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Environmental sustainability orientation of small and medium sized businesses in South Africa

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ABSTRACT

Small and medium sized enterprises (SMEs) represent about 90% of global businesses. SMEs account, on the average, for about 50% of gross domestic product (GDP) of all countries and up to 60% of employment. In South Africa, SMEs account for about 91% of all formally registered business entities, contributing to about 57% of the GDP and providing about 60% of all formal employment. However, SMEs are said to contribute up to 70% of all industrial pollution globally.

SMEs individually perceive little or no impact on the environment and may attempt to relieve themselves of environmental responsibility. Although, the environmental footprint of individual SMEs may be small, collectively they contribute substantially to environmental damage globally.

Research on environmental activities of SMEs is rare and mostly neglected. This research attempts to close this gap by exploring the understanding, practices, barriers and motivation for environmental practices by SMEs in South Africa. This research was realised through semi-structured interviews of nine SMEs located in Eastern Cape, Western Cape, Gauteng and KwaZulu Natal.

KEYWORDS

Environmental sustainability, Small and Medium Sized Business, Environmental Strategies, Energy Systems, Climate Change.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Saheed Babajide Okuboyejo
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1. CHAPTER ONE: INTRODUCTION TO RESEARCH PROBLEM

1.1 Background to Research Problem

Over the last decade, environmental concerns about the depletion of natural resources, reduction in biodiversity, and climate change have become central to global discussions about sustainable development (Keijzers, 2005; Revell, Stokes, and Chen, 2009; Uhlaner, Berent-Braun, Jeurissen, and Wit, 2011a; Wilson, 2002). These concerns and discussions surrounding environmental sustainability have led to a significant body of research exploring and predicting the impact on -- and response by -- large, listed companies to environmental issues (Caniato, Caridi, Crippa, and Moretto, 2012; Dangelico and Pujari, 2010; Lieb and Lieb, 2010; Orlitzky, Siegel, and Waldman, 2011). The response has however been different for small and medium sized enterprises (SMEs). The scarcity of empirical research on how SMEs engage with environmental and social issues has been restated by several authors (Brammer, Hoejmose, and Marchant, 2012; Gadenne, Kennedy, and McKeiver, 2008; Lee, 2009; Nadim and Lussier, 2012).

1.2 Research Motivation

The significance of SMEs in most industrialised and developing economies suggests their environmental impact could be significant, thus warranting more research attention (Gadenne et al, 2008; Purvis, Drake, Hunt, and Millard, 2000; Revell and Blackburn, 2007). Although environmental sustainability among SMEs has been identified as a critical issue, the volume and quality of research required to drive changes in behaviour and practice does not reflect its significance (Redmond, Walker, and Giles, 2010).

Hillary (2000, 2004) argued that SMEs as a sector could contribute up to 70% of all industrial pollution globally. This estimate is based on the level of economic activity dominated by SMEs in most economies. According to the United Nations Industrial Development Organization (UNIDO), SMEs represent more than 90% of global businesses and account, on average, for about 50% of gross domestic product (GDP) of all countries. They also account for 60% of their employment (Maya, Alex, and Peter, 2006).

In New Zealand and the United Kingdom, 99% of the all firms are SMEs (Lewis and Cassells, 2010; Revell et al, 2009).

In Africa, SMEs make up about 90% of all economic activity, and contribute towards more than 50% of employment and GDP (Neneh and van Zyl, 2012). In South Africa, SMEs account for about 91% of all formally registered business entities, contributing to about 57% of the GDP and providing about 60% of all formal employment (Kongolo, 2010).

SMEs are increasingly recognised as the leading vehicle for economic development, and a prime source of employment, revenue generation, innovation and technological advancement in both developed and developing nations (Bosma and Levie, 2010).

In South Africa, the National Development Plan and the New Growth Path Framework recognises the role that SMEs play in economic development (Fine, 2012). The New Growth Path Framework plans to strengthen and consolidate initiatives to support small and medium sized businesses with a comprehensive strategy that includes eliminating unnecessary red tape and strengthening access to finance (Department of Economic Development, 2011).

But despite the major role that SMEs play in the economy, scholars have reiterated that SMEs are “hard to reach" and “lagging behind” in terms of environmental sustainability initiatives (Cassells and Lewis, 2011; Groenewegen, 1996; Hillary, 2000; Rutherfoord, Blackburn, and Spence, 2000; Studer, Tsang, Welford, and Hills, 2008).

Whilst many SMEs may individually perceive little or no impact on the environment and may attempt to relieve themselves of any responsibility and the need to act, it has been stated that their collective impact is significant (Cassells and Lewis, 2011; Lewis and Cassells, 2010; Morsing and Perrini, 2009). It is clear that, although an individual firm’s environmental footprint may be small, collectively they contribute substantially to environmental damage all over the world (Gadenne et al, 2008; Revell and Blackburn, 2007; Spence, Agyemang, and Rinaldi, 2012).

Despite concerns that SMEs are “lagging behind”, recent research shows this narrow-minded position amongst SMEs is gradually changing (Revell et al, 2009). Scholars have proposed that SMEs can contribute to solving environmental problems through helping existing institutions in achieving their goals and by creating new, more environmentally sustainable products, services and institutions (York and Venkataraman, 2010)

It has been found that a high percentage of owner-managers in the United Kingdom are getting involved in environmental sustainability practices such as recycling, energy efficiency, responsible buying and selling, and other efforts to reduce their carbon emissions (Revell et al, 2009). Furthermore, these owner-managers are increasingly seeing it as their responsibility to help solve environmental problems.

Moreover, new forms of entrepreneurship, often referred to as sustainable entrepreneurship, ecopreneurship, social entrepreneurship, institutional entrepreneurship and sustainopreneurship, are emerging (Nadim and Lussier, 2012; Schaltegger and Wagner, 2011). They have been described as one of the most exciting and fastest growing areas of entrepreneurship (Dacin, Dacin, and Matear, 2010; Di Domenico, Haugh, and Tracey, 2010).

These types of entrepreneurs recognise their potential to shift socio-economic institutions towards a more sustainable social and environmental orientation (Nadim and Lussier, 2012). These entrepreneurs are motivated and convinced of their ability to contribute to solving societal and environmental problems through the realisation of a successful business (Schaltegger and Wagner, 2011).

Having identified these growing environmental concerns and the possible impact that SMEs may have on the environment, as well as the emerging trends in entrepreneurship, this research seeks to explore the environmental sustainability orientation displayed by SMEs in South Africa; it also delves into the factors motivating and preventing SMEs to engage in environmental activities.

1.3 Academic Motivation

> “*There has been limited research in small business and sustainability, and none focusing on sustainability strategies used by small firms. Also, the examples in this article of sustainability are*

taken from large businesses because we found no literature providing examples in small firms. Therefore, further research is needed." (Nadim and Lussier, 2012, p. 88)

Whereas studies on environmental sustainability orientation and practices of small and medium sized businesses have grown in recent years, it remains a fairly new academic research area (Nadim and Lussier, 2012). Researchers have acknowledged that in spite of the increasing strategic and economic importance of sustainability, research on SMEs and sustainability is underdeveloped, limited and fragmented (Fenwick, 2007; Wiesner, Chadee, Best, and Poole, 2010).

More in-depth qualitative studies are required to understand the nature, practices and motivations of environmental sustainability in small businesses (Brammer et al, 2012; Gadenne et al, 2008; Nadim and Lussier, 2012) particularly in South Africa, where small businesses are considered to have a major role to play in job creation and local economic development (Department of Economic Development, 2011)

The principal audiences for this study are large corporations interested in a more in-depth understanding of environmental sustainability strategies of SMEs; and policy makers at the national and provincial levels of government seeking to create policies and incentives to support sustainable development and to deal with issues of energy, water and waste.

1.4 Research Objectives

The main objectives of this research are:

a) To examine the concept of environmental sustainability amongst SMEs by reviewing the existing literature on the topic;

b) To use qualitative data collected from semi-structured interviews to:

- Gain more insight into how SMEs understand environmental sustainability in the context of their business,
- Understand the types of environmental practices adopted by SMEs and how are these practices integrated into the business,
- Comprehend the factors motivating SMEs to engage in environmental sustainability activities, or factors preventing others from engaging;

c) To combine the insights from examined literature with qualitative data and present answers to the research questions;

d) To consider what recommendations could be made to large corporations and to government to promote environmental sustainability amongst SMEs; and

e) To make suggestions for further research in this research area.

1.5 Research Scope

This research is limited to the study of environmental sustainability orientation, motivations and practices of a select group of SMEs in South Africa. The emphasis on SMEs is deliberate, given the significance of SMEs to the South African economy especially in relation to employment and overall economic activity.

SMEs are known to be vibrant and innovative; however, they are also known to be generally lacking in resources (Wiesner et al, 2010). Thus, the focus on SMEs will add to the literature and our understanding of how SMEs comprehend and apply environmental sustainability.

1.6 Conclusion to Chapter One

Chapter one provided the background for the study, and motivations for examining the environmental sustainability orientation of small and medium sized firms in South Africa. The chapter further highlights the research objectives and provides a scope for the study.

2. CHAPTER TWO: THEORY AND LITERATURE REVIEW

This chapter provides brief definitions for some of the terms and concepts used in the course of the study. In addition, this chapter presents a review of the existing literature on the topic and highlights current issues for discussion. Discussion in this chapter considers the perspectives of different authors.

