will create financial value for the organisation (Dixon-Fowler, Slater, Johnson, Ellstrand, & Romi, 2013; Driver et al., 2011). In Allet's (2012) study of micro finance organisations she suggests that the competitive motive is apparent in organisations that believe ECSR will create substantial economic benefit or profitability. This was based on the Bansal and Roth (2000) analysis that examined how competitiveness resulted in a focus on cost-benefit breakdowns of ECSR actions of companies.

In the last decade, more service institutions are aiming at the triple bottom line objectives of profit, people and planet which are defined as maintaining or increasing financial viability while advancing the social interests of stakeholders and protecting the environment (Araya & Christen, 2004; Dixon & Clifford, 2007; Żak, 2015). Triple bottom line reporting satisfies both competitive and legitimacy motives. However, as Bansal and Roth (2000) point out, competitive motives for ER and ER reporting most often result in "copycat initiatives", such as EMS systems, and display an avoidance of more expensive innovative initiatives.

As discussed in the opening sections of this study, scholars have argued that triple bottom line reporting is not necessarily indicative of true ECSR practice (Norman & MacDonald, 2004). Prior studies, examining motives for ecological responsiveness, have generally identified the competitiveness motive as the second most important motive of the three in driving ecological responsiveness (Allet, 2014; Bansal & Roth, 2000; Paulraj, 2009). This indicates that the competitive motive is a driver of ecological responsiveness and may be seen in conjunction with other motives, but it does not comprise the main motive. Major differences between authors have been documented mainly in the legitimacy and social responsibility motives (Allet, 2014; Bansal & Roth, 2000).

Paulraj (2009) noted in his study on ER motives that within the context of entrepreneurial environmental responsiveness, competitiveness showed the highest output. To test whether similar results are apparent in the South African context, the competitiveness motive will be tested as a moderator between ecological responsiveness and intrapreneurship as follows:

Hypothesis 2a (H2a): The motivator of competitiveness positively moderates the relationship between ER and Intrapreneurship

2.4.4 Legitimacy as a motive for ecological responsiveness

Bansal and Roth (2000) suggest in their study that legitimacy motives of organisations are characterised by initiatives that focus on impression management and regulatory compliance. It is proposed that organisations face considerable pressure from stakeholders, government laws and environmental regulations and that this, in turn, drives environmentally responsive actions (Hamann et al., 2015).

Legitimacy can be framed in terms of legitimacy theory, discussed previously in this chapter, as a framework that outlines impression management and legitimation objectives for firms in order that they might remain viable (Deegan, 2006; Hossain et al., 2016). Several institutional powers might interact to determine at what level organisations might adopt ECSR (Babiak & Trendafilova, 2011).

Legitimation is often seen as a reactive measure to ensuring firm survival by complying with institutional norms and legislations (Bansal & Roth, 2000). Legitimation as a driver for ecological responsiveness is a key player in various theories and models on corporate decision making, such as legitimacy and stakeholder theory (Clarkson et al., 2008; Freeman & McVea, 2001).Stakeholder theory is applied in this case in order to understand that organisations will adopt legitimate practices only when pressure is placed on the organisation by powerful stakeholders that have the power to punish or reward the organisation (Clarkson et al., 2008). These stakeholders are generally characterised by government organisations, or consumers that mount pressures on

organisations, forcing them to comply with changing perceptions on environmental issues Paulraj (2009).

Legitimacy was found to be the main motivator of ecological responsiveness in Bansal and Roth's study conducted on organisations in Japan and the UK (2000). The study was both restricted to the manufacturing sector, and to two first world economies, the UK and Japan. These factors suggest that the study's results are not generalizable. Allet (2014), differed in her results which were based on an analysis of micro finance institutions in regions such as Latin America & the Caribbean, Africa, South East Asia and Eastern Europe, which are characterised by third world economies. Her findings showed legitimacy to be the least dominant driver of ECSR. This could be due to views of authors posed earlier in this review that poor enforcement of ecological and social policy and regulations, in countries with strained government administrations and less advanced modus operandi, possibly create an environment where organisations do not feel compelled to act on ecological policies. It could also suggest that sectors such as manufacturing are more accountable for their ECSR activities as they are generally greater contributors to negative environmental factors.

Hamann et al. (2015) argued that while Bansal and Roth (2000) found legitimation to be the main motive for ER, the resulting activities would be at face value. If legitimacy were the sole motivation for organisational ER, there would be no ongoing enticement for organisations to act beyond legal requirements and partake in innovative ecologically responsive activities.

In order to determine whether legitimacy as a driver for ecological responsiveness moderates the relationship between ER and intrapreneurship in the South African context the following hypothesis was formed:

Hypothesis H2b: Legitimacy as a motivation for ER positively moderates the relationship between ER and Intrapreneurship.

2.4.5 Social Responsibility as a motive for ecological responsiveness

Social responsibility manifests in organisations through actions such as donations, recycling of office waste or unpublicized initiatives. It is based on individual or corporate morale, social good and ecological values. This individual concern is based around the personal values of employees within the organisation which can then impact an organisations ecological responsiveness (Bansal & Roth, 2000).

Studies have found Environmental Responsibility to be directly related to managerial background, education and outlooks (Cordano, Marshall, & Silverman, 2010). Hamann et al. (2015) found that organisations that were driven by the social responsibility motive dedicated resources to the creation of what he calls a "corporate environmental ethic" (Hamann et al., 2015).

While all three motivations for ecological responsiveness might have a cumulative influence on the decision to go 'green', meaning they are not mutually exclusive, we find that most engagement in environmental management follows a dominant driver which leads to a specific outcome of corporate responsiveness. A study by Allet (2014), which followed that of Bansal and Roth (2000), found that social responsibility, and not legitimation, was the main driver of ecological responsiveness. The context of this study took place in areas with a third world dominance such as Latin America, Africa, South and East Asia, Central Asia, Eastern Europe and The Middle East (Allet, 2014). In their study, however, Bansal & Roth (2000) found little evidence suggesting ecological responsibility had an influence on organisational greening. In saying that, they did note that where ecological responsibility did present as the dominant influencer in an organisations greening, more innovative actions were apparent. The results of these two papers might differ due to different aims of service based industries versus manufacturing based industries. As the finance industry aims for triple bottom line reporting, the social responsibility motive might have a stronger influence on intrapreneurial ECSR. In order to ascertain if South African financial institutions would be consistent with finding by Allet (2014) or Bansal & Roth (2000), the below hypothesis was prepared:

Hypothesis H2c: Social Responsibility as a motivation for ER positively moderates the relationship between ER and Intrapreneurship

2.4.6 Summary of Hypothesis

Hypothesis 1a (H1a): There is a positive relationship between ecological responsiveness and intrapreneurship

Hypothesis H2a: The motivator of competitiveness positively moderates the relationship between ER and Intrapreneurship

Hypothesis H2b: Legitimacy as a motivation for ER positively moderates the relationship between ER and Intrapreneurship

Hypothesis H2c: Social Responsibility as a motivation for ER positively moderates the relationship between ER and Intrapreneurship

2.5 Proposition development

In today's world of internet and up to the minute news updates, organisations can no longer hide the details of their business practices from their customers and other stakeholders. Transparency has become a demand of stakeholders on organisations and accurate reporting is at the forefront of this (Mazurkiewicz, 2004). It is in this light that this study evaluates different models for measuring ECSR.

Although content analysis of organisational reporting has been used for many years to determine the level of an organisations ECSR, it has recently been questioned as a quality measurement tool (Clarkson et al., 2008; Ingram & Frazier, 1980; Rahman & Post, 2012; Wiseman, 1982). Clarkson et al. (2008) argues that this is due to the use of 'soft disclosure' items. 'Soft disclosures' in an organisations reporting might be qualitative statements within the company's vision and mission that lack credibility and are easy to copy. Hard disclosure items are more difficult to falsify, such as environmental management system implementation and actual carbon emissions.

Clarkson et al. (2008) thus created a construct valid instrument for measuring ECSR by measuring both soft and hard disclosure items such as an organisations ECSR spend. Through this he determined that there was in fact a positive relationship between corporate environmental disclosure in an organisations public reporting and ECSR performance, which was relied heavily upon in the construction of the transparent and reliable instrument by Rahman and Post (2012). A model that can measure ECSR performance is an important tool for determining the effect of different motivators in organisations.

Quantitative content analysis (QCA) is a measurement technique using secondary data, which is coded (Rourke & Anderson, 2004). Scholars argue that the use of QCA to draw interpretations about constructs, for example levels of ECSR, is not always accurate (Rahman & Post, 2012; Rourke & Anderson, 2004). Difficulties are found in the reliability of the self-reported secondary data and the objectivity of the person collecting and coding the data (Rahman & Post, 2012).

Both Clarkson et al. (2008) and Rahman and Post (2012) consequently worked to create transparent and valid instruments in order to more accurately measure ECSR through QCA. Clarkson et al. (2008) created an instrument based on Global Reporting Index (GRI) guidelines. This ensured transparency as data was accessible through organisational reporting documents. Furthermore Clarkson et al. (2008) focussed on hard disclosure measures for the majority of QCI items. This index therefore shows a clearer link between organisational ECSR reporting and practice (Appendix C).

Previous research has suggested that hard objective measures of environmental performance must be included in ECSR disclosures. By adhering to these measures a more accurate representation of organisational environmental performance can take place (Clarkson et al., 2008). The analysis tool developed by Rahman and Post (2012) as a result, included hard disclosure items that best anticipated actual organisational performance. This resulted in an ECSR measurement tool that contained 22 items grouped into three categories: Governance Data (5 items), Credibility Data (11 items), and Environmental Performance Indicators (6 items). Following Clarkson et al. (2008), the items are grouped according to their mapping in the index of the Global Reporting Initiative (GRI) guidelines. However, as the study by Rahman and Post (2012), made

use of binary scoring options, it was felt that the model might not be robust enough to show levels of environmental engagement. Accordingly this study has made use of the instrument originally provided by Clarkson et al. (2008). The instrument will be useful in evaluating actual performance of the ECSR activities as seen in financial institutions in South Africa.

Once a score is established for an organisation, the strength of perceptions on Environmental Innovation, as found through multiple pairwise comparisons of survey constructs, will be compared to the QCA score. This study hopes to establish a relationship between strength of environmental innovation perceptions and QCA score, as well as determine a relationship between an organisations QA score and the motive of ecological responsibility motives. By making these comparisons this study will be able to determine whether the ecological responsibility motive can result in higher levels of ECSR activity and most importantly whether greater environmental performance indicates a relationship with environmental innovation perceptions. This study will use the Rationale, Morals and Needs (RaMoNe) pyramid designed by Ketola (2014) for corporate responsibility (CR), to discuss the results of the content analysis study. This will be a useful tool in determining the true level of ECSR as the pyramid plots the positioning of organisations in relation to ECSR grounded on the organisations activities. Based on this the following propositions were formed:

Proposition 1: The relationship between an organisations QCA score, and the organisations level of corporate responsibility environmental innovation action is positively correlated.

Proposition 2: The relationship between an organisations QCA score, and the organisations perceived level of the ecological responsibility motive is positively correlated.

2.6 Conclusion

This study focuses on listed financial institutions of South Africa. These banks are known to have implemented ECSR into business practice and issue accessible annual reports. The study seeks to identify at what level these banks are incorporating environmental responsiveness into their organisational activities and what motivates this. It is important to recognize that ecological responsiveness is a significant factor in an organisations long term viability as it can stimulate intrapreneurship (Morrish et al., 2011).

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This methods chapter describes and explains the methodologies that have been followed in order to address the research question “How do the moderating variables of competitiveness, legitimacy and social responsibility effect the relationship between Ecological Responsiveness and Intrapreneurship in South African Financial Institutions”, as proposed in this study.

Research methodology has been separated into two distinct techniques, these being quantitative and qualitative research. A third technique is recognised in academic study as a combination of the above mentioned methods and is known as a mixed methods approach. Techniques vary in their ability to determine results for differing circumstances and constraints. It is thus imperative for researchers to make use of measurement models and designs that are consistent with the available research and assumed outcomes of the research topic.

Creswell, Plano Clark, Gutmann, and Hanson (2003) have described qualitative research as a constructivist paradigm which uses strategies of enquiry through case studies, narratives, ethnographies or phenomenologies. This results in ‘knowledge claims’ based most commonly on participatory perspectives. As qualitative researchers try to decrease the distance with their subjects it becomes difficult to separate completely the values of the researcher from the research. A qualitative technique requires a researcher to collect open-ended data and uses an inductive approach to advance themes.

Divergent from the above, quantitative research is situated in a traditional, positivist paradigm. Quantitative studies use a deductive “cause and effect” approach to test theories. Data is thus collected by the researcher and then interpreted. This methodology is approached in a more distant manner and is largely statistically based (Creswell et al., 2003).

A mixed methods approach is a combination of quantitative and qualitative research techniques to give a rounded perspective to the study (Creswell et al., 2003). This research design is most effectively used in longitudinal studies that allow for a longer research period.

This paper makes use of a quantitative approach and focuses on three motives for ecological responsiveness as identified as key by Bansal and Roth (2000), namely: competitiveness, legitimacy and social responsibility. Each motivation was measured through a survey designed to measure motivating factors for environmental concern. A further assessment will evaluate the level of ecological responsiveness as disclosed in organisational reporting for the reporting period 2015/2016. Integrated annual reports and company websites were made use of in order to conduct a content analysis.

This chapter provides a framework for the methods used in this research report. It begins by considering the paradigmatic location and design of the research. Followed by a definition of the population, sample and sampling method framework used. The chapter will then give a full description of research instruments employed in this research and the data collection methods that will be required to reach the sample. Finally, data analysis methods, reliability, validity and limitations of this methodological approach will be discussed.

3.2 Research Paradigm

The paradigmatic location of this study is based in ecocentric positivist epistemology. Positivism assumes that theory is based on reasoning but must be verified empirically through observations. This is mostly achieved through deductive theory testing or conducted in a top down manner where theory precedes testing and verification (Creswell et al., 2003). As there is currently a large body of recent theory existing on ECSR and intrapreneurship, a positivist approach using quantitative analysis to verify theory in existing literature is appropriate. As such, the ontological orientation is objectivist due to the quantitative nature of the study.

3.3 Research Design

The aim of this research is to develop findings that are generalizable to the South African context, adding to the body of existing research in the field of organisational ecological responsiveness. A quantitative research design is synonymous with the use of experiments that produce statistical data (Creswell et al., 2003). As noted above, quantitative research uses positivist assertions in order to aid in knowledge creation, explanations and predictions that are generalizable in nature.

This study adopts a cross sectional research design, which is the collection of a body of quantitative data that explains two or more variables. The data is collected from several sources at a single point in time, in order to detect patterns or relationships (Creswell et al., 2003). As this study focuses on the effect of the moderating variable of motivation for ecological responsiveness on intrapreneurship, a cross sectional research design will be effective in estimating the prevalence of specific outcomes for the selected population.

This study uses both primary data collection from surveys and secondary data collection from websites and annual reports. These forms of data collection are utilized in order to determine the existence of relationships between the variables of ecological responsiveness and intrapreneurship. While the ability to ascertain a relationship is a positive outcome of cross sectional analysis there are certain disadvantages to this. With cross sectional analysis only analysing data at a single point in time, it is impossible to infer causality.

3.4 Population and Sample

Barlett, Kotrlik, and Higgins (2001) note that a shared goal of research is to be able to gather data from a sample group which will adequately reflect a population so as to be able to generalise the study to a larger group. They argue that within quantitative research, consideration of sampling error when determining sample size and consideration for non-response bias is essential in population and sample estimates.

3.4.1 Population

The population of this study is employees with management/supervisory positions within the top publically listed financial institutions of South Africa. By adopting a primary focus on financial institutions this study will address, more specifically, the concerns of broad applicability versus perfect suitability for a smaller population.

The participants were purposefully selected on the basis that their principle business is in banking which is central to the theme of ecological responsiveness in service orientated industries. Participants were also selected on the basis that they are publicly listed in order to ensure information, such as an annual reports and sustainability reports, could be easily accessed and equally assessed within the study. Furthermore, it is necessary that participants hold at least a supervisory or management position in the organisation. This is as per existing literature that suggests that a determinate role exists at management level, in the implementation of operational aspects of organisational strategy (Allet, 2014). This severely limits the population size for this study. As such, the population outlined is entirely representative of the sample frame.