2.1 Sustainable Development and Sustainability

In an attempt to resolve the perceived conflict between environmental and developmental goals, a report from the World Commission on Environment and Development (WCED), *Our Common Future*, - sponsored by the United Nations - formulated a working definition for the concept of sustainable development. The report defined this concept as:

> *"Development, which meets the needs of the present without compromising the ability of future generations to meet their own needs." (Brundtland, 1987, p. 187)*

Although the definition has been described as vague, ambiguous and a political manoeuvre (Giddings, Hopwood, and O'Brien, 2002), it remained highly instrumental in developing a global and integrated view of development. The WCED's definition provided a strong head start and has been described as the basis for most of the current discussions on the concept of sustainable development (Mebratu, 1998).

Despite the widespread acceptance of the WCED definition, it has been suggested that the definition focuses too heavily on economic development and only pretends to assure sustainability (Cordero, Roth, and Da Silva, 2005). It has been argued that the meaning provided by WCED does not acknowledge environmental and ecological consequences (Murphy, 2005) and fails to adequately acknowledge the relationship between environmental crisis and ethics (Seghezzo, 2009; Vucetich and Nelson, 2010).

Notwithstanding these criticisms, the WCED's definition has set the standard and become the point of reference for every debate about - and subsequent definition of - sustainable development (Imran, Alam, and Beaumont, 2011). The definition has shaped much of the literature on the subject, including this research (Barkemeyer, Holt, Preuss, and Tsang, 2011; Harlow, Golub, and Allenby, 2013; Holden and Linnerud, 2007).

The International Institute for Environment and Development (IIED) addressed some of the concerns raised about the WCED definition by formulating a systems-based approach to the concept of sustainable development. The IIED articulated a working definition based on the identification of three systems fundamental to the concept, these are: biological or ecological resource system, the economic system, and the social system (Mebratu, 1998). According to the IIED, the objective of sustainable development is to maximize the goals to be achieved across these three systems at one and the same time (Mebratu, 1998).

Sustainable development has since developed into a multi-dimensional phenomenon with the major goal of integrating the economic, ecological, social and institutional sub-systems into a singular whole, while also taking care of their mutual influence (Golusin and Munitlak Ivanović, 2009). The concept marks an attempt to formulate a programme that will integrate different spheres of human activity that had mostly been seen as separate in earlier times (Pawłowski, 2008). The multi-dimensional nature of the concept of sustainable development, encompassing economic, environmental and social sub-systems was reiterated by Ghosh (2008) using the framework in Figure 1 below.

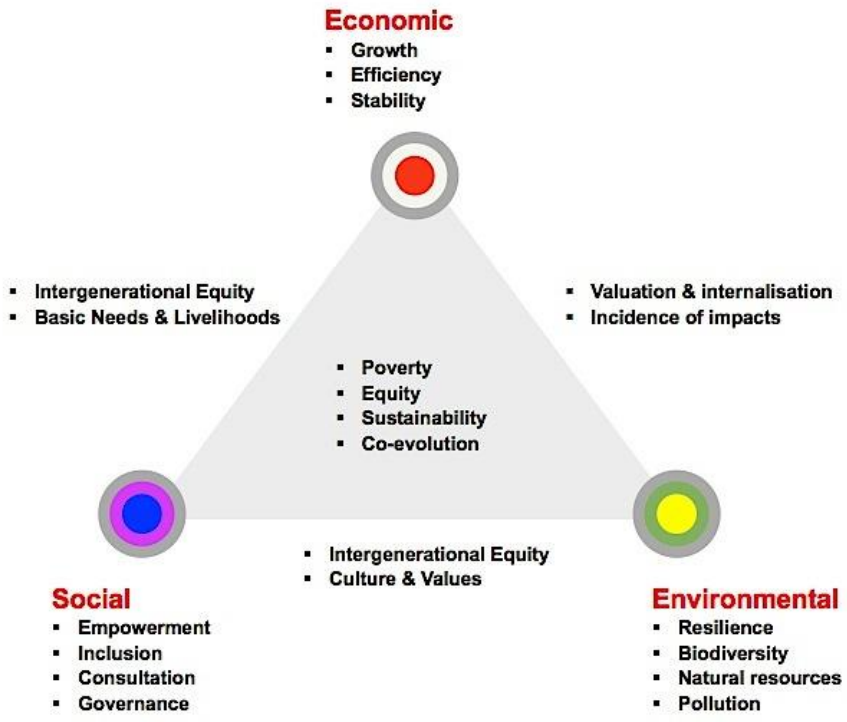

Figure 1 – Elements of Sustainable Development – Munasinghe and Reid (2005)

According to this framework, which was adapted from an earlier work by Munasinghe and Reid (2005), it was acknowledged that the three domains of sustainable development - economic, social and environmental - often represented by the term "triple bottom-line" (Elkington, Tickell, and Lee, 2007) or People, Planet and Profits, "the three P's" (European Commission, 2002) are highly interlinked.

Munasinghe and Reid (2005) argued that environmental changes (e.g. in ecosystem services like food production and water purification) influences short and long-run economic growth, institutions and culture (Ghosh, 2008; Munasinghe and Reid, 2005). Additionally, changes in social values and behaviour influence economic development and environmental management. Critically, economic growth and distribution of wealth and welfare influence both social and ecological attributes (Ghosh, 2008; Munasinghe and Reid, 2005)

In South Africa, The National Framework on Sustainable Development was developed in 2008. This framework defined South Africa's sustainable development vision as follows:

> "*South Africa aspires to be sustainable, economically prosperous and self-reliant nation that safeguards its democracy by meeting the fundamental human needs of its people, by managing its limited ecological resources responsibly for current and future generations, and by advancing efficient and effective integrated planning and governance through national, regional and global collaboration" (Department of Environmental Affairs, 2008, p. 2)*

The National Framework on Sustainable Development (Department of Environmental Affairs, 2008) highlighted five priority areas, which are:

- **Priority One** – Enhancing systems for integrated planning and implementation
- **Priority Two** – Sustaining our ecosystem and using natural resources efficiently
- **Priority Three** – Towards a green economy
- **Priority Four** – Building sustainable communities
- **Priority Five** – Responding effectively to climate change

According to this framework, all sectors including elements of government and civil society, organised labour and business are expected to participate in the social contract to implement the strategy. The framework is expected to become a catalyst for future policy development (Department of Environmental Affairs, 2008)

Sustainable development, by all means, is an all-encompassing and inexhaustible concept seen as involving parameters of human health, labour, education, industrialisation, and demand-side factors, along with the recognition of the contribution made by nature to the economy (Ghosh, 2008).

2.2 Environmental Sustainability

The World Bank probably first used the term "environmental sustainability" as a component of sustainable development (Moldan, Janoušková, and Hák, 2012). Robert Goodland further developed the concept in his 1995 article titled *The Concept of Environmental Sustainability*. In this paper, Goodland explained environmental sustainability as a concept that "seeks to improve human welfare by protecting the sources of raw materials used for human needs and ensuring that the sinks for human wastes are not exceeded, in order to prevent harm to humans" (Goodland, 1995a, p. 3).

> Goodland conceptualised environmental sustainability from a resource, ecological and economic perspective. Goodland argued that the major challenge of the world is ensuring that within less than two human generations as many as ten billion people are decently fed and housed without damaging the environment (Goodland, 1995b, p. 21). Goodland further identified environmental sustainability as a set of constraints on the four major activities regulating the scales of the human economic sub-system: "The use of renewable and non-renewable resources on the source side, and pollution and waste assimilation on the sink side" (Goodland, 1995b, p. 11; Moldan et al, 2012).

Holdren, Daily, & Ehrlich (1995, p. 7) defined environmental sustainability by focusing on its biogeophysical aspects. Biophysical sustainability was defined as "maintaining or improving the integrity of the life-supporting systems of the Earth". It was further explained that sustaining the biosphere with adequate provisions for maximising future options involves enabling current and future generations to achieve economic and social improvement while maintaining the physical environment by means of conservation and proper use of air, water, and land resources (Moldan et al, 2012).

The Commissioner for Environmental Sustainability of the Australian State of Victoria, P. Sutton, defined environmental sustainability as “the ability to maintain the qualities that are valued in the physical environment” (Sutton, 2004).

An important contribution to the concept of environmental sustainability was made by the OECD Environmental Strategy for the First Decade of the 21st Century (OECD, 2001). The OECD environmental strategy highlighted four specific criteria for environmental sustainability, namely:

a) Regeneration (renewable resources shall be used efficiently and their use shall not be permitted to exceed their long-term rates of natural regeneration),

b) Substitutability (non-renewable resources shall be used efficiently and their use limited to levels which can be offset by substitution with renewable resources or other forms of capital),

c) Assimilation (releases of hazardous or polluting substances into the environment shall not exceed their assimilative capacity) and

d) Avoiding irreversibility.

Recently, (L. J. Spence et al., 2012) defined environmental sustainability as “a long term perspective that aims to ensure that economic activity can progress without damaging the environment”.

2.3 Components of Environmental Sustainability

To understand the components of environmental sustainability, the 2012 Environmental Performance Index (Emerson et al., 2012) published by the Yale Centre for Environmental Law and Policy identified ten categories of environmental performance namely:

- Environmental Health
- Water (effects on human health)
- Air Pollution (effects on human health)
- Air Pollution (ecosystem effects)
- Water Resources (ecosystem effects)

- Biodiversity and Habitat
- Forests
- Fisheries
- Agriculture
- Climate Change

The Environmental Performance Index and the Pilot Trend Environmental Performance Index ranks countries on 22 performance indicators spanning ten policy categories reflecting facets of both environmental public health and ecosystem vitality (Emerson et al., 2012). The methodology facilitates country comparisons and provides indicators for assessing the global community's performance over time with respect to established environmental policy goals (Emerson et al., 2012). Particularly, the index provides a framework that could be used to identify and measure key components of the environment.

In the 2012 Environmental Performance Index South Africa ranked 128 out of 132 rated countries, just above Iraq and just below Yemen. South Africa's poor performance was as a result of water quantity and air quality issues. South Africa is also Africa's greatest greenhouse gas emitter with over 90% of the South African electricity supply from coal (Aaron and Omar, 2013)

Additionally, Moldan et al. (2012) provided the six core areas of the environment as follows

- Climate systems (covering climate and climate change, climate risk management, mitigation and adaptation).
- Human settlements and habitats (covering cities, urbanization and transport).
- Energy systems (covering energy use, energy conservation, renewable energy, energy efficiency and bioenergy).
- Terrestrial systems (covering natural and managed ecosystems, forestry, food systems, biodiversity and ecosystem services).

- Carbon and nitrogen cycles (covering sources and sinks, feedback processes and links to other systems).
- Aquatic systems (covering marine and fresh water ecosystems, fisheries, currents and biodiversity)

2.3.1 Climate Change

The concept of climate change has become one of the important areas of research in the environment field (Markandya, 2002). The concept of climate change refers to the impact of human emission particularly of greenhouse gases on climate. This concept has been the subject of much research particularly by the Intergovernmental Panel on Climate Change (*Climate Change and Greenhouse Gas Mitigation*, 2004). The concept is commonly known as global warming, greenhouse effect or climate change.

According to this concept, greenhouse gases trap heat and lead to changes in the global average temperature. However, in a given country the temperature may either decrease or increase depending on the location leading to shift in weather patterns (Markandya, 2002). The suggested impact of climate change includes; potential sea level rise, changes in weather patterns, increased incidence of severe weather conditions, desertification, climate variability and impact on human health (*Climate Change and Greenhouse Gas Mitigation*, 2004). Potential policy responses include mitigation and adaptation policies to reduce the impact of climate change.

South Africa is particularly affected by climate variability (Ncube, Zikhali, and Musango, 2013). Research has shown a relationship between water and energy scarcity and climate variability in South Africa (Ncube et al., 2013).

2.3.2 Human Settlement and Habitats

Human settlement generally refers to spatial and operational arrangement made by humans within certain scales in order to support life and pursue their aspirational goals and targets (Leman, 1980). The term spatial and operational aims includes all aspects pertaining to human settlement in integrated way It denotes practical, non static, continuously changing aspect of the spatial arrangement made by human beings (Banerjee, 1998). According to the United Nations Conference of 1976 referred to as the Vancouver Declaration on Human Settlement, human settlement was defined as the totality of the human community whether in a city, town or village – with all social,

material, organisational, spiritual and cultural elements that sustain it. The fabric of human settlements consists of physical elements and services to which these elements provide material support. These physical component consist of shelter, infrastructure and services (United Nations Human Settlements Programme,1976)

2.3.3 Energy Systems

Energy systems refer to an interrelated network of energy sources connected by generation, transmission, distribution of that energy to where it is needed. The transformation from an energy resource into food or work and subsequently the dissipation of energy is an example of how the system is interconnected (Restivo, 2005). The starting point of all energy systems is the sun, energy systems include oil wells, pipelines, refineries, gas stations, coal mines, sun, wind, rivers, generation plants, transmission lines and related technologies (Restivo, 2005). Based primarily on oil, coal and natural gas, energy services structure everyday life directly and enables computing, air conditioning, telecommunications and global transport. Alternative energy systems refer to renewable energy from the sun, wind and biomass. These sources of energy have the potential to supply all the planet's energy needs (Restivo, 2005).

2.3.4 Terrestrial Systems

Terrestrial systems refers to any land based ecosystem such as forest, desert, grassland and cropland (Park and Allaby, 2013). It also includes the biotic and abiotic system in a given area such as plants, animals, fungi and micro-organisms that live in the particular place along with their immediate physical environment (Park and Allaby, 2013).

2.3.5 Carbon and Nitrogen Cycles

Carbon and Nitrogen cycles refers to the movement of carbon through the surface interior and atmosphere of the earth (Allaby, 2008). Carbon exists in atmospheric gases in form of dissolved ions in the hydrosphere and in solids as a major component of organic matter and sedimentary rocks (Allaby, 2008). Carbon is usually added to the atmosphere through burning of fossil fuels or release of carbon di oxide from the soil through clearance of tropical forest. It is estimated that about 200 billion tonnes of carbon di oxide has been added to the atmosphere since 1850 (Allaby, 2008)

2.4 Environmental Sustainability Orientation

Roxas and Coetzer (2012, p. 464) defined environmental sustainability orientation as the "overall proactive strategic stance of firms towards the integration of environmental concerns and practices into their strategic, tactical and operational activities."

2.5 Small and Medium Sized Enterprises

Several researchers have attempted to define SMEs (Berryman, 1983; Drever, 2006; Wiesner, McDonald, and Banham, 2007). Government and other institutions have followed different approaches in the definition of SMEs (MacGregor and Vrazalic, 2008).

In Australia, SMEs are mostly defined from a control and decision-making standpoint. The Wiltshire Committee defined a small business as "one in which one or two individuals are required to make all important management decisions. This includes finance, accounting, personnel, purchasing, processing or servicing, marketing, selling, without the help of internal professionals and with particular understanding in only one or two functional areas" (Yesseleva, 2012).

In South Africa, the National Small Business Act (Act 102 of 1996) defined small firms as those employing between five and 50 permanent employees, and medium-sized firms as those which employ between 51 and 200 permanent employees (Fraser, Grant, Mwanza, and Naidoo, 2002).

2.6 Sustainable Entrepreneurship

Sustainable entrepreneurship, otherwise termed 'sustainopreneurship' (Shepherd and Patzelt, 2011) has been defined as an innovative, market oriented and personality driven form of value creation, by environmentally or socially beneficial innovation and products exceeding beyond the start-up phase of a company (Schaltegger and Wagner, 2011). It has been described as the realisation of sustainability innovations aimed at the mass market and providing benefit to a large part of society. Through this realisation, entrepreneurs are able to address the unmet needs of a wider range of stakeholders beyond narrow economic interests (Schaltegger and Wagner, 2011)

2.7 Environmental Practices of SMEs

Banerjee (2001) proposed that organisations could develop and implement a range of strategies to address environmental issues and suggested that a wide range of actions can result from these strategies. In his work, he described the environmental strategies of over 250 U.S firms and examined the participation of these firms in 25 environmental activities. These environmental activities were further classified into four categories namely: employee focus, manufacturing focus, corporate focus and marketing focus. These categories are described in Table 1

Categories of Actions	Description	Specific Actions
Employee Focus	Refers to the actions that a firm takes to involve all its employees in environmental activity	• Paper, bottles and can recycling programs • Training programs on environmental issues • Newsletters and communication on environmental issues • Employee car-pooling schemes • Environmental ideas generation
Manufacturing Focus	Address the ways by which a firm can reduce its environmental impact in its manufacturing process	• Manufacturing waste reduction • Use of renewable energy resources • Recycling of manufacturing waste • Recycling of raw materials • Environmental standards for suppliers
Corporate Focus	Refers to the degree of integration of environmental issues into corporate strategy	• Research and development into cleaner products and services •Environmental Impact Assessment of products and services •Annual Environmental Audits of the firm •Environment focused mission statement for the firm •Annual environmental goals for the firm •Environmental Key Performance Indicators for the teams

Marketing Focus	Refers to environmental actions geared toward customers and external stakeholders	•Environmentally friendly product design •Environmentally friendly packaging •Environmentally friendly product range •Reduced packaging material •Cooperative alliance with environmental organisations •Education programs for customers focused on the environment •Advertising of environmental efforts

Table 1 – List of Environmental Actions and Practices - From Banerjee (2001)

2.8 Barriers to Environmental Practices in SMEs

Despite the economic significance of SMEs and the considerable environmental impact they may have, studies have often suggested that while larger companies are increasingly integrating environmental practices into their corporate strategies, SMEs are "hard to reach" and "lagging behind" (Cassells and Lewis, 2011; Groenewegen, 1996; Hillary, 2000; Rutherfoord et al, 2000; Studer et al, 2008). Studies examining the reasons for lack of engagement and action of SMEs in environmental management practices have identified several internal and external barriers. These barriers are discussed as follows:

2.8.1 Resource Poverty

One of the often cited barriers preventing SMEs from engaging in environmental management practices is the lack of money or time (Revell, 2007; Verheul, 1999). Lepoutre and Heene (2006, p. 262) described this factor as the absence of "discretionary slack": the opportunity for managers to use excess time and resources to reduce internal and/or external pressures. Hillary (2000) suggests that generally, limited resources of owner-managers often constrain their engagement in environmentally-responsible business practices, and specifically in the ability to appoint a dedicated environmental manager (Schaper and Raar, 2001). SMEs have been found to consider environmental management practices as a cost burden which can result in loss of competitiveness (Petts, Herd, Gerrard, and Horne, 1999; Revell, 2007; Rutherfoord et al, 2000; Simpson, Taylor, and Barker, 2004a). Nonetheless, it has been noted that SMEs can gain significant competitive advantages from environmentally responsible practices,

but that SMEs are often not prepared to undertake the necessary investment because they believe that the net cost savings would be small (Nadim and Lussier, 2012; Simpson, Taylor, and Barker, 2004b).