3.4.2 Sample and Sampling Method

Hinkin (1998) notes that research suggests a sample size of 150 respondents is adequate in order to achieve robust exploratory factor analysis results. Further to this, more recent research by Parasuraman, Zeithaml, and Malhotra (2005), based on findings by Hair, Black, Babin, Anderson, and Tatham (1998), suggest that a general rule for factor analysis, is that at least 5 respondents per scale item should be observed. This suggests that based on 39 scale items included in this study, confirmatory factor analysis would require a minimum of 195 respondents in the sample. Although management level employees in publically listed South African Banking institutions number in the thousands, time constraints and limited access to high level employees did not allow for a large sample size. Accordingly, this study aimed to obtain a representative sample of the target population, and refers to the above in its conservative target sample size of 200 respondents. The final sample consisted of 210 management level employees who were in the majority employed at 3 different large, listed, South African banks.

Non-probability purposeful snowball sampling was utilized as a basis for this research. This form of sampling begins with contact with a purposefully selected group within the population resulting in these respondents introducing others within their network and at their level. This form of sampling is necessary within the context of this study as listed South African banks were unwilling to provide lists of employees that are required to facilitate the development of a sampling frame.

Similar sampling methods were used in a prior study on corporate entrepreneurship motivators in South African financial institutions (Urban & Wood, 2015). Based on this previous study, a response rate of 46% was expected, as such approximately 400 surveys were distributed to the sample group. The sample group was given the option of completing hard copies of the questionnaire or to complete the survey online. Respondents were not awarded any incentives for choosing to complete the survey.

The sample group of this study, as mentioned above, is indistinguishable from the population as all those in managerial or supervisory positions in listed banking institutions in South Africa will be included.

The sample group resulted in the following profile of respondents as indicated in the table below: 7% of the employees in the sample were currently in a supervisory role, 25% of the sample consisted of junior managers, a further 33%comprised middle management, 21% comprised senior managers and 9% of respondents were at an executive level. 5% of the respondents indicated that they were on other employment levels, but still held decision making positions within the organization, thus qualifying them for the study.

Table 2: Approximate Profile of respondents

Respondent Type	**Percentage of sample groups**
Listed SA banks supervisory role	7%
Listed SA banks junior management	25%
Listed SA banks middle management	33%
Listed SA banks senior management	21%
Listed SA banks executive management	9%
Other decision making roles	5%

3.5 The research Instrument

This research made extensive use of pre-existing survey scale items from several studies. Environmental innovation was measured in survey format, from a scale adapted from the study “Environmental Motivations: a Classification Scheme and its Impact on Environmental Strategies and Practices” by Paulraj (2009). This scale presented an acceptable alpha score of 0.93. The scale items for Legitimacy, competitiveness and social responsibility, as the three key motivators for environmental responsiveness, were measured from a scale adapted from the study “Corporate Motives for Social Initiative: Legitimacy, Sustainability, or the Bottom Line?” (Brønn & Vidaver-Cohen, 2009). These presented alpha scores of 0.80 for legitimacy, 0.78 for competitiveness and 0.80 for social responsibility, which were all in an

acceptable range. The final survey scale for organisational innovation was measured from a scale adapted from the study “Corporate entrepreneurship contingencies and organizational wealth creation” (Antoncic & Hisrich, 2004), which presented alpha scores of 0.90 (Appendix A).

These individual scales resulted in a survey instrument that produced a 39-item questionnaire. The final questionnaire was constructed with Likert-scale questions that ranged from 1, ‘strongly disagree’ to 7, being ‘strongly agree’. This scale allowed for a determination of perception of motives for ecological responsiveness, ecological innovation and Intrapreneurship in the organisation, amongst supervisory and management level employees (Appendix A). These different scales were selected based on their correspondence with the concepts presented in this study. The use of a perception based survey technique was chosen as this methodology has been extensively used in previous research. Perception based measurements have been shown to allow for an accurate valuation of organisation conditions. Further to this specifically ‘management’ perceptions have been shown to be the most effective measure of intrapreneurship and organisational motivations (Antoncic & Hisrich, 2004).

The survey instruments all presented survey constructs with Cronbach α scores for internal consistency of above 0.7 in the pilot test. This is considered to show reliability of the scale. These scales allowed for the study to address the question of moderating effects of motivators on ecological responsiveness. However, once questionnaires were distributed and evaluated a further validity of constructs was tested using exploratory factor analysis. For the Social Responsibility construct, the variable ‘*There are no good reasons not to engage in environmental initiatives’* was excluded since it had a factor loading of less than 0.4. Thus, the construct of Social responsibility initially had 6 items and ended-up with 5 items. This reduced the number of valid items to 38.

The survey made use of a demographics section for descriptive analysis and frequency analysis (Appendix A). This allowed for moderation ensuring that employees were of a supervisory or management position in the organisation. It further provided a basis for further enquiries. Beyond the use of a survey based questionnaire, this study made use of a pre-existing instrument created by Clarkson et al. (2008), that

measures ECSR by conducting content analysis on the website and annual reports of the core organisations that made up the sample group of the study (Appendix C). By making use of a content analysis model this study has made an attempt to better validate the results of the survey and draw corollaries on the relationship between ecological responsiveness motivations and reported action by organisations.

3.6 Procedure for data collection

The survey was distributed to a small, key group of influencers, who were contacted and asked to distribute questionnaires to others within their network. This group consisted of approximately 50 respondents at supervisory level and up, in financial institutions in South Africa. The employees were contacted individually, either in person or via email and asked to forward on the survey to others at a similar level. Email was used to try to increase the reach of the survey in order to get a greater number of responses.

The survey design allows for several methods of data gathering to take place. This is in order to allow for the largest possible number of responses from a limited population group. As participants have varied preferences for response method it was necessary to ensure different inclinations were suitably accommodated.

The following data gathering techniques were used:

- The survey was administered to respondents by hard copy. This enabled respondents to transcribe data and hand the response paper back to the researcher on completion. This method produced the largest number of respondents in the study.
- The survey was also created via Qualtrics. This method allowed for online responses as well as assisted in the “snowball sampling” method, as it provided greater efficiencies for those wanting to forward the survey to contacts within the sample frame. The email with the survey link gave an overview of the research and research objectives. It also contained the consent form and cover letter. The respondent were then able to follow a link directing them to the questionnaire.

- For content analysis data gathering, company websites, annual reports and sustainability reporting for the 2015/2016 period were downloaded from the internet and the researcher coded data according to the instrument as presented by Clarkson et al. (2008).

3.7 Data Analysis

This research primarily made use of a multiple regression model. The model was fitted with Intrapreneurship as dependent variable, Environmental Innovation as the independent variable and Competitiveness, Legitimation and Social Responsibility as the moderating variables.

The data was analysed using SPSS statistical programming, with a significance value of $p < .05$ as per the study by Brønn and Vidaver-Cohen (2009). To address the first sub-problem "Assess the relationship between ecological responsiveness and intrapreneurship", this research made use of a multiple regression model of analysis. In order to address the second sub-problem "Evaluate the effect of the moderating variables of competitiveness, legitimacy and social responsibility motivations on Ecopreneurial initiatives", a multiple regression model was further employed. A stepper regression line was used to show where the relationship between Environmental Innovation and Intrapreneurship is strongest and weakest.

Finally, content analysis was performed on the websites and annual reports of the three financial institutions from which the greatest amount of data was collected. Here a simple assessment of the QCA score of the organisations were performed. The QCA scores for each organisation was measured as 'actual environmental performance'. This is in line with suggestions by Clarkson et al. (2008), that reported firm performance is consistent with actual performance. This allowed for the use of organisational reports as a tool for measuring actual firm performance. The main motivation for firms will be identified and drawn against a firms QCA score. An interpretation of the effect of different motives on level of ECSR activity will then be given.

3.8 Validity and Reliability of research design

Measurement validity's purpose in research is to determine whether the scoring of scales adequately measures the constructs the researcher is attempting to measure (Adcock, 2001). Reliability and validity in research is used to describe and measure survey scales and other data gathering tools. Reliability shows the probability of consistency in results for specific scales, while validity shows the propensity of the scale for an accurate forecast. Validity of the constructs was tested using exploratory factor analysis, with the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity results for the 5 constructs. The reliability of the scale for each of the 5 constructs was evaluated using Cronbach's Alpha.

3.8.1 External Validity

External validity describes generalisability of the study, or to which degree results can be applied beyond the research conducted in the current study (Leedy & Ormrod, 2005). As this research is delimited to include listed banking institutions in South Africa. This study might require external validity to infer findings into different industries or to a different geographical context.

The survey instruments used in this study relied on concurrent validity as the study uses pre-existing instruments and validity can be assessed by looking at similarities between old and new schools of research.

The content analysis tool as adapted from Clarkson et al. (2008) was totally transparent as sources of data and scoring measures were made overt and clear.

3.8.2 Internal Validity

Internal validity describes the extent to which instrument design allows for accurate causal relationships to be identified (Leedy & Ormrod, 2005).

All the KMO values implied that the sample was adequate to conduct factor analysis for each construct. The Bartlett's Test of Sphericity had significant p-values (<0.05) as desired. For all the constructs, the probability associated with the Barlett test was 0.000 to 3 decimal places.

The following steps were used in this study to account for validity:

- Pre-existing instruments with proven validity have been used to construct the survey in this study.
- A KMO and Bartlett's test of Sphericity, as part of factor analysis, were executed to test for construct validity of the questionnaire.
- The pilot also served to test that questions were well understood and that the intended meaning was clear to the respondents.
- Sampling was conducted across various organisations to reduce bias.
- Participants in the questionnaire were asked to participate voluntarily and there was no reward offered for participation in the study.
- Only individuals, who are employed by listed South African banks, and in management/supervisory positions, were asked to take part in the survey. This served to eliminate participants without the necessary skills and insights.

Clarkson et al. (2008) further made use of a GRI specialist in the creation of their content analysis instrument, this has helped to ensure content validity.

3.8.3 Reliability

Reliability shows us the consistency of results attained from the survey instrument when the construct being measured is unchanged (Leedy & Ormrod, 2005)

The pilot test conducted showed that previous scores to a great extent were consistent with pilot test scores thus allowing us to assume internal consistency and reliability of the survey instrument. Interviewees were not placed under duress while completing the survey. Cronbach alpha scores are a measure of internal consistency and thus a measure of reliability of survey scale items. Cronbach alpha scores above .70 are suggested to show a significant level of validity, while Cronbach alpha scores were low for the scale for competitiveness, prior studies and pilot testing gave adequately high scores for this construct. It was also found that the removal of any item within the scale did not improve the reliability level. Thus the decision was taken to leave the scale as is. The reliability results showed that the items within each of constructs could be combined to form a summated scale for each scale.

3.8.4 Pilot testing of survey

Pilot testing is often conducted on survey instruments in order to prove reliability and validity of constructs (Leedy & Ormrod, 2005). The pilot test for this study was conducted using a purposeful convenience sampling method. The pilot was aimed at management or supervisor employees at Capitec bank so as to not dilute the studies population and sample size. Using Capitec also allowed for industry uniformity. The survey was administered to respondents via hard copy and the results were captured manually before being run through SAS. Cronbach alpha scores from the pilot study presented as follows:

- The Environmental innovation construct presented a Cronbach coefficient alpha of 0.93 in prior studies and a Cronbach coefficient alpha of 0.79 in the pilot study.
- The Competitiveness (profit driven) construct presented a Cronbach coefficient alpha of 0.782 in prior studies, the pilot presented a score of 0.64, however upon removing the second question the standardised Cronbach alpha score increased to 0.71 which was satisfactory to the author.
- The Legitimation (law abidance and credibility) construct presented a Cronbach coefficient alpha of 0.80 in previous studies but only 0.52 in the pilot, when question 3 was removed from the construct the standardized Cronbach alpha increased to 0.79.
- The Social responsibility (individual concern) presented a Cronbach alpha score of 0.802 in prior studies and a Cronbach coefficient alpha of 0.803 in the pilot study.
- The scale construct for intrapreneurship gave a score of 0.90 in prior studies and a Cronbach coefficient alpha of 0.925 in the pilot study.

The survey was modified accordingly to assist in improved reliability of instrument and in order to more accurately estimate duration of time taken by respondents to complete the questionnaire which was set at 10 minutes (max).

3.8.5 Alpha score comparison across studies

Table 3: Comparison of alpha scores

	Prior studies	**Pilot Study**	**Final scores for this study**
Environmental Innovation	α = 0.93	α = 0.79	α = 0.927 Excellent
Competitiveness	α = 0.78	α = 0.71	α = 0.631 Questionable
Legitimation	α = 0.80	α = 0.79	α = 0.866 Good
Social Responsibility	α = 0.802	α = 0.803	α = 0.807 Good
Intrapreneurship	α = 0.90	α = 0.925	α = 0.960 Excellent

3.9 Limitations

Due to the cross-sectional research design and the use of a nonprobability purposeful snowball sample the study is not generalizable (Urban & Wood, 2015). However, this study is still significant in that it speaks to a single industry in the South African Context and thus several conclusions can be drawn from the result. This research may be vulnerable to social desirability bias and or common method bias. The researcher will attempt to mitigate this through ensuring anonymity of respondents and ensuring there are no overlapping questions in the survey.

3.10 Ethics

According to research by Kakabadse et al. (2002) ethical concern is inclusive of every aspect of research within the field of management. Ethical concerns are often connected with the values and morals of the researcher. Although ethical issues most often occur, it has been noted that concerns can occur even when people's rights are not openly at risk.

The researcher notes that ethical judgement must be involved in every stage of the research. In the absence of an ethics committee, clearance was provided by the panel constituted to review the proposal. This research is in realisation of the fact that legality does not necessarily imply ethical action and that judgement must be taken into account with sensitive issues.

The researcher does not believe that this study is ethically sensitive and does not at this point find there to be any conflict of interest that may arise from anyone's participation in the study. Regardless, names of institutions and other identifying factors have been removed from this study in order to protect the institutions that participated. A cover letter/ consent form was attached to or sent electronically with the survey in order to obtain informed consent (Appendix B)

3.11 Conclusion

This research made use of both a pilot tested survey instrument and quantitative content analysis. The survey instrument has specific, measurable objectives laid out in a comprehensive designed Likert scale. The population and sample identified for this study is appropriate to the subject being tested. Pilot testing and prior research has found the scales to be both reliable and valid for the survey instrument and the content analysis instrument.

A summary of the main authors whose works were consulted for the development of the hypothesis, the hypotheses themselves, the types of data used and the method of analysis is shown in Appendix D. The results of the methods described in this chapter are analysed in Chapter 4 and discussed in Chapter 5.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

This chapter serves to present the findings of this research based on the methods delineated in Chapter 3. In section one, a presentation of the descriptive statistics of this studies sample group will be given. In section two, there is a presentation of measurement scales validity and Pearson's Correlations. Section three gives a presentation of the analysis of the Hypothesis as well as results obtained. This will show the results of testing the hypothesis through a multiple regression model, which was developed with Intrapreneurship as dependent variable, Environmental Innovation as independent variable and Competitiveness, Legitimation and Social Responsibility as the moderating variables.

In Chapter 4, a presentation of the content analysis results will be shown. These scores will be used to manually suggest the scale and scope of ecological responsiveness present in organisations A, B and C. By comparing QCA scores with innovation ratings and moderating variable mean scores we can perform a more robust testing of the relationship between motives and actual ECSR activities. The chapter will be concluded by summarising the results of the hypothesis testing and Proposition testing, and the usefulness of findings for additional discussion and inferences.

4.2 Descriptive Statistical Results

This study received a total of 228 survey responses. Of the 228 responses, 18 were incomplete and thus excluded for analysis. The total sample achieved for analysis was 210 respondents. The distribution of the respondents in the sample by institution are show as below in Table 4.