2.8.2 Lack of Information

SMEs are frequently cited as lacking the information and managerial capability to implement environmental improvements (Jabbour and Puppim-de-Oliveira, 2012; Lepoutre and Heene, 2006; Lewis and Cassells, 2010). Studies have found that owner-managers have a poor understanding of the knowledge and skills required for environmental management, and a sceptical attitude towards using external support (Hillary, 2000; Perez-Sanchez, Barton, and Bower, 2003; Tilley, 1999). Roxas and Coetzer (2012) found that knowledge of environmental sustainability issues is one of the key determinants of the overall stance of SMEs towards the environment. Furthermore, research has shown that owner-managers of SMEs find it difficult to get information in relation to environmental issues, and that this challenge often negates any willingness they may have either to engage the issues broadly or to specifically implement initiatives (Schaper, 2002; Vernon, Essex, Pinder, and Curry, 2003).

2.8.3 Lack of Stakeholder Pressure

SMEs further claim that lack of pressure from customers or the supply chain removes an important incentive to change (Hillary, 2004). Studies confirm that a lack of pressure from customers and the supply chain to ‘green initiatives’ limits adoption (Revell, 2007). Where pressure is exerted, it tends to be concentrated on large firms and does not flow down the supply chain to small firms (Drake, Purvis, and Hunt, 2004; Merritt, 1998; Revell, 2007; Rowe and Hollingsworth, 1996; Verheul, 1999). Even with SMEs that try to be proactive by purchasing environmentally friendly products, or by enhancing relations with customers’ regulators and stakeholders frequently find it difficult to establish a business case for sustainability initiatives (Drake et al, 2004; McKeiver, 2005; Revell and Blackburn, 2007)

2.9 Drivers of Environmental Practices in SMEs

Whilst studies in the past have highlighted the failure of SMEs to act on environmental sustainably issues (Groenewegen, 1996; Hillary, 2000; Rutherfoord et al, 2000; Studer et al, 2008), more recent studies are suggesting the opposite (Brammer et al, 2012;

Lewis and Cassells, 2010; Longenecker, Moore, Petty, Palich, and McKinney, 2006; Revell et al, 2009).

Brammer et al. (2012) observed in their study of environmental practices of 100 U.K firms that most SMEs are engaged in some environmental initiatives but that there is significant heterogeneity in the engagement of SMEs, they suggested that smaller companies perceive significantly fewer benefits of engagement with environmental issues than larger ones.

Revell et al (2009) found that SMEs are "turning over a new leaf" by taking steps to become more environmentally sustainable through measures such as recycling, energy efficiency, responsible buying and selling, and the management of carbon emissions. Spence and Perrini (2011) found that the ethical and social responsibility including environmental practices and strategies of SMEs tend to be greater than expected, but are informal and local community-based rather than replicating large firm approaches.

Uhlaner, Berent-Braun, Jeurissen, and Wit (2011b) recently, described the environmental management practices of Dutch SMEs as those with active or deliberate strategies aimed at monitoring company waste, producing or selling environmentally friendly products, and searching for more services or production methods that are environmentally friendly.

In recognition of the progress made by SMEs towards environmental sustainability, researchers have continued to examine factors motivating environmentally responsible behaviour among SMEs (Parry, 2012a). It has been argued that although there are extensive studies on the motivation for environmental responsibility amongst large companies, SMEs are significantly different from large firms, and their motives for environmental practices are likely to be different (Jenkins, 2004; Murillo and Lozano, 2006; Quinn, 1997; Spence, 2007).

Distinctive characteristics which make the operations of large firms and SMEs differ have been identified. Some of these differences are attention to personal relationships, focus on stakeholders (Hambrick, 1995; Hendry, Arthur, and Jones, 1995); and a greater level of flexibility in decision making (Aragón-Correa, Hurtado-Torres, Sharma, and García-Morales, 2008). Moore, Slack, and Gibbon (2008) stated that because SMEs have relatively informal organisational structures and are often managed by owners, personal choices and attitudes could greatly affect socially responsible behaviour.

While studies have recognised the difference in environmental orientation of small and large firms, other studies have argued further that SMEs cannot be presented as one homogenous group when contrasted against large firms. Failure to recognise the difference limits insights into ways in which SMEs differ in business aspiration (Brammer et al, 2012; Jenkins, 2004; Parker, Redmond, and Simpson, 2009).

Table 2 summarises the classification of SMEs by environmental orientation. Spence and Rutherfoord (2001) distinguished SMEs according to their profit orientation and engagement in responsible action. Using similar typology, Parker et al (2009) classified SMEs into four main categories: profit driven, advantage driven, compliance driven, and environment driven. These two typologies have been criticised as over-influenced by the perception that business and environmental performance are in tension with each other (Battisti and Perry, 2011). Despite the criticism, the typologies appear to provide insight into the diversity that exists within SMEs. Battisti and Perry (2011) further argued that Parker et al (2009) typology represents four extreme cases of theoretically distinctive types of SMEs, whereas it is more likely to find overlaps between groups.

Spence and Rutherfoord (2000)	Parker et al (2009)	Battisti and Perry (2011)
Profit maximisation	**Profit driven**	**Cost Burden**
• Profit maximising perspective • Socially inactive	• High degree of business performance commitment • Low degree of environmental commitment	• Environment being addressed only as required by regulation • No (or only minor) changes to business operation
Enlightened self-interest	**Advantage driven**	**Business Opportunity**
• Profit maximising perspective • Socially active	• High degree of business performance commitment • High degree of environmental commitment	• Environment is seen as an opportunity • Changes in business operation are pursued only provided they maximise profit and provide competitive advantage

Subsidence priority	Compliance driven	Bottom-line
• Profit satisficing perspective • Socially inactive	• Low degree of business performance commitment • Low degree of environmental commitment	• Environment and environmental performance of the business is prioritised over financial performance • Owner-managers actively pursue environmental business practices
Social priority	**Environment driven**	**Responsibility**
• Socially active	• Low degree of business performance commitment • High degree of environmental commitment	• Protecting the environment and reducing individual impact is seen as a duty, alongside the responsibility toward family, staff, the local community and the responsibility to operate in a financially profitable manner. • Owner-managers are prepared to compromise their business income where this brings improved environmental performance

Table 2 - Classifications of SMEs by Environmental Orientation; From Battisti and Perry (2011)

Furthermore, Lynch-Wood and Williamson (2011) suggested firm size, visibility and resources as major differentiators among SMEs. They proposed that each firm has a "capability profile" -- a set of characteristics that defines the firm's potential to comply with environmental regulations, which depend largely on firm size and resources.

Studies have identified several factors as drivers for environmentally responsible behaviour among SMEs (Côté, Booth, and Louis, 2006; del Brío and Junquera, 2003; Lepoutre and Heene, 2006; Worthington and Patton, 2005). These factors were initially categorised into four main areas of motivation: legislation, stakeholder pressure, economic opportunity, and ethical motives (Bansal and Roth, 2000). Recent studies have further expanded possible areas of motivation to include institutional environment (Roxas and Coetzer, 2012); tangibility of the sector, firm size, innovation orientation,

family influence and perceived financial benefit from energy conservation (Uhlaner et al, 2011a).

Notwithstanding the motives or drivers stated above, Babiak and Trendafilova (2011) found that owner managers responsible for decision-making regarding sustainable management practices considered multiple motives for engaging in environmental responsibility practices, primarily seeking legitimacy by conforming to institutional pressures and expectations and taking advantage of the strategic opportunities offered through these types of activities

Four motivational factors are reviewed in the sub sections below. The factors reviewed are regulation, stakeholder pressure, owner managers' ethics and values and economic and financial advantage. These factors have been mostly found to be the drivers of environmental activity of small firms (Bansal and Roth, 2000)

2.9.1 Regulation

Most studies agree that legislation and regulatory compliance is a significant driver urging SMEs to engage in environmentally friendly practices (del Brío and Junquera, 2003; Kehbila, Ertel, and Brent, 2009; Paulraj, 2009; Rowe and Hollingsworth, 1996; Williamson, Lynch-Wood, and Ramsay, 2006; Zhang, Bi, and Liu, 2009). Nonetheless, a recent study conducted amongst 44 SMEs from the Northwest of England indicated that the impact of environmental legislation on SMEs is overstated. Impact increased commensurate with effort to comply and enforcement action (Wilson, Williams, and Kemp, 2012). It has also been questioned whether legislation promotes voluntary activity, above that required to meet minimum standards (Dief and Font, 2010).

2.9.2 Stakeholder Pressure

Stakeholder pressure from customers, local communities, environmental interest groups, supply chain and regulatory agencies has been found as a driver for positive environmental behaviour amongst SMEs (Kehbila et al, 2009; Murillo and Lozano, 2006; Vernon et al, 2003). Specifically, Murillo and Lozano (2006) found that responsible practices in small business are not just a matter of the owner- manager's ideological beliefs, but also result from pressure from stakeholders, particularly customers. It has been noted that customers are the key stakeholders driving the adoption of environmental management systems within SMEs, and have influence far beyond any of

the other stakeholders (Hillary, 2004). In addition, it has been proven that pressure to improve on environmental behaviour is being exerted on SMEs through the supply chain (Ilomäki and Melanen, 2001).

In South Africa, Woolworths, a large retail business selling a wide range of products including clothing, food, and general merchandise has taken steps to improve the sustainability of its supply chain by implementing the Good Business Journey Programme (Santos, Svensson and Padin, 2013). Woolworths took responsibility for the supply chain and influenced customers and suppliers in the network to reduce their environmental impact. Through the Good Business Journey Programme, the company has been able to encourage suppliers of agricultural products to engage in sustainable agricultural practices (Santos et al., 2013)

2.9.3 Economic and Financial Advantage

Although studies have identified economic and financial advantages as a driver for environmental sustainability in small business (Kramer, Pfitzer, and Lee, 2005; Lee, 2009; Smerecnik and Andersen, 2011; Tilley, 1999; Uhlaner, Berent-Braun, Jeurissen, and Wit, 2011b; Vernon et al, 2003). Parry (2012a) argued that it remains unclear whether financial and economic benefits are real drivers for SMEs to adopt sustainable practices. Allen and Malin (2008) suggested that environmentally pro-active entrepreneurs who display higher levels of concern about the environment tended to have low interest in economic success.

2.9.4 Owner Managers' Ethics and Values

Critical to most discussions on the motivations for positive environmental behaviour of SMEs is the ethical motives and values of owner managers. This factor has been the subject of most environmental sustainability and small business studies in the last decade (Akgeyik, 2003; Cassells & Lewis, 2011; Fuller & Tian, 2006; Murillo & Lozano, 2006; L. J. Spence, 2007). Studies have argued that the values and attitudes of Owner Managers are highly influential factors in determining whether SMEs embrace environmental good practice (Cordano, Marshall, and Silverman, 2010; Perez-Sanchez et al, 2003; Tzschentke, Kirk, and Lynch, 2008). They also argued that environmentally sustainable strategies and practices are closely connected to the ethical standards of Owner Managers (Branzei, Ursacki-Bryant, Vertinsky, and Zhang, 2004; Parisi and Maraghini, 2010). However, it has been argued that these values and attitudes do not

necessarily translate into business practices (Hitchens, Thankappan, Trainor, Clausen, and De Marchi, 2005; McKeiver, 2005; Mir and Feitelson, 2007; Parisi and Maraghini, 2010; Tilley, 1999). This lack of translation of values to practices has been termed "value-action" gap (Revell et al, 2009). Battisti and Perry (2011) disagree with this notion; they found that environmental practices pursued by SMEs are consistent with their understanding of the environment.

2.10 Environmental Sustainability Orientation of SMEs

While small business owner-managers might be motivated towards environmentally sustainable practices by a combination of factors highlighted above, the extent to which these practices are institutionalised into the strategies, structures and processes may differ slightly. The overall proactive stance of firms towards the integration of environmental concerns and practices into their strategic, tactical and operational activities is referred to as environmental sustainability orientation (ESO) (Roxas and Coetzer, 2012). Figure 2 shows the components of ESO.

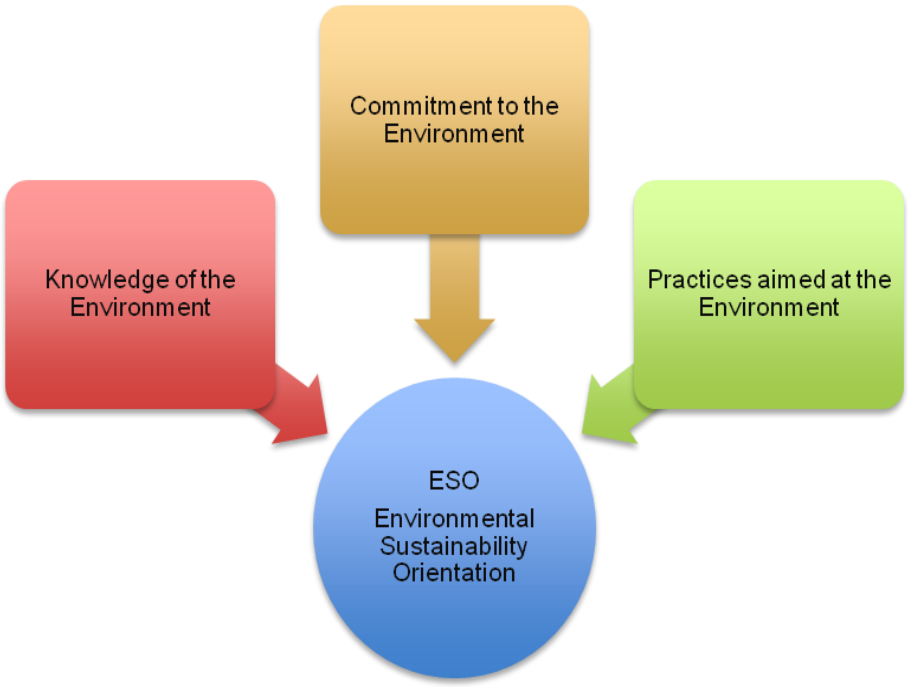

Figure 2 – Environmental Sustainability Orientation (ESO). From Roxas and Coetzer (2012)

Environmental sustainability orientation reflects the firm's philosophy of doing business in an environmentally sustainable way (Roxas and Coetzer, 2012). The ESO a SME is demonstrated by the extent to which it integrates environmental concerns into its culture,

decision making, strategy, and business operations, as well as through the interaction with stakeholders. SMEs may be considered to have a high level of ESO when its implementation of sustainable environmental activities is triggered by an organisational-wide sense of responsibility and accountability (Sharma and Starik, 2003).

A firm's Environmental sustainability orientation takes into consideration the organisation's strategy and the manifestation of its awareness, engagement and commitment to issues, activities and programs relating to environmental responsibility and sustainable development (Black and Härtel, 2004; Carroll, 1991). It examines the philosophy of doing business in an environmentally friendly way.

Environmental Sustainability Orientation of a SME digs much deeper, looking beyond environmentally friendly practices to appreciate the level at which environmental concerns are integrated into its culture, decision making, strategy and business operation, as well as through its interaction with stakeholders (Linnenluecke and Griffiths, 2010; Zwetsloot and van Marrewijk, 2004). ESO is a multi-dimensional construct which considers SMEs' knowledge, practices and commitment towards environmental sustainability (Roxas and Coetzer, 2012).
Knowledge of sustainability issues relates to the level of awareness of SMEs about pressing environmental issues and the impact these issues may have on the business and community as a whole. The extent of this knowledge determines the strategic orientation of an SME and its ability to identify, adopt and act in response to these issues (Roxas and Coetzer, 2012).

The second dimension of ESO - practices aimed at environmental sustainability - refers to the nature and extent of sustainable business activities that a firm has actually implemented (Roxas and Coetzer, 2012). These practices have are manifested through actual conduct or behaviour within the firm.

The third dimension - commitment to environmental sustainability - refers to the extent to which the firm enjoys the tangible benefits of being proactive.

It appears that firms with higher levels of ESO are most likely sustainable entrepreneurs with the strategic objective and purpose of creating value through environmentally

beneficial innovation and products. Sustainable entrepreneurship, otherwise termed "Sustainopreneurship" (Shepherd and Patzelt, 2011) has been defined as an innovative, market-oriented and personality-driven form of value creation by environmentally or socially beneficial innovation and products going beyond the start-up phase of a company (Schaltegger and Wagner, 2008, p. 32). It has been described as the realisation of sustainability innovations aimed at the mass market and providing benefit to the larger part of society. Through this realisation, these entrepreneurs are able to address the unmet needs of a wider range of stakeholders beyond the narrow economic interest

2.11 Ecopreneurship

The term "ecopreneurship" sometimes referred to as green, enviro-preneurship, ecological entrepreneurship, and eco-entrepreneurship is a combination of the two words "ecological" (eco) and entrepreneurship (McEwen, 2012). This suggests the creation of an innovative company that provides environmentally friendly products and services (Schaper, 2010). Fundamentally, ecopreneurs start businesses in eco-friendly markets, not only to make profits, but also to contribute to environmental sustainability. Examples of eco-businesses include recycling waste materials, reducing pollution, water purification technologies and renewable energy technologies (McEwen, 2012). Some of the benefits from ecopreneurship will include reduced environmental degradation, improved agricultural practices and fresh water supply, and the maintenance of biodiversity (Shepherd and Patzelt, 2011).

2.12 Conclusion to Chapter Two

Considering the scarcity of academic literature on environmental practices of small businesses especially in South Africa. This research will attempt to cover this gap by exploring this topic within the South African context. Specific research questions to be explored are set out in chapter three and the methodology adopted is set out in chapter four.

3. CHAPTER THREE: RESEARCH QUESTIONS

3.1 Introduction

The previous chapter reviewed a series of literature on the topic and provided a detailed background to the questions explored in this study. Fundamentally, this piece of research explores how South African SMEs understand environmental sustainability in the context of their business and how they translate their understanding into practice**.** The research questions are stated as follows:

3.2 Question One

How do small and medium sized enterprises understand environmental sustainability in the context of their business?

3.3 Question Two

What are the environmental practices adopted by small and medium sized businesses?

3.4 Question Three

What are the factors motivating small businesses to act proactively towards environmental concerns?