Table 4: Institution

Analysis Group	Bank	Frequency	Percent
B	B	97	46.2%
A	A	66	31.4%
C	C	35	16.7%
Other	D	3	1.4%
	E	1	0.5%
	Other (please specify)	3	1.4%
	Missing data	5	2.4%
	Total	**210**	**100.0%**

It can be noted that institution B (46.2%) had the highest proportion of employees in the sample, followed by institution A (31.4%), C (16.7%), D (1.4%) and E (0.5%). There was an additional 1.4% of the sample that indicated that they work for other financial institutions while 2.4% did not indicate the financial institution that they work for.

The age groups per institution are shown in Table 5 below. The employees that were not from institution A, B or C, but which had sizable samples, were grouped together to form another group called ‘other’.

Table 5: Age group

Age group	B	A	C	Other	Total
n=	97	66	35	12	210
18-29	23%	12%	3%	17%	16%
30 - 39	48%	36%	40%	33%	42%
40 - 49	19%	35%	40%	33%	28%
50 - 59	8%	17%	17%	8%	12%
60 - 69	2%	0%	0%	8%	1%
Total	100%	100%	100%	100%	100%

The age distribution results show that 16% of the sample was 18 – 29 years old, 42% were 30 – 39 years old, 28% were 40 – 49 years old, 12% were 59 – 59 years old, and only 1% was 60 – 69 years old. The age distribution per institution is also shown. What is common across all institution is that more that 60% of the respondents were between 30 and 49 years old. The total percentage by institution between 30 and 49 years of age were: 67% of institution B, 71% of institution A, 80% of institution C, and 60 % of ‘other’ institutions.

Table 6 shows the gender distribution of the respondents in the sample:

Table 6: Gender

Gender	B	A	C	Other	Total
n=	97	66	35	12	210
Male	74%	52%	46%	42%	60%
Female	26%	48%	54%	58%	40%
Total	100%	100%	100%	100%	10000%

Results show that overall, there were more male respondents (60%) in the sample compared to 40% female respondents. This distribution differed by institution. Institution B and institution A had more male respondents in the sample, 74% and 52% respectively, compared to 46% male respondents for institution C and 42% male respondents for 'other' institutions.

The level of employment per intuitions is shown in Table 7:

Table 7: Employment Level

Employment Level	B	A	C	Other	Total
n=	97	66	35	12	210
Supervisor	11%	2%	6%	0%	7%
Junior Management	32%	20%	11%	42%	25%
Middle Management	32%	38%	31%	25%	33%
Senior Management	19%	24%	20%	25%	21%
Executive	4%	5%	31%	8%	9%
Other (please specify)	2%	12%	0%	0%	5%
Total	100%	100%	100%	100%	100%

The results for level of employment show that 7% of the employees in the sample were at a Supervisory level of employment, while 25% were Junior Management, 33% were Middle Management, 21% were Senior Management, and 9% represented an Executive level of employment. 5% of respondents indicated that they were on other employment levels, although according to the studies requirements, this still represented a decision making role. The majority of respondents across institutions were represented by Middle Management.

One-way Analysis of Variance (ANOVA) was conducted to assess whether the rating of the various constructs (Environmental Innovation, Competitiveness, Legitimation, Social Responsibility and Intrapreneurship) differed by Bank. The null hypothesis was that the mean rating was the same across all banks ($\mu_1 = \mu_2$=… =μ_4). The alternative hypothesis was that the mean rating differed by bank (at least one mean is different). The test was conducted at 5% significance level. Thus, the null hypothesis is rejected if the p-value is less than 0.05. The results are shown in Table 8 below:

Table 8: One-way analysis of variance by bank

Descriptive Analysis					**ANOVA**	
	Bank	**N**	**Mean**	**Std. Deviation**	**F**	**P-value**
Environmental Innovation	**B**	97	4.52	1.310	7.832	.000
	A	66	5.45	1.261		
	C	35	4.49	1.592		
	Other	12	5.37	1.226		
	Total	210	4.86	1.406		
Competitiveness	**B**	97	5.08	1.047	1.023	.383
	A	66	5.36	0.895		
	C	35	5.25	1.216		
	Other	12	5.21	0.698		
	Total	210	5.20	1.017		
Legitimation	**B**	97	6.05	0.928	1.176	.320
	A	66	6.14	1.039		

	C	35	6.32	1.167		
	Other	12	6.50	0.595		
	Total	210	6.15	0.994		
Social Responsibility	**B**	97	5.45	0.935	2.028	.111
	A	66	5.76	0.869		
	C	35	5.53	0.994		
	Other	12	5.88	0.774		
	Total	210	5.58	0.924		
Intrapreneurship	**B**	97	5.02	1.048	1.662	.176
	A	66	4.87	1.127		
	C	35	5.35	0.923		
	Other	**12**	**5.13**	**0.688**		
	Total	**210**	**5.04**	**1.043**		

The results show that there is an association between perceptions on Environmental Innovation (p-value = 0.000) and Bank since the p-value was less than 0.05 (the significance level). Table 9 below, shows where the perceptions on Environmental Innovation differs by banks:

Table 9: Multiple Comparisons for Environmental Innovation by bank

Multiple Comparisons						
LSD						
Dependent Variable	**I (Bank)**	**J (Bank)**	**Mean Difference (I-J)**	**Sig.**	**95% Confidence Interval**	
					Lower Bound	**Upper Bound**
Environmental Innovation	**B**	**A**	-.93193*	.000	-1.3541	-.5098
		C	.03387	.898	-.4878	.5556
		Other	-.84708*	.040	-1.6567	-.0375
	A	**B**	.93193*	.000	.5098	1.3541
		C	.96580*	.001	.4126	1.5190
		Other	.08485	.841	-.7454	.9151
	C	**B**	-.03387	.898	-.5556	.4878
		A	-.96580*	.001	-1.5190	-.4126
		Other	-.88095	.051	-1.7660	.0041
	Other	**B**	.84708*	.040	.0375	1.6567
		A	-.08485	.841	-.9151	.7454
		C	.88095	.051	-.0041	1.7660

The multiple pairwise comparison indicates that institution A (mean = 5.45) is rated significantly higher on Environmental Innovation than institution B (mean = 4.52, p-value = 0.000) and institution C (mean = 4.49, p-value = 0.001) since the p-values were less than 0.05. It can also be noted that 'Other' banks (mean = 5.37) were rated

significantly higher on Environmental Innovation compared to institution B (mean = 4.52, p-value = 0.040) since the p-value was less than 0.05.

4.3 Measurement scale validity, reliability and Pearson's Correlations

4.3.1 Scale validity

Validity of the 5 identified constructs was tested using exploratory factor analysis. For the Social Responsibility construct, the variable 'There are no good reasons not to engage in environmental initiatives' was excluded since it had a factor loading less than 0.4. Thus, the factor initially had 6 items ended-up with 5 items.

Table 10 below shows the results of the KMO and Bartlett's Test

Table 10: KMO and Bartlett's Test

Environmental Innovation		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.865
Bartlett's Test of Sphericity	Approx. Chi-Square	877.034
	df	10
	Sig.	.000
Competitiveness		
KMO Measure of Sampling Adequacy.		.645
Bartlett's Test of Sphericity	Approx. Chi-Square	105.424
	df	6
	Sig.	.000
Legitimation		
KMO Measure of Sampling Adequacy.		.714
Bartlett's Test of Sphericity	Approx. Chi-Square	315.590
	df	3
	Sig.	.000
Social Responsibility		
KMO Measure of Sampling Adequacy.		.741
Bartlett's Test of Sphericity	Approx. Chi-Square	363.286
	df	10
	Sig.	.000
Intrapreneurship		
KMO Measure of Sampling Adequacy.		.938
Bartlett's Test of Sphericity	Approx. Chi-Square	3802.345
	df	210
	Sig.	0.000

Table 10 shows the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity results for the 5 constructs. All the KMO values were greater than the minimum required value of 0.5, Environmental Innovation (0.865), Competitiveness (0.645), Legitimation (0.714), Social Responsibility (0.741) and Intrapreneurship (0.938). This implies that the sample was adequate to conduct factor analysis for each construct. The Bartlett's Test of Sphericity had significant p-values (<0.05) as desired. For all the constructs, the probability associated with the Barlett test was 0.000 to 3 decimal places.

The results in Table 11 shows the composition of the final constructs and the validity of the scale as shown by the factor loadings and total variance explained by the construct as well as the reliability of the scale items within each construct as measured by the Cronbach's Alpha.

Table 11: Scale item composition, total variance explained and factor loadings

Construct	Items	Factor 1	Total Variance Explained
Environmental innovation	Q5 3 - We have a bold, innovative, environmentally friendly product development approach	.928	78.04%
	Q5 2 - Our organisation has a high rate of environmentally friendly product introductions	.913	
	Q5 4 - Our organisation has a proactive posture to the environmental market	.898	
	Q5 1 - Our organisation has a cultural emphasis on innovation and R&D in environmentally friendly products	.847	
	Q5 5 - Our organisation is one of the first to introduce new environmentally friendly technologies and products	.826	
Competitiveness	Q6 4 - Our organisation can earn money by solving environmental problems	.708	47.68%
	Q6 1 - If we do not engage in environmental initiatives, regulators will force us to do so	.691	
	Q6 3 - Our shareholders demand that we engage in environmental initiatives	.682	
	Q6 5 - We must engage in social initiatives to maintain our position against competitors	.681	

Legitimation	Q7 1 - Engaging in environmental initiatives can improve our image	.918	78.92%
	Q7 2 - Engaging in environmental initiatives serves our company's long-term interests	.896	
	Q7 4 - We wish to be seen at the forefront of society's legal, moral and ethical standards	.850	
Social responsibility	Q8 5 - Engaging in environmental initiatives helps us gain knowledge from environmental service organisations	.814	57.24%
	Q8 3 - It makes us feel good to work on environmental problems	.794	
	Q8 4 - Engaging in environmental initiatives can build networks in foreign cultures	.755	
	Q8 6 - Our organisation has valuable resources that can be used to solve environmental problems	.714	
	Q8 2 - People in our organisation are concerned about environmental problems and want to help	.700	
Intrapreneurship	Q9 6 - My organisation emphasize developing new products	.880	56.78%
	Q9 16 - Innovation is a part of our business concept	.838	
	Q9 8 - My organisation spends money on new product development activities	.825	
	Q9 7 - My organisation introduces new products into the market	.824	
	Q9 5 - My organisation enters new businesses by offering new lines and products	.823	
	Q9 9 - My organisation adds new products	.809	
	Q9 18 - Our organisation reorganizes units and divisions to increase innovation	.807	
	Q9 19 - Our organisation coordinates activities among units to enhance company innovation	.806	
	Q9 20 - Our organisation increases the autonomy (independence) of different units to enhance their innovation	.801	
	Q9 4 - My organisation finds new niches for our products in our current markets	.794	
	Q9 13 - My organisation emphasizes pioneering technological developments in our industry	.791	

	Q9 12 - My organisation emphasizes technological innovation	.786	
	Q9 21 - Our organisation adopts flexible organizational structures to increase innovation	.752	
	Q9 10 - My organisation invests in developing proprietary technologies	.746	
	Q9 15 - Innovation is defined in our organisation's mission	.730	
	Q9 2 - My organisation broadens business lines in current industries	.724	
	Q9 1 - My organisation stimulates new demand on existing products in our current markets through aggressive advertising and marketing	.656	
	Q9 3 - My organisation pursues new businesses in new industries that are related to our current business	.653	
	Q9 17 - Innovation has redefined the industries in which our organisation competes	.571	
	Q9 14 - Our organisation's revenue has been impacted by products that did not exist three years ago	.559	
	Q9 11 - My organisation adopts technologies developed by other companies or industries	.516	

The results indicate that each of the 5 constructs retained one factor and each of the Environmental innovation, Competitiveness, Legitimation, and Intrapreneurship constructs retained all the items that were in the initially hypothesized constructs. One item was removed from the Social responsibility construct.

The Environmental Innovation construct explained 78.04% of the total variation in the items within the scale. Competitiveness construct explained 47.68% of variation in items within the construct, Legitimation explained 78.92%, Social responsibility explained 57.24%, and Intrapreneurship explained 56.78%. All items in the retained factors loaded highly onto their respective constructs / factors. The factor loadings were very high, ranging from 0.516 to as high as 0.928.

4.3.2 Scale reliability

The reliability of the scale for each of the 5 constructs was evaluated using Cronbach's Alpha. The results are shown in Table 12:

Table 12: Scale Reliability

Construct	Items	Cronbach's Alpha	Reliability Level
Intrapreneurship	21	.960	Excellent
Environmental innovation	5	.927	Excellent
Legitimation	3	.866	Good
Social responsibility	5	.807	Good
Competitiveness	4	.631	Questionable

It can be noted from the reliability table that the Intrapreneurship scale (21 items, α = 0.960) and the Environmental Innovation scale (5 items, α = 0.927) had excellent reliability since the Cronbach's Alpha values were greater than 0.9. Legitimation (3 items, α = 0.866) and Social responsibility (5 items, α = 0.807) had good level of reliability since the Cronbach's Alpha values were greater than 0.8. It was only Competitiveness (4 items, α = 0.631) which had a questionable level of reliability but the removal of any item within the scale did not improve the reliability level. The reliability results showed that the items within each of constructs could be combined to form a summated scale for each scale. The summated scale was calculated by computing the average of the items within the scale.

4.3.3 Pearson's correlations

The descriptive statistics and Pearson's correlations are shown in table 13:

Table 13: Descriptive Statistics & Pearson's Correlations

	M	SD	1	2	3	4	5
1. Environmental Innovation	4.86	1.41	1				
2. Competitiveness	5.20	1.02	.43***	1			
3. Legitimation	6.15	0.99	.39***	.54***	1		
4. Social Responsibility	5.58	0.92	.42***	.48***	.57***	1	
5. Intrapreneurship	5.04	1.04	.39***	.31***	.42***	.38***	1
	*Notes: M = Variable mean, SD = standard deviation, *** = p < .01*						

The descriptive statistics shows the ratings associated with the three constructs, Legitimation, Competitiveness and Social Responsibility. Table 13 above shows that the highest rated construct was Legitimation (mean = 6.15), followed by Social Responsibility (mean = 5.58), Competitiveness (mean = 5.20) and then Intrapreneurship (mean = 5.04). The lowest rated construct was Environmental Innovation (mean = 4.86).

The correlation analysis shows that each of Environmental Innovation (r =0.39, p-value <0.001), Competitiveness (r = 0.31, p-value <0.001), Legitimation (r = 0.42, p-value <0.001) and Social Responsibility (r = 0.38, p-value <0.001) were significantly correlated to Intrapreneurship since the p-values were less than 0.05.

4.4 Results pertaining to Hypothesis and Propositions

4.4.1 Hypothesis 1a (H1a) and Hypothesis 2a (H2a)

H1a: There is a positive relationship between ecological responsiveness and intrapreneurship

H2a: The motivator of competitiveness positively moderates the relationship between ER and Intrapreneurship

Results pertaining to Hypothesis 1a (H1a) and Hypothesis 2a (H2a) show the following:

To assess these two hypotheses a multiple regression model was fitted with Intrapreneurship as the dependent variable, Environmental Innovation as the independent variable and Competitiveness as the moderating variable.

The null hypothesis for hypothesis 1a was no relationship between ecological responsiveness and intrapreneurship. The alternative hypothesis was that there is a positive relationship between ecological responsiveness and intrapreneurship. The results are shown in Table 14 below:

The null hypothesis for hypothesis 2a was that competitiveness does not moderate the relationship between ecological responsiveness and intrapreneurship. The alternative hypothesis was that competitiveness positively moderates the relationship between ecological responsiveness and intrapreneurship. The results of the multiple regression analysis between the hypothesised constructs are shown in Table 14 below:

Table 14: Moderation equations with Intrapreneurship as dependent variable, Environmental Innovation independent variable and Competitiveness as moderating variable

Moderation Regressions - ALL						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	β	B	β
Intercept	5.04***	0	5.04***	0	5***	0
Environmental Innovation	0.29***	0.39	0.24***	0.32	0.25***	0.34
Competitiveness			0.18**	0.18	0.21***	0.2
Environmental Innovation x Competitiveness					0.06*	0.12
R-square	0.15		0.18		0.19	

Moderation Regressions - B						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	β	B	β
Intercept	5.02***	0	5.02***	0	4.97***	0
Environmental Innovation	0.35***	0.43	0.32***	0.4	0.35***	0.44
Competitiveness			0.08	0.08	0.13	0.13
Environmental Innovation x Competitiveness					0.11*	0.19
R-square	0.19		0.19		0.22	

Moderation Regressions - A						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	β	B	β
Intercept	4.87***	0	4.87***	0	4.84***	0
Environmental Innovation	0.46***	0.52	0.36***	0.4	0.4***	0.44
Competitiveness			0.28*	0.23	0.25	0.2
Environmental Innovation x Competitiveness					0.06	0.08
R-square	0.27		0.3		0.31	

Moderation Regressions - C						
	Model 1		**Model 2**		**Model 3**	
	B	β	B	β	B	β
Intercept	5.35***	0	5.35***	0	5.32***	0
Environmental Innovation	0.25**	0.42	0.15	0.25	0.16	0.27
Competitiveness			0.27**	0.36	0.3**	0.4
Environmental Innovation x Competitiveness					0.04	0.11
R-square	0.18		0.28		0.29	

*Notes: *** = p < .01, ** = p < .05, * = p < .10*

The results for model 1 for all respondents shows that there is a positive relationship between with Intrapreneurship and Environmental Innovation (B = 0.29, Standardised better = 0.39, p-value < 0.001). The relationship is positive since the coefficient of Environmental Innovation is positive and is significant because the p-value is less than 0.05. The model shows that variation in Environmental Innovation explains 15% of variation in Intrapreneurship. Thus, the null hypothesis is rejected in favour of the alternative hypothesis. It is therefore concluded that there is a positive relationship between ecological responsiveness and intrapreneurship. The same conclusion applied to all three Banks since the coefficient of Environmental Innovation is positive for all three Banks and the p-values were also less than 0.05.

On model 3 for all respondents, the introduction of the moderator, Environmental Innovation x Competitiveness led to an increase in the R-Square. The variable, Environmental Innovation x Competitiveness (B = 0.06, = Standardised better = 0.12, p-value >0.05) was not a significant predictor of intrapreneurship since the p-values exceeded 0.05. This implies that hypothesis h2a was not supported. This implies that competitiveness does not moderate the relationship between ecological responsiveness and Intrapreneurship. The same results were noted for all the individual institutions.

4.4.2 Hypothesis 2b (H2b):

Hypothesis H2b: Legitimacy as a motivation for ER positively moderates the relationship between ER and Intrapreneurship.

Results pertaining to Hypothesis 2b (H2b) show the following:

To assess this hypothesis a multiple regression model was fitted with Intrapreneurship as dependent variable, Environmental Innovation as the independent variable and Legitimation as the moderating variable.

The null hypothesis for hypothesis 2b was that Legitimacy does not moderate the relationship between ecological responsiveness and intrapreneurship. The alternative hypothesis was that Legitimacy positively moderates the relationship between ecological responsiveness and intrapreneurship. The results are shown below:

Table 15: Moderation equations with Intrapreneurship as dependent variable, Environmental Innovation independent variable and Legitimation as moderating variable

Moderation Regressions - ALL						
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Intercept	5.04***	0	5.04***	0	5.02***	0
Environmental Innovation	0.29***	0.39	0.2***	0.27	0.2***	0.27
Legitimation			0.32***	0.31	0.36***	0.34
Environmental Innovation x Legitimation					0.03	0.06
R-square	0.15		0.24		0.24	

Moderation Regressions - B						
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Intercept	5.02***	0	5.02***	0	4.98***	0
Environmental Innovation	0.35***	0.43	0.33***	0.41	0.35***	0.44
Legitimation			0.11	0.1	0.19*	0.17
Environmental Innovation x Legitimation					0.13*	0.2
R-square	0.19		0.2		0.23	

Moderation Regressions - A						
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Intercept	4.87***	0	4.87***	0	4.9***	0
Environmental Innovation	0.46***	0.52	0.21**	0.23	0.21**	0.23
Legitimation			0.57***	0.53	0.5***	0.46
Environmental Innovation x Legitimation					-0.04	-0.1
R-square	0.27		0.46		0.47	

Moderation Regressions – C						
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Intercept	5.35***	0	5.35***	0	5.26***	0
Environmental Innovation	0.25**	0.42	0.14	0.25	0.12	0.2
Legitimation			0.29**	0.37	0.57**	0.72
Environmental Innovation x Legitimation					0.11	0.41
R-square	0.18		0.28		0.33	

*Notes: *** = p < .01, ** = p < .05, * = p < .10*

The results on model 3 for all respondents show that the introduction of the moderator, Environmental Innovation x Legitimation did not change the R-Square. The variable, Environmental Innovation x Legitimation (B = 0.03, = Standardised better = 0.006, p-value >0.05) was therefore not a significant predictor of intrapreneurship since the p-values were less than 0.05. This indicates that hypothesis h2b was not supported. This implies that Legitimacy does not moderate the relationship between ecological responsiveness and Intrapreneurship. The same results were noted for all the individual institutions.

4.4.3 Hypothesis 2c (H2c)

Hypothesis H2c: Social Responsibility as a motivation for ER positively moderates the relationship between ER and Intrapreneurship

Results pertaining to Hypothesis 2c (H2c) show the following:

To assess these two hypotheses a multiple regression model was fitted with Intrapreneurship as dependent variable, Environmental Innovation as the independent variable and Social Responsibility as the moderating variable.

The null hypothesis for hypothesis 2c was that Social Responsibility does not moderate the relationship between ecological responsiveness and intrapreneurship. The alternative hypothesis was that Social Responsibility positively moderates the relationship between ecological responsiveness and intrapreneurship. The results are shown in Table 16 below:

Table 16: Moderation equations with Intrapreneurship as dependent variable, EI as independent variable and Social Responsibility as moderating variable

Moderation Regressions - ALL						
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Intercept	5.04***	0	5.04***	0	4.99***	0
Environmental Innovation	0.29***	0.39	0.21***	0.28	0.21***	0.28
Social Responsibility			0.3***	0.26	0.38***	0.33
Environmental Innovation x Social Responsibility					0.09**	0.17
R-square	0.15		0.21		0.24	

Moderation Regressions - B						
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Intercept	5.02***	0	5.02***	0	4.97***	0
Environmental Innovation	0.35***	0.43	0.29***	0.37	0.31***	0.39
Social Responsibility			0.21*	0.18	0.3**	0.27
EI x Social Responsibility					0.12*	0.2
R-square	0.19		0.22		0.25	

Moderation Regressions - A						
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Intercept	4.87***	0	4.87***	0	4.83***	0
Environmental Innovation	0.46***	0.52	0.35***	0.39	0.3***	0.33
Social Responsibility			0.46***	0.36	0.51***	0.39
EI x Social Responsibility					0.11	0.12
R-square	0.27		0.38		0.39	

Moderation Regressions – C						
	Model 1		Model 2		Model 3	
	B	β	B	β	B	β
Intercept	5.35***	0	5.35***	0	5.29***	0
Environmental Innovation	0.25**	0.42	0.1	0.18	0.1	0.18
Social Responsibility			0.45***	0.49	0.58***	0.63
EI x Social Responsibility					0.08	0.22
R-square	0.18		0.36		0.39	

*Notes: *** = p < .01, ** = p < .05, * = p < .10*

The results on model 3 for all respondents shows that the introduction of the moderator, Environmental Innovation x Social Responsibility resulted in an increase in the R-Square from 21% to 24%. The inclusion of the variable, Environmental Innovation x Social Responsibility (B = 0.09, = Standardised better = 0.17, p-value < 0.05) was significant in predicting intrapreneurship since the p-values was less than 0.05.

This implies that the null hypothesis for hypothesis h2c rejected in favour of the alternative hypothesis. This implies that Social Responsibility positively moderates the relationship between ecological responsiveness and Intrapreneurship. The moderation relationship is illustrated graphically in Figure 4 below:

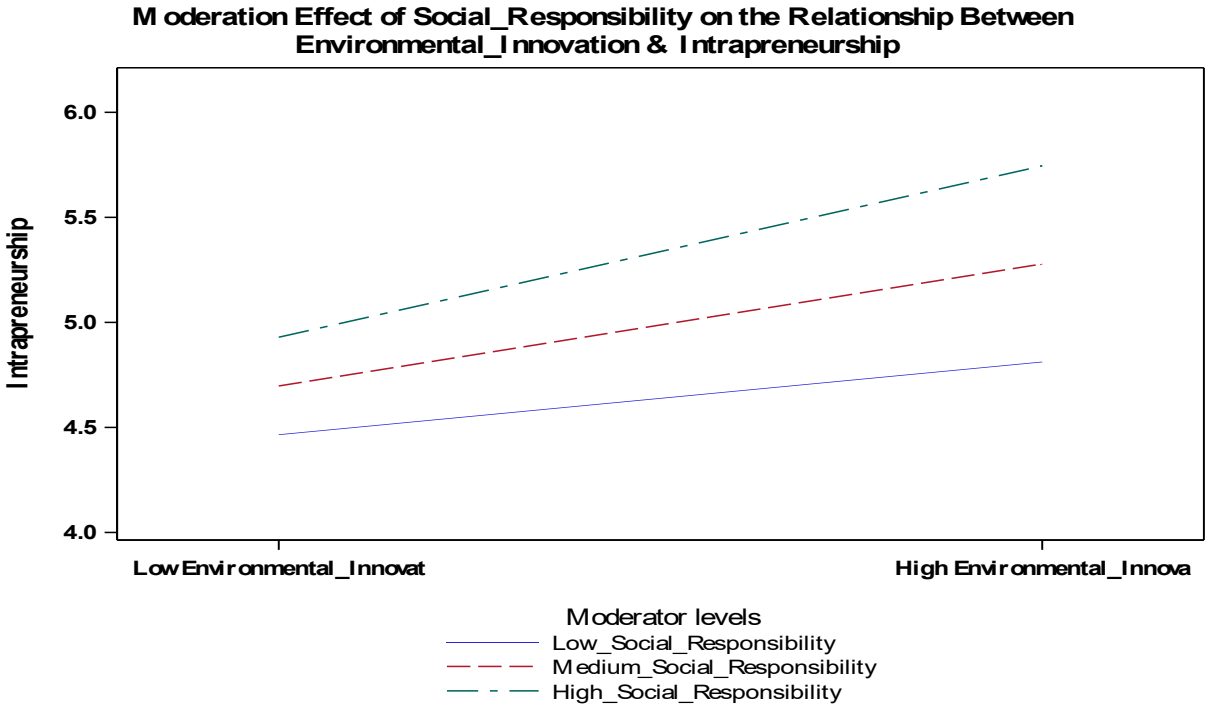

Figure 4: Moderating effect of Social responsibility on relationship between Environmental Innovation and Intrapreneurship

It can be noted that the relationship between environmental innovation and Intrapreneurship is strongest at high levels of social responsibility as shown by a stepper regression line. The stepper regression line further shows that the relationship is weakest at the low levels of social responsibility, as shown by the dark blue line. Thus, the higher the rating of social responsibility the stronger the relationship between environmental innovation and Intrapreneurship and the lower the rating of social responsibility, the weaker the relationship between environmental innovation and Intrapreneurship

4.4.4 Proposition 1 (P1) and Proposition 2 (P2)

Results pertaining to Proposition 1: The relationship between an organisations QCA score, and the organisations level of corporate responsibility environmental innovation action is positively correlated; and Proposition 2: The relationship between an organisations QCA score, and the organisations perceived level of the ecological responsibility motive is positively correlated, are detailed as per table 17 below:

Table 17: Content Analysis

Content Analysis	B	C	A
(A1) Governance structure and management systems (max score is 6)			
1. Existence of a Department for pollution control and/or management positions for environmental management (0–1)	1	1	1
2. Existence of an environmental and/or a public issues committee in the board (0–1)	0	0	1
3. Existence of terms and conditions applicable to suppliers and/or customers regarding environmental practices (0–1)	0	0	1
4. Stakeholder involvement in setting corporate environmental policies (0–1)	0	1	1
5. Implementation of ISO14001 at the plant and/or firm level (0–1)	0	1	1
6. Executive compensation is linked to environmental performance (0–1)	0	0	0
(A2) Credibility (max score is 10)			
1. Adoption of GRI sustainability reporting guidelines or provision of a CERES report (0–1)	1	1	1
2. Independent verification/assurance about environmental information disclosed in the EP report/web (0–1)	0	1	1
3. Periodic independent verifications/audits on environmental performance and/or systems (0–1)	0	1	1
4. Certification of environmental programs by independent agencies (0–1)	0	0	1
5. Product Certification with respect to environmental impact (0–1)	0	0	0
6. External environmental performance awards and/or inclusion in a sustainability index (0–1)	1	1	1
7. Stakeholder involvement in the environmental disclosure process (0–1)	0	1	1
8. Participation in voluntary environmental initiatives endorsed by EPA or Department of Energy (0–1)	1	1	1
9. Participation in industry specific associations/initiatives to improve environmental practices (0–1)	1	1	1
10. Participation in other environmental organizations/assoc. to improve environmental practices (if not awarded under 8 or 9 above) (0–1)	0	1	1

(A3) Environmental performance indicators (EPI) (max score is 60)			
1. EPI on energy use and/or energy efficiency (0–6)	4	5	6
2. EPI on water use and/or water use efficiency (0–6)	0	4	6
3. EPI on greenhouse gas emissions (0–6)	5	5	6
4. EPI on other air emissions (0–6)	0	0	6
5. EPI on TRI (land, water, air) (0–6)	0	0	3
6. EPI on other discharges, releases and/or spills (not TRI) (0–6)	0	0	0
7. EPI on waste generation and/or management (recycling, re-use, reducing, treatment and disposal) (0–6)	2	2	5
8. EPI on land and resources use, biodiversity and conservation (0–6)	0	4	5
9. EPI on environmental impacts of products and services (0–6)	1	2	5
10. EPI on compliance performance (e.g., exceedances, reportable, incidents) (0–6)	1	3	5
(A4) Environmental spending (max score is 3)			
1. Summary of rand saving arising from environment initiatives to the company (0-1)	0	0	1
2. Amount spent on technologies, R& D and/or innovations to enhance environmental performance and/or efficiency (0–1)	0	1	1
3. Amount spent on fines related to environmental issues (0–1)	0	0	0
(A5) Vision and strategy claims (max score is 6)			
1. CEO statement on environmental performance in letter to shareholders and/or stakeholders (0–1)	0	0	1
2. A statement of corporate environmental policy, values and principles, environmental codes of conduct (0–1)	0	1	1
3. A statement about formal management systems regarding environmental risk and performance (0–1)	0	0	1
4. A statement that the firm undertakes periodic reviews and evaluations of its environmental performance (0–1)	0	0	1

5. A statement of measurable goals in terms of future env. Performance (if not awarded under A3) (0–1)	1	0	1
6. A statement about specific environmental innovations and/or new technology (0–1)	0	0	1
(A6) Environmental profile (max score is 4)			
1. A statement about the firm's compliance (or lack thereof) with specific environmental standards (0–1)	0	0	1
2. An overview of environmental impact of the industry (0–1)	0	1	1
3. An overview of how the business operations and/or products and services impact the environment. (0–1)	1	1	1
4. An overview of corporate environmental performance relative to industry (0–1)	0	0	0
(A7) Environmental initiatives (max score is 6)			
1. A substantive description of employee training in environmental management and operations (0–1)	1	0	1
2. Existence of response plans in case of environmental accidents (0–1)	0	0	0
3. Int; ernal environmental awards (0–1)	1	1	1
4. Internal environmental audits (0–1)	1	1	1
5. Internal certification of environmental programs (0–1)	0	0	1
6. Community involvement and/or donations related to environ. (if not awarded under A1.4 or A2.7) (0–1)	1	1	1
Total:	**24**	**43**	**77**

The content analysis shows that institution A has the highest score for environmental reporting (77 points out of a possible 95), followed by institution C (43 points) and then institution B (22 points). The content analysis shows that the institutions differ vastly in their disclosure scores. Literature suggests that reporting by institutions has a positive relationship with actual organizational performance. Thus we can assume

from the content analysis above that institution A would perform with a higher degree of ecological responsiveness than institution B and C.