3.5 Question Four

What are the barriers to environmental sustainability practices in small businesses?

4. CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

This chapter provides the conceptual structure within which this study was conducted. It sets out the plan for the collection, measurement and analysis of data for the purpose of exploring the research problem. The study adopted a flexible and economical method that is focused on minimising bias and maximising reliability in the collection and analysis of the data.

4.2 Research Design

The aim of this research design is to provide for the collection of the relevant evidence needed to explore the research problem with minimal expenditure of time and money. According to Kothari (2004), the research design appropriate for a particular research problem usually involves the consideration of the following factors:

a) The means of obtaining information;

b) The availability and skills of the researcher and his staff, if any;

c) The objective of the problem to be studied;

d) The nature of the problem to be studied; and

e) The availability of time and money for the research work.

It was further stated that, if the purpose of the research study, as in this case, happens to be exploratory, i.e. to seek new insights, ask new questions and to assess the topic in greater detail, the research design most appropriate must be flexible enough to permit the consideration of many different aspects of the phenomenon (Kothari, 2004; Saunders, 2011).

This research adopted an exploratory qualitative methodology to gain insights and discover ideas in relation to the problem. An exploratory method is a flexible research design which provides opportunity for considering many different aspects of the problem (Saunders, 2011). According to Kothari (2004, p. 35) “the main purpose of exploratory studies is to formulate a problem for further investigation, or of developing the working hypotheses from an operational point of view. The major emphasis in such studies is on the discovery of ideas and insights. As such the research design appropriate for such

studies must be flexible enough to provide opportunity for considering different aspects of a problem under study.

Built-in flexibility in research design is needed because the research problem, broadly defined, is transformed into one with more precise meaning in exploratory studies, which fact may necessitate changes in the research procedure for gathering relevant data."

4.2.1 Motivation for the Research Method

As stated earlier, the nature of the problem to be studied is one of the factors to be considered in determining the research design. In relation to this research problem, it has been acknowledged that despite the increasing strategic and economic importance of SMEs, research on small business and environmental sustainability is underdeveloped, limited and fragmented (Fenwick, 2007; Wiesner et al, 2010). Hence, more in-depth studies are required to discover ideas and to formulate theories to be tested in further research. Therefore, this study focused on understanding the phenomenon in greater detail, using a flexible and economical method to collect and analyse data.

4.2.2 Research Approach: Qualitative

This study adopted the qualitative research approach. This approach helps the researcher to generate subjective assessments of attitudes, opinions, and behaviour in relation to the research problem.

The qualitative approach helps with insights and impressions into the subject matter (Kothari, 2004). This approach uses relatively small samples to probe detail, ambiguities and nuances that individual narratives usually reveal (Saunders, 2011). Qualitative methods help to extract information that can be lost in larger survey questions, and can provide tentative answers to initial questions.

Although the approach is not usually representative of the population because of the use of small sample sizes, it however enables personal meaning of experiences. It is impossible to generalise findings acquired from using this research method (Saunders, 2011). Since the objective of the study was to probe into the detail of the research problem and to understand the phenomenon deeply, the qualitative research approach was considered the most appropriate one for this study.

4.3 Population and Unit of Analysis

The universe of this study was defined as small and medium sized enterprises. Therefore, the study population included all SMEs in South Africa. The population members for sampling included founder's partners and owner-managers of SMEs. The unit of analysis are the perceptions, experiences and observations of each member on the questions asked.

4.4 Sampling

According to Mason (2010) samples for qualitative studies are generally much smaller than those used in quantitative studies because this form of research is concerned with meaning and not making generalised hypotheses. Ritchie, Lewis, and Elam (2003) explained the reason for the small size as "the point of diminishing return to a qualitative sample."

This is generally referred to as the point of saturation in qualitative research. Ritchie et al (2003) reasoned that, as a qualitative study goes on, more data does not necessarily lead to more information. This is because one occurrence of a piece of data, or a code, is all that is necessary to ensure that it becomes part of the framework of analysis, and such single occurrence is potentially as useful as many in understanding the process behind a topic (Mason, 2010).

Although qualitative research is labour intensive, analysing a large sample can be time-consuming and often impractical. However, the samples must be large enough to assure that most or all of the perceptions that might be important are uncovered, at the same time, if the sample is too large, data becomes repetitive and eventually superfluous (Mason, 2010).

Ritchie et al (2003) highlighted that in most cases financial and time constraints determine sample size. This research was particularly constrained by a limited budget and time, which made it impossible to reach the entire population.

A non-probability purposive sampling technique was adopted. Purposive sampling is a type of non-probability sampling in which the researcher's judgement is used to select the sample numbers based on a range of possible reasons and premises (Saunders, 2011). This sampling technique is particularly used to select a small sample when collecting qualitative data.

For the purpose of this research, preliminary interviews were conducted with SME experts and 20 potential respondents were shortlisted. Only 10 SMEs out of the 20 shortlisted showed willingness to participate in the research. Nine respondents were interviewed. Details of SMEs sampled are provided in Table 3.

Respondent	Industry	Location	Employees	Participant
Bus A	Real Estate Developer	Johannesburg	12	CEO
Bus B	Advertising	Cape Town	16	Partner
Bus C	Consulting Firm	Pretoria	7	Partner
Bus D	Architectural Firm	Cape Town	11	Partner
Bus E	Engineering Systems	Johannesburg	8	Co-Founder
Bus F	Waste Management	East London	21	Co-Founder
Bus G	Rural Infrastructure	Durban	22	Co-Founder
Bus H	Construction	Johannesburg	27	CEO
Bus I	Law Firm	Johannesburg	10	Partner

Table 3 – List and Basic Details of SMEs Interviewed

The study selected its sample size from different sectors namely; real estate and construction, consulting, professional services, advertising and engineering. One respondent from each participating business was interviewed. The ideal respondent was the founder, co-founder, owner, or manager of the business.

4.5 Data Collection

This study is purely exploratory in nature, and sought to find general answers to questions that are not clearly understood. Qualitative in-depth interviews were the most appropriate data collection technique for this study, for reasons stated in section 4.2. The greatest value of an interview lies in the depth of information that can be collected (Blumberg, Cooper, and Dchindler, 2008).

Three types of interview techniques are available: structured, semi-structured, and unstructured interviews. Structured interviews use a pre-defined questionnaire and do not allow the researcher the flexibility sometimes required to explore in more detail

(Blumberg et al, 2008). Exploring a topic requires at least a semi-structured approach, which allows the interviewee to take the interview along paths that the researcher may not even have considered, hence aiding the whole process of discovery (Blumberg et al, 2008). For the purpose of this study, the semi-structured interview was adopted as the most appropriate method.

The semi-structured interview technique of data collection allows the interviewer to ask questions about a set of themes using a pre-determined questionnaire (Saunders, 2011). During the course of a semi-structured interview, the interviewer is allowed to vary the order of the questions, omit some topics and questions, or ask additional questions where appropriate (Saunders, 2011).

During the execution of this research, interviews were electronically recorded using the REV mobile phone application. Some interviews were conducted using teleconferencing tools based on the request or availability of participants.

4.6 Data Analysis

The recorded interviews were transcribed. The content was analysed manually using simple interpretative technique that involves providing structure and generating themes using observations of the researcher. Keywords were grouped and analysed based on common trends observed.

4.7 Research Limitation

This research has certain limitations that suggest opportunities for future research. At the theoretical level, this research relied primarily on foreign literature, as local literature was unavailable on the topic.

In terms of the research methodology, the response rate of SMEs invited to participate in this research was low. Only 10 out of the 20 SMEs invited were willing to participate and only nine were available for the interview. Therefore, considering the small sample, this research is unable to make generalisations based on the findings.

5. CHAPTER FIVE: RESULTS

This chapter presents the results for the four questions posed in Chapter Three. These results are reported using a thematic format, and includes appropriate verbatim quotes to illustrate the results. This chapter further serves as a linkage to the discussion in chapter six.

5.1 Summary of Respondents

A total of nine respondents were interviewed from a variety of sectors. Table 4 shows a list of these respondents and further categorises them by industry, location, number of employees and turnover.

Respondent	Industry	Location	Employees	Turnover
Bus A	Real Estate Developer	Johannesburg	12	R 30 Million
Bus B	Advertising	Cape Town	16	R 3.2 Million
Bus C	Consulting Firm	Pretoria	7	R 10 Million
Bus D	Architectural Firm	Cape Town	11	R 2.4 Million
Bus E	Engineering Systems	Johannesburg	8	R 5 Million
Bus F	Waste Management	East London	21	R 16 Million
Bus G	Rural Infrastructure	Durban	22	R 21 Million
Bus H	Construction	Johannesburg	27	R 45 Million
Bus I	Law Firm	Johannesburg	10	R 8 Million

Table 4 - List of Respondents including Industry, Location, Number of Employees and Turnover

5.2 Research Question One – SMEs' Understanding of Environmental Sustainability

How do small and medium sized enterprises understand environmental sustainability in the context of their business?

5.2.1 The Environment as a Concern

Interview Question 8	Common Themes
What environmental issues concern you and your company the most?	• Resource Scarcity • Carbon Tax • Public awareness of the environment • Increasing cost of energy • Availability of fresh water • Safety of electrical appliances • Effect of mining on the environment

Table 5 - Themes Derived from Interview Question 8

All the respondents interviewed showed some level of concern for the environment. Some of the respondents suggested that government and policy makers have failed in dealing with environmental issues, and there is need for business to step in to make a difference.