The multiple pairwise comparison noted previously in this chapter, indicates that institution A (mean = 5.45) is rated significantly higher on Environmental Innovation than institution B (mean = 4.52, p-value = 0.000) and institution C (mean = 4.49, p-value = 0.001).

It also shows that institution A rated higher (Mean = 5.36) than institution B (Mean = 5.25) and then C (Mean = 5.08), with regards to a competitive motive. Institution C rated higher with regard to a legitimation motive (Mean = 6.32), followed by A (Mean = 6.14) and then B (Mean = 6.06). Finally the Social responsibility motive showed that institution A rated higher (Mean = 5.76), than institution C (Mean = 5.53) and then institution B (Mean = 5.45). The data shows that South African banking institutions are primarily motivated by legitimation, followed by Social responsibility and then competitiveness.

4.5 Summary of Hypothesis results

Table 18: Summary of Hypotheses

Hypothesis	**β**	**P-value**	**Decision**
H1a: There is a positive relationship between ecological responsiveness and intrapreneurship	0.39	< 0.05	**Supported**
H2a: The motivator of competitiveness positively moderates the relationship between ER and Intrapreneurship	0.12	> 0.05	Not supported
H2b: Legitimacy as a motivation for ER positively moderates the relationship between ER and Intrapreneurship.	0.06	>0.05	Not Supported
H2c: Social Responsibility as a motivation for ER positively moderates the relationship between ER and Intrapreneurship	0.17	<0.05	**Supported**

4.6 Conclusion

Results of this study have shown, through a multiple regression model, that a relationship exists between ecological responsiveness and intrapreneurship, which is positively moderated by the social responsibility motive. Further to this, the proposition that suggests an organisations QCA score and the perceived level of the ecological responsibility motive is positively correlated, is indicated. The following chapter will discuss these results in further detail.

CHAPTER 5: DISCUSSION OF THE RESULTS

5.1 Introduction

In this section, research findings will be discussed, particularly with reference to similar studies and their findings, such as Bansal and Roth (2000), Paulraj (2009) and Allet (2014). By using comparative methods to discuss the finding of these three studies in conjunction with the findings of this study, we hope to gain a deeper understanding of motivations for why organisations go green. Further to this, the results of the qualitative content analysis performed, will bring to light the different levels of ecological actions that are associated with different motives and the strength of those motives as seen in the study.

This study firstly tested for a relationship between Ecological Responsiveness and Intrapreneurship. Once this was determined, the study then used the three main motives for ecological responsiveness as identified by Bansal and Roth (2000), namely legitimation, competitiveness, and ecological responsibility, to determine if different motivations showed a moderating effect on the relationship between Ecological Responsiveness and Intrapreneurship.

This chapter begins with a discussion regarding the demographic profile of research respondents, followed by discussions and study comparisons around the hypothesis and propositions presented in this study. Finally the chapter will conclude with a summary of the conclusions reached in this research paper.

5.2 Demographic profile of respondents

This study was made up of 210 survey responses on which analysis was conducted. Authors such as Hinkin (1998) suggests a minimum sample size of 200 respondents in the sample in order to complete a robust exploratory and confirmatory factor analysis. The achieved number suggest that the results of this study will be sufficiently robust.

An important consideration in this research, is the assumption that respondents were at minimum functioning as supervisors in their organisations. This management level requirement was based on previous research which notes the important role of managers in driving and implementing organisational strategy (Allet, 2014). Their role as decision makers and their understanding of organisational operations, was key to ensuring accurate and informed information was provided through the survey.

Demographic results from the survey showed that the majority of respondents represented middle management and above, with just 32% being below this, but still engaged in a decision making role. A large proportion of these management level employees were between 30 and 49. This age group is likely the most acquainted with environmental policy in business as many of them entered business at a stage when organisational environmental concern were beginning to peak, in the 1990s (Lampikoski et al., 2014). Other demographic information surveyed in this study, such as gender, had little relevance to the results of this study.

Paulraj (2009) had suggested that future research on green motivations, studies focused on specific industries in order to more clearly ascertain the main driving motive for ecological responsiveness. In contrast to the green motivation study conducted by Paulraj (2009), this study focused on a single industry in an effort to make results more generalizable to a specific industry, but also for greater comparative value when considering motives studies in the manufacturing industry by Bansal and Roth (2000), or in the financial services industry as covered by Allet (2014). The resultant ecologically responsive actions observed from different primary motives will be a key area of comparison between the studies. This research had a primary focus on three organisations within a single industry allowing for greater cross organisational

comparison. This allowed for adequate assessment of dominant motivation versus actual environmental commitment and level of action achieved.

5.3 Discussion of Hypothesis

5.3.1 H1a: There is a positive relationship between ecological responsiveness and intrapreneurship

Based on a multiple regression model, with intrapreneurship as the dependent variable and environmental innovation as the independent variable, results for the opening hypothesis (H1a) pertaining to the existence of a relationship between ecological responsiveness and intrapreneurship, showed a positive relationship. This result is in line with suggestions in the literature that ECSR provides opportunities for organisations to partake in innovative activities and that ecological responsiveness can stimulate entrepreneurship in organisations (Morrish et al., 2011).

Covin and Miles (1999), argue similarly but with reversed causality, that corporate entrepreneurship can lead to the fundamental transformation of firm products and process that support greater ecological responsiveness. Although it is difficult to prove causality, as intrapreneurial organisations may provide an environment that is conducive to greater ecological responsiveness and vice versa, the existence of a relationship is important to show that the two constructs are interlinked.

By suggesting that there is a relationship between ER and Intrapreneurship, this study can then draw conclusions as to how the moderating variables of competitiveness, legitimation and ecological responsibility effect organisational actions associated with this. Covin and Miles (1999) note that the more significant the environmental problem faced by the organisation, the more likely it is that organisations will engage in innovative or entrepreneurial activities in order to enhance environmental commitment and/or competitive advantage. Although Herrington and Kew (2016) note that South Africa's economy is factor-driven, and thus less likely to focus on innovation, the results of the regression showed environmental innovation to be significant at less than 0.05. This may be due to the fact that South African financial institutions exhibit a high level of efficiency and are operationally advanced enough to tackle

organisational entrepreneurship effectively. The results thus suggest that because a relationship exists between ER and intrapreneurship, ECSR has the potential to be a driver of organisational entrepreneurial initiatives in South Arica.

5.3.2 H2a: The motivator of competitiveness positively moderates the relationship between ER and Intrapreneurship

This study has based its analysis on three different motive studies, namely those by Bansal and Roth (2000), Paulraj (2009) and Allet (2014). These studies all strive to determine a dominant driver of ecological responsiveness and to a lesser extent explore the resultant activities most often seen from corresponding motives. However they differ significantly in geographical location of study and industry. This research is unique in that it focuses on large, listed financial institutions in the South African environment with a focus on resulting activities. A comparison however, is still useful in that there are distinctive categories of significance in the study. The studies by Bansal and Roth (2000) and Paulraj (2009) both take place in western economies, while the research by Allet (2014) and this study both take place in developing economies. Another distinction is that the study by Bansal and Roth (2000) is restricted to manufacturing organisations, whiles the study by (Paulraj, 2009) covers many industries and the study by Allet (2014) and this study cover service based financial industries. Finally, the year in which the study was conducted represents considerable importance as environmental issues within organisations are increasing in popularity. Thus creating greater awareness amongst stakeholders and potentially affecting motives for corporate greening. The analysis also draws heavily on the model of ecological responsiveness introduced by Bansal and Roth (2000).

In order to determine the second hypothesis presented in this study, the motivator of competitiveness positively moderates the relationship between ER and Intrapreneurship, a multiple regression analysis was applied to the dependent variable Intrapreneurship and the independent variable environmental innovation with a moderating variable of competitiveness. The results, as expected, showed that the moderation variable of competitiveness was not a significant predictor of intrapreneurship. While competitiveness might represent a significant motivator for ecological responsiveness in the organisation, its ability to create an innovative response from financial institutions was not apparent. This was similar to the findings

of all three previous authors, who found that competitiveness was not the primary driver for ecological responsiveness and that its resulting actions were most often in "copycat initiatives", such as EMS systems (Bansal & Roth, 2000), greener supply activities, the purchasing of environmental products, adopting existing common methods for waste reduction (Paulraj, 2009), and renewable or efficient energy promotion Allet (2014). In addition to this authors noted that the competitiveness motive was not the main motive for the implementation of these activities, but a secondary motive that was seen in conjunction with a different primary motive. As noted in the literature review, the motives for ECSR are not mutually exclusive, and can be present in an organisation simultaneously.

In the context of developing economies and thus South Africa, competitiveness is further hampered by a perception that environmental initiatives are costly to develop and implement. Thus when competitiveness is the main motive, short term cost benefits are often used to determine whether the initiative should be implemented or not. This often results in an avoidance of effective ECSR initiatives.

A finding of no moderating effect of competitiveness on the relationship between ecological responsiveness and Intrapreneurship was both expected, and is logical in the South African environment. This result was uniform across all examined institutions.

5.3.3 Hypothesis H2b: Legitimacy as a motivation for ER positively moderates the relationship between ER and Intrapreneurship.

Hypothesis H2b focussed on legitimacy as a moderating variable, in the research question of whether the motivator of legitimacy positively moderates the relationship between ER and intrapreneurship. A multiple regression analysis was applied to the dependent variable Intrapreneurship and the independent variable environmental innovation with the moderating variable of legitimacy. The results of the statistical analysis are in support of the null hypothesis, suggesting that legitimacy has no moderating effect on the relationship between ecological responsiveness and intrapreneurship.

These results were in accord with expectations derived from the literature. While legitimation through policy, regulation and stakeholder pressures, was identified by

Bansal & Roth (2000) as the most important motive for ecological responsiveness in the manufacturing sector, the resultant actions are seldom seen to encourage proactive, innovative or independent ecological responsiveness in the organisation.

Many authors have recognised the important role of legislation and stakeholder pressures in stimulating an initial ecological response from organisations (Bansal & Roth, 2000; Lawrence & Morell, 1995; Paulraj, 2009). This is particularly apparent in western locations where government effectively monitors compliance (Sonnenberg & Hamann, 2006). However, while still important for ecological responsiveness in the early adoption phase, legitimation has little to no effect in the achievement of long term and dynamic ECSR results.

The findings of Allet (2014) differed from those as identified by Bansal & Roth (2000), in that legitimacy proved to provide the least motivation for ecological responsiveness in the micro finance sector, but concur on the point that legitimation encouraged the least proactive environmental management actions, or the least ability to act outside of legal requirements for organisational survival. The research made conclusions that had application across the finance industry. Similarities exist in terms of environmental impact of the financial industry being more ancillary and more complex to monitor through legal compliance measures. The results suggested that within the finance industry ecological responsiveness that was motivated by legitimation resulted in negative and minimal action. Actions characterised by “greenwashing” strategies such as one size fits all compliance, can result in counterproductive environmental effects, suggesting that in the finance industry, increased environmental pressure from stakeholders and government is not necessarily positive. Again, by putting the action based effects of different motives for ER into a South African environment we see that previous research has concluded that when assessing organisational activities such as natural resource conservation, recycling and monitoring environmental performance, the legitimation motivation did not stimulate improvements (Hamann et al., 2015).

While findings on the dominant motive was contradictory in terms of legitimation, particularly between studies conducted in differing industries, for example manufacturing (Bansal & Roth, 2000) vs service based (Allet, 2014), there is a clear trend in the evaluation of the resultant action.

The results of this study showed for all respondents, that the introduction of the moderator, environmental innovation x legitimation did not change the R-Square. This suggests that the weakest link between ecological responsiveness and intrapreneurship was seen when the moderating variable of legitimacy was introduced. This finding would be in line with all the other comparative studies identified (Allet, 2014; Bansal & Roth, 2000; Hamann et al., 2015; Paulraj, 2009). Suggesting that legitimacy does not encourage innovation or entrepreneurial action within organisations.

5.3.4 Hypothesis H2c: Social Responsibility as a motivation for ER positively moderates the relationship between ER and Intrapreneurship

The only moderating variable that proved to result in a positive moderation for the relationship between ecological responsiveness and intrapreneurship was ecological responsibility (social responsibility). This was based on Hypothesis H2c: Social Responsibility as a motivation for ER positively moderates the relationship between ER and Intrapreneurship.

Bansal and Roth (2000) suggested in their study on why organisations go green, that social responsibility had the least ability to drive ecological responsiveness in manufacturing industries. The contrary is seen in the study by Allet (2014), which suggests that in the financial sector, ecological responsibility has a greater influence on an organisations decision to go green. This is attributed to a trend in financial institutions that has seen a rise in environmental concern, and greater adoption of the social mission and ethical responsibility associated with ECSR. With more than a decade between these two studies it is important to consider that while both the industry studied, and the geographical location of the studies might have influenced this contradictory result, changing perceptions on the role of ECSR and the attitude of organisational leaders toward supporting actions could also influence the dominant motive for ER.

Allet (2014) suggests that organisations that are dominated by an ecological responsibility motive foresee economic and strategic benefits that can be created in their organisation through effective ECSR measures. They respond by implementing proactive and positive actions for ECSR. In the financial services industry these actions include: drives for increased client awareness, internal environmental training

and offering green credits, fitting financial products to ensure promotion of ER products and processes and developing non-financial environmental services.

Allet (2014) asserts that an ecological responsibility motive implies management driven innovation or intrapreneurship is present in the organisation. From a financial perspective the role of leadership and management in social responsibility based ecological responsiveness is clear throughout the literature. Allet (2014) notes that leadership pays a key role in the advancement of social values in an organisation. Similarly Bansal and Roth (2000) and Paulraj (2009) assert the role of management and leaders in establishing ecological responsibility in their organisation. Thus by including management level in this study a clearer picture of the organisations overall view of the ecological responsibility motive is.

The results of this study shows concurrence with other motives studies in that the results suggest, through a multiple regression model, that social responsibility is indeed a positive moderating factor on the relationship between ecological responsiveness and intrapreneurship. Statistical evidence by use of a stepper regression line in the previous chapter, shows that levels of environmental intrapreneurship are higher where high levels of social responsibility are present in an organisation. Thus, the more evident social responsibility is as a dominant driver of ecological responsiveness, the stronger the relationship between environmental innovation and intrapreneurship. It can accordingly be assumed that an ecological responsibility motive for ER is characterised by independent and innovative green actions by the organisation.

5.4 Comparison of research findings

Table 19 below demonstrates the comparison between this research and the research findings of Bansal and Roth (2000), Paulraj (2009) and Allet (2014). This table represents the ranking of each motivation for ecological respondents in order of most important, moderately important and least important. It then considers which studies have noted intrapreneurship as a resultant action of the different motives for ER.

Table 19: Study comparisons for importance of motivations for ER

Motivator	Level of Importance			
	Bansal and Roth (2000)	**Paulraj (2009)**	**Allet (2014)**	**Current Research**
Legitimation	Most Important	Least Important	Least Important	Most Important
Competitiveness	Moderately Important	Moderately Important	Moderately Important	Least Important
Ecological Responsibility	Least Important	Most Important	Most Important	Moderately Important
Motivator	**Intrapreneurship**			
	Bansal and Roth (2000)	**Paulraj (2009)**	**Allet (2014)**	**Current Research**
Legitimation	None	None	None	None
Competitiveness	When seen in conjunction with ecological responsibility	When seen in conjunction with ecological responsibility	None	None
Ecological Responsibility	Yes	Yes	Yes	Yes

The data suggest that institution A rated higher (Mean = 5.36) than institution B (Mean = 5.25) and then C (Mean = 5.08), with regards to a competitive motive. Institution C rated higher with regard to a legitimation motive (Mean = 6.32), followed by A (Mean = 6.14) and then B (Mean = 6.06). Finally the social responsibility motive showed that institution A rated higher (Mean = 5.76), than institution C (Mean = 5.53) and then institution B (Mean = 5.45). The data shows that South African banking institutions are primarily motivated by legitimation, followed by social responsibility and then competitiveness.

This findings of dominant motive are interestingly in line with the study by Bansal and Roth (2000) and not Allet (2014) as expected. The competitiveness motive is also found to be the least important in the South African context of this study, which is in contrast to the other three studies that noted competitiveness as a secondary driver for ecological responsiveness. As expected social responsibility was of relevant importance in the South African context.

Most notable however is that across all studies the relationship between ecological responsiveness and intrapreneurship was moderated by the social responsibility motive. As per existing literature this study confirmed that social responsibility was the most notable driver of ecological responsiveness that encouraged innovation and entrepreneurial actions in organisations.

5.5 Discussion pertaining to Proposition

5.5.1 Proposition 1: The relationship between an organisations QCA score, and the organisations level of corporate responsibility environmental innovation action is positively correlated

Results pertaining to Proposition 1, were deduced by comparing results of the quantitative content analysis, with mean values associated with different constructs in the descriptive data, and environmental innovation levels discovered through the multiple pairwise comparison conducted against constructs from the survey.

Clarkson et al. (2008) and Rahman and Post (2012) suggest that a positive relationship exists between corporate environmental disclosure and actual

performance. This study attempts to test this by comparing the results of QCA with intrapreneurship levels presented in the survey results through the environmental innovation construct. There can be further comparison with moderating variable mean scores, in order to perform a more robust testing of the relationship between motives and actual ECSR activities. By evaluating this, the results intend to show whether the relationship between an organisations QCA score, and the organisations level of ECSR innovation is positively correlated. As the organisations QCA score increases, the environmental innovation level rises. As the literature and hypothesis have suggested a social responsibility motivation should suggest the strongest relationship with intrapreneurship, and thus environmental innovation. The key to this evaluation would be to determine if organisations with a higher social responsibility drive have a correspondingly high QCA score.

The content analysis shows that institution A has the highest score for environmental reporting (77 points out of a possible 95), followed by institution C (43 points out of a possible 95) and then institution B (22 points out of a possible 95). The multiple pairwise comparison noted previously in this chapter, indicates that institution A (mean = 5.45) is rated significantly higher on environmental innovation than institution B (mean = 4.52, p-value = 0.000) and institution C (mean = 4.49, p-value = 0.001).

While institution A showed both the highest score for environmental performance and their environmental innovation rating, institution C and B did not produce clear results. Institution C had the second highest QCA score but the lowest environmental innovation rating, while institution B had the lowest QCA score and the second highest environmental innovation rating. This suggests that the proposed relationship between an organisations actual environmental performance and their environmental innovation rating cannot be put forward.

5.5.2 Proposition 2: The relationship between an organisations QCA score, and the organisations perceived level of the ecological responsibility motive is positively correlated

When comparing the organisations QCA score to dominant drivers of environmental innovation, institution A showed the highest QCA score (77) and the highest social responsibility drive (Mean =5.76). This suggests that the higher level of social

responsibility might result in greater environmental innovation actions by the firm. Similar findings could be drawn by reviewing the QCA scores for institution C, which had a QCA score of 43 and a social responsibility mean of 5.53, and finally institution B which had the lowest QCA score of 22 points and the lowest social responsibility mean of 5.45. This suggests that the higher the social responsibility motive apparent in an organisation the higher the actual ECSR action apparent in the firm.

It also shows that institution A rated higher (Mean = 5.36) than institution B (Mean = 5.25) and then C (Mean = 5.08), with regards to a competitive motive. Institution C rated higher with regard to a legitimation motive (Mean = 6.32), followed by A (Mean = 6.14) and then B (Mean = 6.06). Finally the Social responsibility motive showed that institution A rated higher (Mean = 5.76), than institution C (Mean = 5.53) and then institution B (Mean = 5.45). The data shows that South African banking institutions are primarily motivated by legitimation, followed by social responsibility and then competitiveness. It must be noted however that the mean values for all 3 motives were high (above 5) for all three motives. This only suggests that the constructs do not exist exclusively in the organisations, but that in general, even though the legitimation motive is noted as the dominant driver for ECSR, there is still an acceptance of environmental responsibility and to a lesser extent competition as a driver for ER.

While the first proposition put forward in this study is not supported the data suggests that the second proposition on the relationship between an organisations QCA score, and the organisations perceived level of the ecological responsibility motive was supported.

The data suggests that a stronger perceived level of environmental responsibility in an organisation, results in better reported and actual scores for environmental practices. This is evident even when social/ecological responsibility is not the main driver for ECSR.

5.6 Conclusion

As evident throughout the study, different drivers for ECSR emphasize different levels of corporate environmental actions. This study showed consistent results with previous research findings on the relationship between ECSR and intrapreneurship by suggesting that a social responsibility motive drives innovation in organisations. The results suggest that the social responsibility motive for ECSR is superior to other motivations in its ability to moderate the relationship between ER and intrapreneurship. While social responsibility was not seen to be the dominant driver of ECSR in South African financial institutions, an understanding of how to adopt organisational changes to enhance the entrepreneurial performance of an organisation is relevant.

While there was no support for the proposed relationship between an organisations QCA score and environmental innovation score, the supported second proposition suggests that in order for firms to engage in greater ECSR action the social responsibility motive should be fostered. This puts forward that in order for organisations to be proactive and innovative in their approach to ECSR an ecological/social responsibility motive must be aspired to.

CHAPTER 6: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

6.1 Introduction

Ecologically and socially responsible entrepreneurship serves to destroy prevailing products and process in organisations, in order to replace them with products and services that that are not only ecologically benign but that sometimes improve the quality of the environment. This is what Schumpeter (1976) referred to as creative destruction. Entrepreneurship that serves environmental purposes has been found to not only be an imperative of sustainable business and a source of competitive advantage (Schaltegger & Wagner, 2011), but also a key method for long term environmental protection (Lenox & York, 2011). This study prescribes to the idea that organisational entrepreneurship or intrapreneurship, could resolve many of the world's environmental challenges. A consideration of what could encourage an innovative ecological response from organisations is consequently important for research in this field. While this study doesn't attempt to generalise on motives for ecological responsiveness in the South African business environment, it does attempt to draw some assumptions on what motivations have the greatest moderating effect on the relationship between ecological responsiveness and intrapreneurship and thus what policies and behaviours organisations should adopt in order to encourage this.

In this concluding chapter, a final discussion of findings and summary will take place. The second section will draw on implications of the research findings, its practical and theoretical implications. It hopes to provide useful recommendations for stakeholders in the field of environmental corporate responsibility and corporate entrepreneurship.

Finally the chapter will provide recommendations for future research based on findings of the study, and suggested avenues for development of research instruments, to provide a more robust analysis of the topics addressed within this study.

6.2 Research Findings

This study provides a modest contribution to suggestions for future research by Bansal and Roth (2000), who suggested that a deductive research design should be adopted in the field of motivations for ecological responsiveness, in order to make effective assumptions on the relative effectiveness of different drivers.

Based on this suggestion, this study, has considered the relationship between environmental corporate social responsibility and the ensuing actions that result from it. Central to this was the idea that a relationship existed between ECSR and intrapreneurship, suggesting the existence of links between an organisations ecological responsiveness and sustainability innovations. The practical implications of this research especially relate to what motives for ER are most likely to encourage this relationship, and thus provide a basis for organisational policy makers, leaders and institutional entrepreneurs, from which to create their environmental policy from.

Using primarily survey based data, this study aimed to determine first and foremost if a relationship existed between ecological responsiveness and intrapreneurship. The results of a multiple regression analysis on the two constructs of ecological responsiveness and intrapreneurship, show that the existence of a relationship between the concepts was positive. Thus, the original hypothesis was accepted. Based on suggestions in the literature that ecological corporate social responsibility affords opportunities for organisations to partake in innovative activities (Ketola, 2014; Morrish et al., 2011; Schaltegger, 2002), the positive statistical results, that were conclusive across all financial institutions studied, give affirmation to the existence of the relationship in large financial/service based organisations in South Africa.

The results of the hypothesis related to the moderating effect of different motives for ecological responsiveness, applied to the above confirmed relationship, showed mixed results. By using multiple regression analysis against the provided data, no moderating effect was found for the competitiveness and legitimation motives. This was consistent with suggestions from prior research that found that the competitiveness and legitimation motives resulted most commonly in reactive approaches to ECSR and not proactive or innovative approaches (Allet, 2014; Bansal & Roth, 2000; Paulraj, 2009). The authors of this prior research noted actions such as

cost efficiencies, product differentiation, reduced energy use, waste reduction, reduced material expenditure (Allet, 2014), and other copy-cat initiatives (Paulraj, 2009). The findings of this study suggest that intrapreneurship is not moderated by competitiveness or legitimation, which cements the findings of these previous authors.

The hypothesis relating to the moderating effect of ecological responsibility on the relationship between ER and intrapreneurship was supported in this study. This further confirms suggestions from prior inductive research that the ecological responsibility motive results in more proactive and innovative measures for ECSR in organisations. Paulraj (2009) had shown that organisations with an ecological responsibility motive was less inclined to mimic ecological actions of other organisations, but rather develop differentiating green strategies that encourage innovative product and process creations. While the findings of this study do not attempt to infer causality by suggesting that ecological responsiveness is the cause of environmental innovation in organisations, this research in combination with prior research findings allows us to suggest that ecological responsibility might be one of the drivers of innovative actions by the organisation.

The bulk of research conducted on motivations for ecological responsiveness used an inductive approach to developing an understanding of the actions that result from the different drivers for ecological responsiveness (Allet, 2014; Bansal & Roth, 2000; Hamann et al., 2015). This study attempted to use a deductive approach through the use of a transparent and reliable content analysis instrument, to confirm the suggested resulting actions of motives for ecological responsiveness.

The results of the content analysis on the proposed positive relationship between an organisations QCA score, and the organisations level of perceived environmental innovation found no conclusive result. While institution A showed a significantly high QCA score and a comparatively high ecological innovation score, the findings pertaining to institution B and institution C did not support this. The literature does not suggest that innovation will amount to greater quantities of general ecologically responsive activity and so this study, while attempting to determine whether a relationship existed did not alternate from or concur with any writings on the topic.

The second proposition based on a relationship between an organisations QCA score, and the organisations perceived level of the ecological responsibility motive is positively correlated. While prior research had suggested that ecological responsibility resulted in innovative actions by organisations, it did not conclude that the ecological responsibility motive resulted in comparatively more ecologically responsive actions as suggested by the content analysis. In fact, Paulraj (2009) noted in his study on ER motives that within the context of entrepreneurial environmental responsiveness, competitiveness and not ecological responsibility showed the highest output for ecologically responsive actions. Interestingly, the dominant motive for all firms in this study was legitimacy which the literature suggests, should result in minimal adoption of ecologically responsive action. Contrasting to this, competitiveness was shown to be the lowest driver of ecological responsive actions in the literature (Allet, 2014; Bansal & Roth, 2000). The findings of this study are different from those presented in previous studies on the actual quantity of ER action that takes place when different motives are apparent. This provides an avenue for future deductive studies to explore.

This study contributes to quantitative knowledge development around resulting actions of motivations for ecological responsiveness. While ecological motivation studies have been conducted in South Africa for SMMEs, this study created a basis for researchers in developing economies, to comparatively assess these actions in large organisations. The points of similarity further help to cement hypothesised relationships between the ecological responsibility motive for ECSR and intrapreneurship, as well as that between ECSR and organisational innovation.

6.3 Implications and Recommendations

Although significant and recent research has been conducted in the field of motives for ecological responsiveness (Allet, 2014; Hamann et al., 2015; Paulraj, 2009), the majority of ECSR motive studies rely on inductive methods for determining the resultant actions of an organisations motives for corporate greening, if actions are considered as part of the main analysis at all. The present study recognises that resulting actions of ECSR motives are an important aspect of encouraging the development of different motives in a practical organisational context. While the identification of dominant motives is an important aspect of ECSR studies, the

functional application of dominant motive knowledge without a thorough enquiry into its resulting actions has limited practical implications. Development of research that has greater value for ECSR practitioners, and not just academic value, is important for the progress of truly sustainable and effective ECSR strategy.

This research shows that there are important implications related to the dominant driver of ecological responsiveness in organisations. As such, this study has identified an opportunity for policy makers and creators of ECSR strategy, to create an environment within their organisation that fosters greater ecological innovation, and ultimately a sustainable competitive advantage.

The findings of this research suggested that the motive of ecological responsibility showed a positive moderating effect on the relationship between ECSR and environmental intrapreneurship. By considering this in organisational policy creation, practitioners can draw from existing literature to create an organisational environment that promotes an ecologically responsive motive. Bansal and Roth (2000), concluded in their study that the ethical orientation of leaders within the organisation, is often a direct determinant of the organisations culture. By selecting leaders with an environmentally orientated approach, organisations can encourage a socially responsible ethic within the organisation. This can in turn, result in a more innovative approach to ECSR. Furthermore, Sonnenberg and Hamann (2006) found that investing stakeholders in South African organisations showed low levels of ecological awareness and were thus less concerned about ECSR strategies. Increasing stakeholder awareness could encourage the adoption of more robust ECSR activities within the organisation.

Both the survey based findings and the QCA findings of this research support the notion that ecological responsibility is an important driver for significant and broad ECSR actions. Thus, a comprehensive effort by firms to cultivate an ecologically responsive environment should be at the forefront of ECSR strategy development.

6.4 Limitations of research

As suggested in previous chapters, the cross sectional design of this study makes it difficult to generalise. The study is also restricted to a single industry in a single country. However, areas of this study that have shown similarity with other studies might create a more robust and therefor generalizable aspect to the study. While efforts were made to reduce social desirability bias and or common method bias, by ensuring anonymity of respondents and ensuring there are were overlapping questions in the survey, this still represented a limitation of the study.

6.5 Suggestions for further ECSR research

Even though this study attempted to address gaps in ECSR literature by consolidating the industry examined, and by providing empirical research for ECSR motives and resulting actions, only one construct was examined with regards to its relationship with an organisations QCA score. Future research should endeavour to incorporate all three motives for ECSR in their attempt to identify actual environmental performance in organisations, resultant from differing motives for ECSR.

The results of the content analysis on the proposed positive relationship between an organisations QCA score, and the organisations level of perceived environmental innovation found no conclusive result. This suggests that future research should seek to find a more robust instrument for the effective measurement of the relationship between an organisations environmental strategies and actions, and environmental corporate entrepreneurship. Whilst this study attempted to use a construct valid instrument with significant hard disclosure items for content analysis, the understanding that its use as a quality measurement tool, due to uncertainty surrounding self-reporting on environmental initiatives, causes concern for authors is noted (Clarkson et al., 2008; Ingram & Frazier, 1980; Rahman & Post, 2012; Wiseman, 1982). Shortcomings of the more advanced tool for QCA as presented by Rahman and Post (2012), included a binary approach to scoring, which did not allow for a representation of different levels of applicability for different constructs present in an organisation. It further presented tools for analysis that relied on external organisations that were often specific to the American environment. Thus, a prior tool by Clarkson

et al. (2008) was relied on. However the prevalence of soft disclosure items in this tool further enhanced the relevance of concerns by previous authors, over the reliability of measures that depend on self-reported items. Future research can aim to improve on the methods used for analysis and work toward the creation of a robust measurement tool for gauging a firms reported ECSR activities on a global scale.

A further point of investigation is the sample of the study. While the sample size was acceptable, the narrow range of institutions assessed in this study allowed for a limited comparative process. Future research should attempt to broaden the study to a greater number of institutions, and to present it across different sectors.

6.6 Conclusion

The outcomes of this research serves to advance academic and practical knowledge concerning the differences in resulting actions from varying ECSR motivations, and the effects of the ecological responsibility motive on subsequent environmental practices. This is in order to provide a modest base from which future ECSR research can be conducted. In summary, the research presented gives focus to the gaps identified in previous literature, suggesting that the delivery of empirical evidence, through cross sectional data collection, can assist in strengthening previous studies that suggest links between motivations for ecological responsiveness and resulting actions for ECSR. Its function as a branch of entrepreneurship study also serves as an important foundation for further enquiry.

REFERENCES

Adcock, R. (2001). *Measurement validity: A shared standard for qualitative and quantitative research.* Paper presented at the American Political Science Association.