The Bus E highlighted the issue of energy in particular. He stated that the price of energy is one of the key issues that will drive environmental behaviour. He forecasted that energy prices would continue to increase as a result of resource scarcity, labour unrest, increased regulation, and carbon tax. He suggested that the pressure on businesses to become sustainable would increase, as people become more aware about environmental impacts and decide to live more sustainable lives.

5.2.2 Impact of Humans and Businesses on the Environment

Interview Question 9	Common Themes
What is your perception of the impact of humans and businesses on the environment?	• High Impact • Change of behaviour can reduce impact • Impact is over-rated • Humans should be held accountable for their impact • Sanitation and sewage has a high impact on the environment • Water conservation is required to reduce negative impact • Use of Non-renewable Resources • Impact of humans on the environment is causing climate change

Table 6 - Themes Derived from Interview Question 9

The respondents interviewed demonstrated that small businesses generally understand the impact of humans on the environment. Most businesses surveyed acknowledged that this impact is generally high and a change of behaviour is required. Some respondents raised the issue of accountability and stressed that social and cultural norms can play a major role in driving behavioural change. Some of the respondents linked the impact of humans to sanitation, water conservation and food scarcity. One of the respondents believed that the perceived impact of humans on the environment is over-rated. This respondent argued:

> *"I think the impact of humans on the environment is overrated. I don't think the humans have that significant impact; however I think we are accountable to our actions."* (*Bus F)*

5.2.3 The Role of SMEs in Environmental Sustainability

Interview Question 10	Common Themes
How do you think small businesses can help to reduce environmental impact?	• Efficient Use of Paper • Support Required from large corporates • SMEs can Play a Positive Role • SMEs Lack Resources To Make a Difference • Waste Separation and Recycling • Water Conservation and Rainwater Harvesting • Sustainability as Value Creation • Energy Efficiency and Conservation • Customer Demands

Table 7 - Themes Derived From Interview Question 10

Most of the respondents interviewed stated that small businesses have a role to play in reducing environmental impact, and further highlighted some of the initiatives that could be adopted to make a difference. These included efficient use of paper and energy, solar panels, waste separation and recycling, water conservation, rainwater harvesting, and energy efficiency. One of the respondents further differentiated the role of small businesses according to their typology. The respondent specified that small businesses could be divided into those operating in the sustainability field and those that are more general small businesses. The respondent further suggested that SMEs offering a sustainability-based value proposition have a greater role to play as they grow. He indicated that sustainable SMEs must show the linkage between environmental and financial sustainability, and prove that working on the environment can create competitive advantage, increase productivity and reduce waste in the use of resources.

> *"Mostly, environmental sustainability and financial sustainability coincide and it makes economic sense to focus on this. Sustainable SMEs must show that working on the*

environment is one way to improve productivity and lower running cost from efficient use of resources." (Bus C)

Some of the respondents suggested that although small businesses can play a major role in reducing environmental impact, they could only play such role if they are adequately supported. Respondents advocated that SMEs lack the financial resources that corporations have to effect necessary changes to the environment. As a result, requiring small business to play a significant role in reducing the impact on the environment is unfair and unbalanced.

5.2.4 Education and Training on Greening Concepts

Interview Question 11	Common Themes
Do you have prior experience or training on the environment, or in greening concepts?	• Advanced Degrees • Self Interest and Passion • High School Education • No Formal Education and Training in Greening Concepts • Engineering and Management Education

Table 8 - Themes Derived From Interview Question 11

Most of the respondents interviewed have advanced degrees in electrical and mechanical engineering and management. Despite their lack of formal education and training in the field of the environment and sustainability, they claimed to have developed working knowledge of this topic due to their interest and passion. Some respondents indicated their interest and passion for renewable energy, energy efficiency, waste management and water conservation. One of the respondents had only high school education but expressed his knowledge and passion for the environment as follows:

"My highest level is standard five. However, growing up in Alexandria exposed me a lot to household energy challenges. I have seen people dying as a result of lack of action. A huge gap exists in the area of education and actions. We need effective use of resources and poor planning on the side of government. There is disaster

management education for households in South Africa. This is a huge gap and this motivated me to change the young mind towards energy saving" (Bus C).

5.2.5 Environmental Laws, Policies and Regulation

Interview Question 12	Common Themes
Are you aware of laws, rules and regulations that help to regulate the environment?	• Industry norms are better • I believe in laws of conscience • Ineffective Enforcement of Laws • Lack of Competencies to Enforce Existing Laws and Regulations • I know of the Water Management Act • I know of the Waste Management Act • I know of the Green Building Code • I know of the new Energy Regulation

Table 9 - Themes Derived from Interview Question 12

Respondents were aware of laws that regulate the environment, specifically in their field or area of business. They mentioned the Water Act, building regulations, and Waste Management Act. Most of the respondents indicated that the implementation of these laws and regulations has been a challenge. One respondent suggested that industry norms and practices could be more effective in changing behaviour and creating a more sustainable future. The respondent called this "Laws of Conscience".

Another respondent pointed out that the agencies tasked with implementing these laws and regulations have limited competencies to deal with the harm caused to the environment by large corporations. A respondent in the building industry criticised the new building code, which caps the energy consumption in buildings. He stated as follows:

"The new building code which requires buildings to cap the amount of energy they use right now is very clumsy and

inadequate. This cap is still very high, although energy consumption cap for buildings can be a very effective mechanism to reduce energy use and cost associated." (Bus D)

The respondent suggested that efforts and codes to regulate the environment do not necessarily have to be developed and implemented by government. He gave the Green Building Council and Green Star Rating of buildings as an example of voluntary codes and regulations that started from the private sector, and have now been recognised and adopted by government as the standard code for rating the efficiency of a building.

5.3 Research Question Two – SMEs' Environmental Sustainability Practices

What environmental sustainability practices are adopted by small and medium sized businesses?

5.3.1 Practices Related to Improving the Environment

Table 10 provides a list of themes derived from question 13 of the interview questionnaire.

Interview Question 13	Common Themes
Is your company engaged in practices that could help improve the physical environment?	• Shared Office Space • Water Efficiency • Energy Efficiency • Public Transport • Living within 2 kilometres of work • Paper and Plastic Recycling • Biogas Digesters • Solar Panels • Optimised Building Design • It's Too Expensive

Table 10 - Themes Derived From Interview Question 13

Some of the respondents interviewed said that small activities could make a big difference if done consistently and over a length of time. The respondents highlighted a number of environmentally related practices considered to be of relevance. One of the respondents explained the concept of the open office space as follows:

> *"We are in the era of sustainable development, and one of the ways of ensuring that we achieve this is by sharing resources. It does not make sustainable sense to have dedicated office buildings that are expensive and inefficient. Shared office in its very nature is about sustainability and economics. Notionally, we are using far less of the earth's space and saving on heating and cooling. Shared office in its essence is responding to environmental issues of the day." (Bus A)*

Other respondents highlighted water and energy efficiency as key activities that can considerably improve the quality of the environment. These respondents identified cost as a driver. They indicated that the increase of electricity cost in South Africa has made them focus on ways to decrease cost. Thus, they have implemented measures such as energy efficient lighting, solar water heating, geyser control systems, motion sensors for lighting, and room temperature sensors.

Two of the respondents identified waste as the area of central focus. These respondents stated that most of the household and office waste generated could be recycled. They advised that if the waste generated can be separated and recycled, there will be no need to have landfill sites that do not only occupy large expanse of land, but also make the land unfit for human habitation. They stated their involvement in waste separation and paper recycling. One of the respondents claimed that green initiatives are too expensive for a small business, and that small businesses generally have scarce resources and should not be involved in greening initiatives.

5.3.2 Environmental Practices as an Opportunity or a Risk

Interview Question 14	Common Themes
Do you consider addressing environmental issues an opportunity or a risk?	• It's an Opportunity • It is Both an Opportunity and a Risk • Renewable Energy • Independent Power Grid • Reduce Cost • Waste to Energy • Technology Risk

Table 11 - Themes Derived from Interview Question 14

Most of the respondents interviewed believed that addressing environmental issues is an opportunity. One of the respondents indicated that despite the significant business opportunities that exist in the area of environmental products and services, it is sometimes difficult to prove to customers. He stated as follows:

> *"The environment is an incredible opportunity because of our future, but functionally it is hard to prove to people that you can process waste effectively and efficiently in a world that relies on intellectually-biased propaganda chosen by industry and economy. It is extremely difficult to make sustainable solutions mainstream. I tried it once and it didn't work." (Bus F)*

Another respondent argued that the role of business is to solve problems by providing products and services that address the issues. Hence, the existence of environmental problems offers businesses a great opportunity to offer products or services. He advised that problems such as scarcity of energy, excessive reliance on grid electricity, increasing cost of energy, and abundant waste provides endless opportunities for business and government.

Two respondents suggested that the environment offers both opportunity and risk. These respondents emphasised that most of the technologies addressing environmental

concerns are unconventional; consequently most consumers are either unaware or not convinced of the potential of these technologies.

5.4 Research Question Three – Motivating Factors

What are the factors motivating small businesses to engage in environmental practices?