Ahmad, F., Zayed, N. M., & Harun, M. A. (2013). Factors behind the Adoption of Green Banking by Bangladeshi Commercial Banks. *ASA University Review, 7*(2), 241-255.

Allet, M. (2014). Why Do Microfinance Institutions Go Green? An Exploratory Study. *Journal of Business Ethics, 122*(3), 405-424. doi:10.1007/s10551-013-1767-2

Allet, M., & Hudon, M. (2015). Green microfinance: Characteristics of microfinance institutions involved in environmental management. *Journal of Business Ethics, 126*(3), 395-414.

Ansoff, H. I., & McDonnell, E. J. (1990). *Implanting strategic management*: Prentice hall.

Antoncic, B., & Hisrich, R. D. (2001). Intrapreneurship: Construct refinement and cross-cultural validation. *Journal of Business Venturing, 16*(5), 495-527.

Antoncic, B., & Hisrich, R. D. (2004). Corporate entrepreneurship contingencies and organizational wealth creation. *Journal of Management Development, 23*(6), 518-550.

Araya, M., & Christen, R. P. (2004). Microfinance as a tool to protect biodiversity hot-spots. *Washington DC: CGAP*.

Auer Antoncic, J., & Antoncic, B. (2011). Employee satisfaction, intrapreneurship and firm growth: a model. *Industrial Management & Data Systems, 111*(4), 589-607.

Babiak, K., & Trendafilova, S. (2011). CSR and environmental responsibility: motives and pressures to adopt green management practices. *Corporate social responsibility and environmental management, 18*(1), 11-24.

Bahl, S. (2012). Green banking-The new strategic imperative. *Asian Journal of Research in Business Economics and Management, 2*(2), 176-185.

Bansal, P., & Roth, K. (2000). Why companies go green: a model of ecologicall responsiveness. . *Academy of management journal, 43*(4), 717-736. doi:10.2307/1556363

Barlett, J. E., Kotrlik, J. W., & Higgins, C. C. (2001). Organizational research: Determining appropriate sample size in survey research. *Information technology, learning, and performance journal, 19*(1), 43.

Brønn, P. S., & Vidaver-Cohen, D. (2009). Corporate motives for social initiative: legitimacy, sustainability, or the bottom line? *Journal of Business Ethics, 87*(1), 91-109.

Carroll, A. B. (1999). Corporate social responsibility evolution of a definitional construct. *Business & society, 38*(3), 268-295.

Cho, C. H., & Patten, D. M. (2007). The role of environmental disclosures as tools of legitimacy: A research note. *Accounting, Organizations and Society, 32*(7), 639-647.

Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society, 33*(4), 303-327.

Colwell, S. R., & Joshi, A. W. (2013). Corporate Ecological Responsiveness: Antecedent Effects of Institutional Pressure and Top Management Commitment and Their Impact on Organizational Performance. *Business Strategy & the Environment (John Wiley & Sons, Inc), 22*(2), 73-91. doi:10.1002/bse.732

Cordano, M., Marshall, R. S., & Silverman, M. (2010). How do small and medium enterprises go “green”? A study of environmental management programs in the US wine industry. *Journal of Business Ethics, 92*(3), 463-478.
Covin, J. G., & Miles, M. P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship: Theory and practice, 23*(3), 47-47.
Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. *Handbook of mixed methods in social and behavioral research*, 209-240.
Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of management journal, 34*(3), 555-590.
Deegan, C. (2006). Methodological issues in accounting research: theories and methods. In Z. Hoque (Ed.), (pp. 161-182): Spiramus Press Ltd.
Dess, G. G., & Lumpkin, G. T. (2005). The Role of Entrepreneurial Orientation in Stimulating Effective Corporate Entrepreneurship. *Academy of Management Executive, 19*(1), 147-156. doi:10.5465/AME.2005.15841975
Dixon-Fowler, H. R., Slater, D. J., Johnson, J. L., Ellstrand, A. E., & Romi, A. M. (2013). Beyond “does it pay to be green?” A meta-analysis of moderators of the CEP–CFP relationship. *Journal of Business Ethics, 112*(2), 353-366.
Dixon, S. E. A., & Clifford, A. (2007). Ecopreneurship - a new approach to managing the triple bottom line. *Journal of Organizational Change Management, 20*(3), 326-345. doi:10.1108/09534810710740164
Driver, T., Saunders, C., & Guenther, M. (2011). *Sustainability Trends in emerging markets: market drivers for sustainable consumption in China and India*: ARGOS.
Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California management review, 36*(2), 90-100.
Elkington, J. (1997). Cannibals with forks. *The triple bottom line of 21st century*.
Figge, F., Hahn, T., Schaltegger, S., & Wagner, M. (2002). The sustainability balanced scorecard–linking sustainability management to business strategy. *Business strategy and the Environment, 11*(5), 269-284.
Freeman, R. E., & McVea, J. (2001). *A stakeholder approach to strategic management*.
Ganda, F., & Ngwakwe, C. C. (2014). Energy and carbon reduction practices in South African banks.
Gladwin, T. N., Kennelly, J. J., & Krause, T.-S. (1995). Shifting paradigms for sustainable development: Implications for management theory and research. *Academy of management Review, 20*(4), 874-907.
Gumpert, D. E., & Stevenson, H. (1985). The heart of entrepreneurship. *Harvard Business Review, 63*(2), 85-94.
Guth, W. D., & Ginsberg, A. (1990). Guest editors' introduction: Corporate entrepreneurship (pp. 5-15): JSTOR.
Guthrie, J., & Parker, L. D. (1989). Corporate social reporting: a rebuttal of legitimacy theory. *Accounting and business research, 19*(76), 343-352.
Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). Multivariate data analysis . Uppersaddle River. *Multivariate Data Analysis (5th ed) Upper Saddle River*.
Hamann, R., Smith, J., Tashman, P., & Marshall, R. S. (2015). Why do SMEs go green? An analysis of wine firms in South Africa. *Business & society*, 0007650315575106.
Hannan, M. T., & Freeman, J. (1984). Structural inertia and organizational change. *American sociological review*, 149-164.

Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of management Review, 20*(4), 986-1014.
Hart, S. L., & Milstein, M. B. (1999). Global sustainability and the creative destruction of industries. *MIT Sloan Management Review, 41*(1), 23.
Hartwick, J. M. (1977). Intergenerational equity and the investing of rents from exhaustible resources. *The american economic review, 67*(5), 972-974.
Heikkurinen, P. (2010). Image differentiation with corporate environmental responsibility. *Corporate social responsibility and environmental management, 17*(3), 142.
Herrington, M., & Kew, P. (2015). *Global entrepreneurship monitor: South African Report 2015/16. Is South Africa heading for an economic meltdown?* . Retrieved from Graduate School of Business. Cape Town: University of Cape Town.
:
Herrington, M., & Kew, P. (2016). *GEM: South African Report*. Retrieved from file:///C:/Users/CayleyC/Downloads/gem-south-africa-2015-2016-report-1464165654.pdf
Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational research methods, 1*(1), 104-121.
Hockerts, K., & Wüstenhagen, R. (2010). Greening Goliaths versus emerging Davids—Theorizing about the role of incumbents and new entrants in sustainable entrepreneurship. *Journal of Business Venturing, 25*(5), 481-492.
Hoffman, A. J. (1999). Institutional evolution and change: Environmentalism and the US chemical industry. *Academy of management journal, 42*(4), 351-371.
Hörisch, J. (2015). The Role of Sustainable Entrepreneurship in Sustainability Transitions: A Conceptual Synthesis against the Background of the Multi-Level Perspective. *Administrative Sciences (2076-3387), 5*(4), 286-300. doi:10.3390/admsci5040286
Hossain, D. M., Al Bir, A. T. S., Tarique, K. M., & Momen, A. (2016). Disclosure of Green Banking Issues in the Annual Reports: A Study on Bangladeshi Banks. *Middle East Journal of Business, 11*(1), 19-30. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=112172410&site=ehost-live
Ingram, R. W., & Frazier, K. B. (1980). Environmental performance and corporate disclosure. *Journal of accounting research*, 614-622.
Isaak, R. (2002). The Making of the Ecopreneur. *Greener Management International*(38), 81. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=9997702&site=ehost-live
Kaeufer, K. (2010). Banking as a Vehicle for Socio-economic Development and Change: Case Studies of Socially Responsible and Green Banks. *Presencing Institute, Cambridge, MA*.
Kakabadse, N. K., Kakabadse, A., & Kouzmin, A. (2002). Ethical Considerations in Management Research: A 'Truth'Seeker's Guide. *International Journal of Value-Based Management, 15*(2), 105-138.
Keogh, P. D., & Polonsky, M. J. (1998). Environmental commitment: a basis for environmental entrepreneurship? *Journal of Organizational Change Management, 11*(1), 38-49.
Ketola, T. (2014). Rationale, Morals, and Needs Pyramid for Corporate Responsibility Development. *Corporate Social Responsibility & Environmental Management, 21*(4), 228-239. doi:10.1002/csr.1317

KPMG. (1997). *KPMG–IEF Top SA Companies Environmental Survey* Retrieved from Johannesburg: KPMG:
Kunz, M. B. (2016). A Proposed Investigation of Corporate Social Responsibility Reporting on Fortune 500 Corporate Websites. *Journal of Leadership, Accountability and Ethics, 13*(2), 93.
Lampikoski, T., Westerlund, M., Rajala, R., & Möller, K. (2014). Green Innovation Games: VALUE-CREATION STRATEGIES FOR CORPORATE SUSTAINABILITY. *California Management Review, 57*(1), 88-116. doi:10.1525/cmr.2014.57.1.88
Lawrence, A., & Morell, D. (1995). Research in corporate social performance and policy.
Leedy, P. D., & Ormrod, J. E. (2005). *Practical research*: publisher not identified.
Lenox, M., & York, J. G. (2011). Environmental entrepreneurship: Cambridge, UK: Oxford University Press.
Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of management Review, 21*(1), 135-172.
Mazurkiewicz, P. (2004). Corporate environmental responsibility: Is a common CSR framework possible. *World Bank, 2*.
McDougall, P., Shane, S., & Oviatt, B. M. (1994). Explaining the formation of international new ventures: The limits of theories from international business research. *Journal of Business Venturing, 9*(6), 469-487. doi:http://dx.doi.org/10.1016/0883-9026(94)90017-5
McGrath, R. G., Venkataraman, S., & MacMillan, I. C. (1992). *Measuring the outcomes of corporate venturing: an alternative perspective.* Paper presented at the Academy of Management Proceedings.
Meena. (2013). Green banking as initiative for sustainable development. *Global Journal of Management and Business Studies, 3*(10), 1181-1186.
Meena, D., Das, P., Kumar, S., Mandal, S., Prusty, A., Singh, S., . . . Pal, A. (2013). Beta-glucan: an ideal immunostimulant in aquaculture (a review). *Fish physiology and biochemistry, 39*(3), 431-457.
Menon, A., & Menon, A. (1997). Enviropreneurial marketing strategy: the emergence of corporate environmentalism as market strategy. *The Journal of Marketing*, 51-67.
Miles, M. P., Munilla, L. S., & Darroch, J. (2009). Sustainable corporate entrepreneurship. *International Entrepreneurship and Management Journal, 5*(1), 65-76.
Morris, D. (2016). *What Does Corporate Social Responsibility Mean to Fortune 500 Companies and Why? A 2015 CSR audit of the top 25 Fortune 500 Companies.* (Master of Science), Syracuse University. (478)
Morris, M. H., Lewis, P. S., & Sexton, D. L. (1994). Reconceptualizing entrepreneurship: an input-output perspective. *SAM Advanced Management Journal, 59*(1), 21.
Morrish, S. C., Miles, M. P., & Polonsky, M. J. (2011). An exploratory study of sustainability as a stimulus for corporate entrepreneurship. *Corporate Social Responsibility & Environmental Management, 18*(3), 162-171. doi:10.1002/csr.271
Müller, A.-L., & Pfleger, R. (2014). Business transformation towards sustainability. *Business Research, 7*(2), 313-350. doi:10.1007/s40685-014-0011-y
Nayager, T., & Van Vuuren, J. J. (2015). An analysis of an organisational strategy, structure and culture that supports corporate entrepreneurship in established organisations. *South African Journal of Economic and Management Sciences, 8*(1), 29-38.
Norman, W., & MacDonald, C. (2004). Getting to the bottom of "triple bottom line". *Business Ethics Quarterly, 14*(02), 243-262.

Nwagbara, U., & Reid, P. (2013). Corporate Social Responsibility (CSR) and Management Trends: Changing Times and Changing Strategies. *Economic Insights - Trends & Challenges, 65*(2), 12-19. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=89188918&site=ehost-live

Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). ES-QUAL a multiple-item scale for assessing electronic service quality. *Journal of service research, 7*(3), 213-233.

Paulraj, A. (2009). Environmental motivations: a classification scheme and its impact on environmental strategies and practices. *Business Strategy & the Environment, 18*(7), 453-468. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=44838071&site=ehost-live

Porter, M. E. (2000). Green and Competitive: Ending the Stalemate. *The Dynamics of the eco-efficient economy: environmental regulation and competitive advantage*, 33.

Rahman, N., & Post, C. (2012). Measurement Issues in Environmental Corporate Social Responsibility (ECSR): Toward a Transparent, Reliable, and Construct Valid Instrument. *Journal of Business Ethics, 105*(3), 307-319. doi:10.1007/s10551-011-0967-x

Rourke, L., & Anderson, T. (2004). Validity in quantitative content analysis. *Educational Technology Research and Development, 52*(1), 5-18.

Schaltegger, S. (2002). A Framework for Ecopreneurship. *Greener Management International*(38), 45. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=9997716&site=ehost-live

Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: categories and interactions. *Business Strategy & the Environment (John Wiley & Sons, Inc), 20*(4), 222-237. doi:10.1002/bse.682

Schollhammer, H. (1982). Internal corporate entrepreneurship. *Encyclopedia of entrepreneurship, 209*, 223.

Schumpeter, J. (1976). Capitalism, society, and democracy: New York: Harper & Row.

Sharma, S., & Vredenburg, H. (1998). Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. *Strategic management journal*, 729-753.

Sonnenberg, D., & Hamann, R. (2006). The JSE Socially Responsible Investment Index and the state of sustainability reporting in South Africa. *Development Southern Africa, 23*(2), 305-320.

Stevenson, H. H., & Carlos Jarrillo-Mossi, J. (1986). Preserving entrepreneurship as companies grow. *Journal of Business Strategy, 7*(1), 10-23.

Timmons, J. A., & Spinelli, S. (2008). *New venture creation*. Homewood, IL: Irwin Publishing.

Trumpp, C., Endrikat, J., Zopf, C., & Guenther, E. (2015). Definition, Conceptualization, and Measurement of Corporate Environmental Performance: A Critical Examination of a Multidimensional Construct. *Journal of Business Ethics, 126*(2), 185-204. doi:10.1007/s10551-013-1931-8

Urban, B., & Wood, E. (2015). The importance of opportunity recognition behaviour and motivators of employees when engaged in corporate entrepreneurship. *Journal of Business Economics & Management, 16*(5), 980-994. doi:10.3846/16111699.2013.799087

Varadarajan, P. R., & Menon, A. (1988). Cause-related marketing: A coalignment of marketing strategy and corporate philanthropy. *The Journal of Marketing*, 58-74.

Verrecchia, R. E. (1983). Discretionary disclosure. *Journal of accounting and economics, 5*, 179-194.

Visser, W. (2005). Corporate Citizenship in South Africa. *Journal of Corporate Citizenship*(18), 29-38. Retrieved from http://0-search.ebscohost.com.innopac.wits.ac.za/login.aspx?direct=true&db=bth&AN=18086830&site=ehost-live&scope=site

Walley, E., & Stubbs, M. (2000). Termites and Champions. *Greener Management International*, 41-41.

Walley, E., & Taylor, D. (2002). Opportunists, Champions,Mavericks...? *Greener Management International*(38), 31. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=9997726&site=ehost-live

Wiseman, J. (1982). An evaluation of environmental disclosures made in corporate annual reports. *Accounting, Organizations and Society, 7*(1), 53-63.

Zahra, S. A., & Covin, J. G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of Business Venturing, 10*(1), 43-58.

Żak, A. (2015). Triple bottom line concept in theory and practice. . *Koncepcja potrójnej linii przewodniej w teorii i w praktyce.*(387), 251-264. doi:10.15611/pn.2015.387.21

Appendix A: Survey Research Instrument

This study uses pre-existing survey instruments from the studies: “Environmental Motivations: a Classification Scheme and its Impact on Environmental Strategies and Practices” (Paulraj, 2009), “Corporate Motives for Social Initiative: Legitimacy, Sustainability, or the Bottom Line?” (Brønn & Vidaver-Cohen, 2009) and “Corporate entrepreneurship contingencies and organizational wealth creation” (Antoncic & Hisrich, 2004) to create a single more comprehensive survey instrument as attached.

Furthermore, it makes use of the content analysis instrument constructed by (Rahman & Post, 2012), as attached at the back of this proposal.

Survey:

This scale was submitted to respondents on a seven-point Likert scale template as attached. To avoid bias the items were not necessarily administered in this order and headings were removed.

Motives Scale Items:

Environmental innovation Cronbach α = 0.93

EI1. Our organisation has a cultural emphasis on innovation and R&D in environmentally friendly products. 0.80

EI2. Our organisation has a high rate of environmentally friendly product introductions. 0.79

EI3. We have a bold, innovative, environmentally friendly product development approach. 0.83

EI4. Our organisation has a proactive posture to the environmental market. 0.81

EI5. Our organisation is one of the first to introduce new environmentally friendly technologies and products. 0.76 (Paulraj, 2009)

Competitiveness (profit driven) Cronbach α = 0.782

C1: If we do not engage in environmental initiatives, regulators will force us to do so. .756

C2: As a private organisation, we can solve environmental problems better than non-profit agencies .655 (removed after pilot)

C3: Our shareholders demand that we engage in environmental initiatives.626

C4: Our organisation can earn money by solving environmental problems .572

C5: We must engage in social initiatives to maintain our position against competitors .567 (Brønn & Vidaver-Cohen, 2009)

Legitimation (law abidance and credibility) Cronbach α = 0.80

L1: Engaging in environmental initiatives can improve our image .837

L2: Engaging in environmental initiatives serves our company's long-term interests.772

L3: People inside and outside our organisation expect us to engage in environmental initiatives .632 (Removed after pilot)

L4: We wish to be seen at the forefront of society's legal, moral and ethical standards .620 (Brønn & Vidaver-Cohen, 2009)

Social responsibility (individual concern) Cronbach α = 0.802

S1: There are no good reasons not to engage in environmental initiatives .743

S2: People in our organisation are concerned about environmental problems and want to help .720

S3: It makes us feel good to work on environmental problems.673

S4: Engaging in environmental initiatives can build networks in foreign cultures.663

S5: Engaging in environmental initiatives helps us gain knowledge from environmental service organisations .578

S6: Our organisation has valuable resources that can be used to solve environmental problems.513 (Brønn & Vidaver-Cohen, 2009)

Intrapreneurship Scale Items:

Intrapreneurship Cronbach α = 0.90

I1: To what extent is your organisation stimulating new demand on existing products in your current markets through aggressive advertising and marketing.

I2: To what extent is your organisation broadening business lines in current industries

I3: To what extent is your organisation pursuing new businesses in new industries that are related to your current business

I4: To what extent is your organisation finding new niches for your products in your current markets

I5: To what extent is your organisation entering new businesses by offering new lines and products.

I6: How much does your organisation emphasise developing new products

I7: At what rate does your organisation introduce new products into the market?

I8: To what extent does your company spend on new product development activities?

I9: To what extent does your company add new products?

I10: To what extent does your organisation invest in developing proprietary technologies?

I11: To what extent does your organisation adoption technologies developed by other companies or industries

I12: To what extent does your organisation emphasise technological innovation

I13: To what extent does your organisation emphasise pioneering technological developments in your industry

I14: To what extent has your company's revenue been impacted by products that did not exist three years earlier

I15: To what extent is innovation defined in your company's mission

I16: To what extent is innovation a part of your business concept

I17: To what extent does innovation redefining the industries in which your company will compete?

I18: To what extent is your organisation reorganizing units and divisions to increase innovation

I19: To what extent is your organisation coordinating activities among units to enhance company innovation

I20: To what extent is your organisation increasing the autonomy (independence) of different units to enhance their innovation?

I21: To what extent is your organisation adopting flexible organizational structures to increase innovation (Antoncic & Hisrich, 2004)

Intrapreneurship and motives survey.

Demographic Questions

Age group: 18-29 ☐
30-39 ☐
40-49 ☐
50-59 ☐
60-69 ☐
70-79 ☐

Gender: Male ☐
Female ☐

Level of Employment: Junior Management ☐
Middle Management ☐
Senior Management ☐
Executive Management ☐
Other (please specify) ☐

Scale Questions

	Question:	Strongly Disagree	Moderately disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
		1	2	3	4	5	6	7
1	Our organisation has a cultural emphasis on innovation and R&D in environmentally friendly products							
2	Our organisation has a high rate of environmentally friendly product introductions							
3	We have a bold, innovative, environmentally friendly product development approach							
4	Our organisation has a proactive posture to the environmental market							
5	Our organisation is one of the first to introduce new environmentally friendly technologies and products							
6	If we do not engage in environmental initiatives, regulators will force us to do so							
7	Our shareholders demand that we engage in environmental initiatives							
8	Our organisation can earn money by solving environmental problems							
9	We must engage in social initiatives to maintain our position against competitors							
10	Engaging in environmental initiatives can improve our image							
11	Engaging in environmental initiatives serves our company's long-term interests							
12	We wish to be seen at the forefront of society's legal, moral and ethical standards							
13	There are no good reasons not to engage in environmental initiatives							
14	People in our organisation are concerned about environmental problems and want to help							
15	It makes us feel good to work on environmental problems							
16	Engaging in environmental initiatives can build networks in foreign cultures							
17	Engaging in environmental initiatives helps us gain knowledge from environmental service organisations							
18	Our organisation has valuable resources that can be used to solve environmental problems							

	Question:	**Not at all**	**Very small degree**	**Small Degree**	**Medium degree**	**High Degree**	**Very High Degree**	**Always**
		1	**2**	**3**	**4**	**5**	**6**	**7**
19	Is your organisation stimulating new demand on existing products in your current markets through aggressive advertising and marketing							
20	Is your organisation broadening business lines in current industries							
21	Is your organisation pursuing new businesses in new industries that are related to your current business							
22	Is your organisation finding new niches for your products in your current markets							
23	Is your organisation entering new businesses by offering new lines and products							
24	How much does your organisation emphasise developing new products							
25	Does your organisation introduce new products into the market							
26	Does your organisation spend money on new product development activities							
27	Does your organisation add new products							
28	Does your organisation invest in developing proprietary technologies							
29	Does your organisation adoption technologies developed by other companies or industries							
30	Does your organisation emphasise technological innovation							
31	Does your organisation emphasise pioneering technological developments in your industry							
32	Has your organisation's revenue been impacted by products that did not exist three years earlier							
33	To what extent is innovation defined in your organisation's mission							
34	To what extent is innovation a part of your business concept							
35	Does innovation redefining the industries in which your organisation will compete							
36	Is your organisation reorganizing units and divisions to increase innovation							

37	Is your organisation coordinating activities among units to enhance company innovation							
38	Is your organisation increasing the autonomy (independence) of different units to enhance their innovation							
39	Is your organisation adopting flexible organizational structures to increase innovation							

Thank you for electing to take part in this survey.

Appendix B: MM Research Consent Form

The Graduate School of Business Administration

2 St David's Place, Parktown,
Johannesburg, 2193,
South Africa
PO Box 98, WITS, 2050
Website: www.wbs.ac.za

MM RESEARCH CONSENT FORM

(Master of Management in entrepreneurship and New Venture Creation)

Study: The effect of motivations for ecological responsiveness (ER) as driversof intrapreneurship in South Africa

INFORMATION SHEET AND CONSENT FORM

Who I am

My name is Cayley Christos and I am conducting research for the purpose of completing my MM at Wits Business School

What I am doing

I am conducting research on how different motivations for ecological responsiveness effect intrapreneurship within South African banks. I am conducting a quantitative study with 400 informants to establish *How the moderating variables of competitiveness, legitimacy and social responsibility effect the relationship between Ecological Responsiveness and Intrapreneurship in South African Financial Institutions?*

Your participation

I am asking you whether you will allow me to conduct one interview with you. If you agree, I will ask you to participate in a survey that will take you approximately 30 minutes to complete.

Please understand that **your participation is voluntary** and you are not being forced to take part in this study. The choice of whether to participate or not, is yours alone. If you choose not take part, you will not be affected in any way whatsoever. If you agree to participate, you may stop participating in the research at any time and tell me that you don't want to continue. If you do this there will also be no penalties and you will NOT be prejudiced in ANY way.

Confidentiality

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including my academic supervisor. (All of these people are required to keep your identity confidential.)

All study records will be destroyed after the completion and marking of my thesis. I will refer to you by a code number or pseudonym (another name) in the thesis and any further publication.

Risks/discomforts

At the present time, I do not see any risks in your participation. The risks associated with participation in this study are no greater than those encountered in daily life.

Benefits

There are no immediate benefits to you from participating in this study. However, this study will be extremely helpful to us in understanding what motives for ecological responsiveness have an effect on intrapreneurship in the South African context.

If you would like to receive feedback on the study, I can send you the results of the study when it is completed sometime after February 2017.

Who to contact if you have been harmed or have any concerns

This research has been approved by the Wits Business School. If you have any complaints about ethical aspects of the research or feel that you have been harmed in any way by participating in this study, please contact the Research Office Manager at the Wits Business School, Mmabatho Leeuw. Mmabatho.leeuw@wits.ac.za

If you have concerns or questions about the research you may call my academic research supervisor Dr Robert Venter.

CONSENT

I hereby agree to participate in research on the study for what motives for ecological responsiveness have an effect on intrapreneurship in the South African context. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to benefit me personally in the immediate or short term.

I understand that my participation will remain confidential.

……..
Signature of participant **Date**:……..

Appendix C: Content Analysis instrument

Measuring ECSR: a reliable proxy content analysis instrument for a firm's environmental performance.

This instrument is transparent because data sources and scoring criteria are made fully explicit. Also, by involving a GRI specialist in the development of their instrument, they have ensured its content validity

(A1) Governance structure and management systems (max score is 6)

1. Existence of a Department for pollution control and/or management positions for environmental management (0–1)
2. Existence of an environmental and/or a public issues committee in the board (0–1)
3. Existence of terms and conditions applicable to suppliers and/or customers regarding environmental practices (0–1)
4. Stakeholder involvement in setting corporate environmental policies (0–1)
5. Implementation of ISO14001 at the plant and/or firm level (0–1)
6. Executive compensation is linked to environmental performance (0–1)

(A2) Credibility (max score is 10)

1. Adoption of GRI sustainability reporting guidelines or provision of a CERES report (0–1)
2. Independent verification/assurance about environmental information disclosed in the EP report/web (0–1)
3. Periodic independent verifications/audits on environmental performance and/or systems (0–1)
4. Certification of environmental programs by independent agencies (0–1)
5. Product Certification with respect to environmental impact (0–1)
6. External environmental performance awards and/or inclusion in a sustainability index (0–1)
7. Stakeholder involvement in the environmental disclosure process (0–1)
8. Participation in voluntary environmental initiatives endorsed by EPA or Department of Energy (0–1)

9. Participation in industry specific associations/initiatives to improve environmental practices (0–1)
10. Participation in other environmental organizations/assoc. to improve environmental practices (if not awarded under 8 or 9 above) (0–1)

(A3) Environmental performance indicators (EPI) (max score is 60)

1. EPI on energy use and/or energy efficiency (0–6)
2. EPI on water use and/or water use efficiency (0–6)
3. EPI on 'green'house gas emissions (0–6)
4. EPI on other air emissions (0–6)
5. EPI on TRI (land, water, air) (0–6)
6. EPI on other discharges, releases and/or spills (not TRI) (0–6)
7. EPI on waste generation and/or management (recycling, re-use, reducing, treatment and disposal) (0–6)
8. EPI on land and resources use, biodiversity and conservation (0–6)
9. EPI on environmental impacts of products and services (0–6)
10. EPI on compliance performance (e.g., exceedances, reportable, incidents) (0–6)

(A4) Environmental spending (max score is 3)

1. Summary of rand saving arising from environment initiatives to the company (0-1)
2. Amount spent on technologies, R& D and/or innovations to enhance environmental performance and/or efficiency (0–1)
3. Amount spent on fines related to environmental issues (0–1)

(A5) Vision and strategy claims (max score is 6)

1. CEO statement on environmental performance in letter to shareholders and/or stakeholders (0–1)
2. A statement of corporate environmental policy, values and principles, environmental codes of conduct (0–1)
3. A statement about formal management systems regarding environmental risk and performance (0–1)
4. A statement that the firm undertakes periodic reviews and evaluations of its environmental performance (0–1)

5. A statement of measurable goals in terms of future env. Performance (if not awarded under A3) (0–1)
6. A statement about specific environmental innovations and/or new technology (0–1)

(A6) Environmental profile (max score is 4)

1. A statement about the firm's compliance (or lack thereof) with specific environmental standards (0–1)
2. An overview of environmental impact of the industry (0–1)
3. An overview of how the business operations and/or products and services impact the environment. (0–1)
4. An overview of corporate environmental performance relative to industry (0–1)

(A7) Environmental initiatives (max score is 6)

1. A substantive description of employee training in environmental management and operations (0–1)
2. Existence of response plans in case of environmental accidents (0–1)
3. Internal environmental awards (0–1)
4. Internal environmental audits (0–1)
5. Internal certification of environmental programs (0–1)
6. Community involvement and/or donations related to environ. (if not awarded under A1.4 or A2.7) (0–1)

(Clarkson et al., 2008)

Appendix D: Consistency Matrix

Table 3: Consistency Matrix

How do the moderating variables of competitiveness, legitimacy and social responsibility effect the relationship between Ecological Responsiveness and Corporate Entrepreneurship in South African Financial Institutions?					
AIMS OF RESEARCH	**LITERATURE REVIEW**	**HYPOTHESIS**	**SOURCE OF DATA**	**TYPE OF DATA**	**ANALYSIS**
Determine if there is a relationship between ecological responsiveness and Intrapreneurship	(Hossain, Al Bir, Tarique, & Momen, 2016) (Ketola, 2014; Morrish, Miles, & Polonsky, 2011; Rahman & Post, 2012) (Colwell & Joshi, 2013)	There is a positive relationship between ecological responsiveness and intrapreneurship	Survey instrument	Quantitative Discrete Nominal	Multiple regression analysis
Determine if competitiveness as a motivations for ecological responsiveness creates intrapreneurship	(Allet, 2014; Bansal & Roth, 2000; Hamann, Smith, Tashman, & Marshall, 2015; Paulraj, 2009)	The motivator of Competitiveness positively moderates the relationship between ER and intrapreneurship	Survey	Quantitative Discrete Nominal	Multiple regression analysis
Determine if legitimacy as a motivations for ecological responsiveness creates intrapreneurship	(Allet, 2014; Bansal & Roth, 2000; Hamann et al., 2015; Paulraj, 2009)	The motivator of Legitimacy positively moderates the relationship between ER and intrapreneurship	Survey	Quantitative Discrete Nominal	Multiple regression analysis
Determine if social responsibility as a motivations for ecological responsiveness creates intrapreneurship	(Allet, 2014; Bansal & Roth, 2000; Hamann et al., 2015; Paulraj, 2009)	The motivator of Social Responsibility positively moderates the relationship between ER and intrapreneurship	Survey	Quantitative Discrete Nominal	Multiple regression analysis
Measure ECSR through content analysis of websites	(Allet, 2014; Bansal & Roth, 2000; Hamann et al., 2015; Paulraj, 2009)	Proposition: The relationship between an organisations QCA score, and the organisations level of corporate responsibility environmental innovation action is positively correlated	Content analysis Annual reports Website	Quantitative Discrete Nominal	Content analysis Physical comparison