5.4.1 Factors Motivating SMEs to Engage in Environmental Activities

Interview Question 15	Common Themes
What are the factors motivating small businesses to engage in environmental practices?	• Commercial Opportunity • Market Gap • Innovation • Sustainable Alternative Methods • Passion and Values • Bring About Change • Efficiency • Recognition • Solving Societal Problems • Reduce Operational Expenses

Table 12 - Themes Derived from Interview Question 15

Some of the respondents identified commercial opportunity or the need to make money as one of the factors motivating them to get involved in environmental practices. They stated that there are significant gaps that remain uncovered in the environmental space. They suggested that taking advantage of these opportunities would create avenues for wealth and job creation.

Another respondent advocated against massive pollution from human activities and the huge waste generated therefrom. He advised that current methods are not sustainable, and suggested that small businesses need to be innovative to develop alternative methods. He suggested that big corporations rarely develop these innovative alternative methods because they currently benefit from them.

Some of the respondents stated that their passion and personal values are the most critical factors motivating them to engage in environmental activities, or to provide an environmental product or service. In addition to passion and values, some of the respondents repeated the need to bring about change as their primary motivator. One of the respondents highlighted efficiency as his major driver. He said that although he is passionate about providing environmental products, the ultimate objective is to achieve efficiency. He stated as follows:

> *"I love what I do and I believe there is a lot of opportunity in this area. I believe that what we do here can make a difference and bring about change within the industry, so that we -- as an industry and as a country -- can become more efficient." (Bus D)*

One of the respondents identified recognition as his main motivator for engaging in environmental activities. He stated as follows:

> *"I want to be recognised as someone who has made something out of nothing, I want to be remembered as someone who implemented household energy safety strategies, and ensured that people take ownership. I want to address poverty, not just through employment, but also through development of skills." (Bus C)*

Another respondent highlighted issues of operational efficiency as a motivator. He suggested that environmental products and services are not only meant to address an environmental concern, but are also usually developed to drive efficiency and reduce operational expenses. He mentioned solar water heaters as an example of technology that helps to reduce electricity consumption by up to 40%, but also reduces the operational expense of a business or household. He added that this technology could also be used as a climate change mitigation measure, reducing the amount of carbon dioxide emitted into the atmosphere.

5.4.2 Intentions of SMEs

Interview Question 16	Derived Themes
What do you intend to achieve by getting involved with the environment?	• Innovative Business Model • Change the World • Better Future Generations • Better Industry Practices • Hub for Innovation and Design • Environmental Awareness • Energy and Food Sovereignty Model

Table 13 - Themes Derived from Interview Question 16

One of the respondents reiterated the need to prove that environmental products and services could be provided using innovative business models. He mentioned that conventional models are difficult to imitate, especially with concepts and ideas.

Some respondents said they intend to change the way people behave, and ultimately the world, by implementing sustainable solutions where needed. One respondent stated as follows:

> *"I hope to change people's behaviour by refocusing them towards sustainability. I hope for improved quality of life and greater awareness of the environment and sustainability. I want to empower people to live sustainably. Though all these, I hope to make the world a much better place for future generations." (Bus G)*

Another respondent focused on better industry practices. He mentioned that he would like to achieve better industry practices in the building and construction industry. He compared these industry practices in South Africa with Australia, and hoped that the South African industry could be transformed in such a way that all new buildings would have to meet green building standards and codes.

A respondent stated that he would like to see South Africa become a hub for innovation and the design of environmental and other sustainability products and services, while

another respondent specified environmental awareness as an important area of achievement. Finally, one of the respondents stated that he would like the energy and food sovereignty model to work in South Africa. He stated as follows:

> *"One of the big things for me is the energy and food sovereignty model, particularly in the Eastern Cape, and that is to try and make communities much more sustainable, craving opportunities for enterprise and jobs. I would like to create support for small scale business that promotes environmental sustainability". (Bus F)*

5.5 Research Question Four – Barriers

What are the barriers to environmental sustainability practices is SMEs?

5.5.1 Barriers to Environmental Sustainability Practices of SMEs

Interview Question 19	Derived Themes
What factors are discouraging you from getting involved in environmental practices?	• Government Bureaucracy • Lack of Government Support • Inconsistent Policies • Lack of Support From Large Corporates • Lack of Public Awareness • Lack of Technical Understanding • Lack of Funds

Most of the respondents highlighted government bureaucracy as one of the factors discouraging them to engage in environmental practices. They indicated that there are lots of activities that could be carried out in rural communities to support the environment but there that there is so much bureaucracy and lack of government support which makes it difficult for small businesses to get involved. One of the respondents stated

> *"We want to do something for the environment. For instance, when we enquired about solar panels, the service providers told*

us we couldn't sell excess electricity back to the grid because government does not allow it. We are business at the end of the day and not an electricity utility. We need clear policy and government support to make these kinds of expenses" (Bus H)

Some of the respondents indicated that most of the large companies that they serve are not particularly interested in environmental activities hence they are discouraged to make such investments. They mentioned that they are willing to make such investments provided large companies are willing to support them through financing over a period of time.

One respondent stated that customers lack awareness of the benefit of environmental improvements therefore he is discouraged from making such changes to his business. He specified that customers have to be willing to pay for such investment for it to make economic sense. He stated as follows

"Unlike other parts of the world, customers here are not willing to pay a premium price for environmental friendly products. It takes so much time and effort to convince someone that it's actually better for them" (Bus G)

Some of the respondents also mentioned lack of funds as a major factor discouraging them to engage in environmental practices. They highlighted that small businesses barely survive from one month to the other and incurring additional expenses cannot be accommodated.

5.6 Conclusion to Chapter Five

This chapter presented the result of semi-structured interviews of nine South African SMEs. The results were presented in order of the research questions one to four as stated in chapter two. The common themes were provided in tables and specific quotes were presented to provide further explanation. This result will be discussed in line with the academic literature in chapter six

6. CHAPTER SIX: DISCUSSION OF RESULTS

6.1 Introduction

The result from the interview process was presented in the chapter five. The purpose of this chapter is to discuss the findings in relation to the existing theory on the subject. These findings are discussed below in order of the research questions asked in chapter five.

6.2 Discussion of Research Question One – SMEs' Understanding of Environmental Sustainability

The aim of this question was to determine the knowledge and establish the level of understanding of environmental sustainability issues amongst the SMEs interviewed.

6.2.1 SMEs' Knowledge and Understanding of Environmental Sustainability

According to Roxas and Coetzer (2012) knowledge of sustainability issues relates to the level of awareness of SMEs about pressing environmental issues and the impact these issues may have on the business and community as a whole. The extent of this knowledge determines the strategic orientation of an SME and its ability to identify, adopt and act in response to these issues.

The categories of environmental sustainability identified by Moldan et al (2012) were used to assess the knowledge and understanding of SMEs interviewed.

SMEs are frequently cited as lacking the information and managerial capability to implement environmental improvements (Lepoutre and Heene, 2006; Lewis and Cassells, 2010). Studies have found that owner-managers have a poor understanding of environmental management, and a sceptical attitude towards using external support (Hillary, 2000; Perez-Sanchez, Barton, and Bower, 2003; Tilley, 1999).

The findings of this study do not support the previous findings that SMEs are generally lacking in information about the environment and that owner-managers have poor understanding of environmental management. SMEs interviewed demonstrated clear knowledge and understanding of environmental sustainability issues. Although, not all the categories stated by Moldan et al (2012) were defined in detail by the SMEs interviewed, reference to these categories could be inferred from their statements.

These findings are further discussed using the categories adapted from Moldan et al. (2012)

6.2.2 Climate Change

Climate change as a component of environmental sustainability was not specifically mentioned but can be implied from some of the statements made by the businesses interviewed. For instance Bus E stated as follows:

> *"Our activities as humans have significant impact on the environment. We emit so much carbon into the atmosphere that it's no longer sustainable. We need find ways to reduce the amount of emissions". (Bus E)*

Another respondent Bus G stated as follows:

> "We are constantly polluting the environment with all kinds of gases that are harmful but government is not willing to be proactive to reduce or stop emissions. We constantly set targets that's we never achieve". (Bus G)

6.2.3 Human Settlements and Habitats

Human settlement as a component of environmental sustainability was not specifically mentioned but can be inferred from some of the statements made by the respondents interviewed. Bus A made reference to spacial arrangement in his shared office concept and emphasised the contribution that can be made towards a sustainable environment by using less space and sharing office resources.

6.2.4 Energy Systems

Some of the respondents mentioned and defined energy systems as a component of the environment. The respondents made reference to renewable energy specifically solar energy and energy efficiency. Respondents also referred to biogas as a means of effective utilisation of waste from households and companies.

6.2.5 Carbon and Nitrogen Cycles

One of the businesses mentioned bio-digesters as a practical solution, which helps to prevent the waste generated from ending up on landfills and releasing gases unto the atmosphere. The respondent stated as follows:

"Biogas digesters are very effective at helping to manage waste generated through our daily activities and preventing the waste from finding its way into landfill site and ultimately the atmosphere" (Bus F)

6.2.6 Aquatic Systems

One of the respondents mentioned water efficiency as one of the components of the environment the firm highlighted its activities in water efficiency and provided more insight into water issues as follows:

"Water is critical to the environment, in-fact I think water issues are the most critical of all. They say the next world war will be fought over water and not energy. It shows how water is essential and will be the driver of our existence in the nearest future". (Bus H)

6.3 Discussion of Research Question Two – Environmental Practices of SMEs

The purpose of question two is to identify the environmental practices of small businesses and to classify these practices using Moldan et al's (2012) framework on environmental categories and Banerjee (2001) framework on environmental strategies. Table 15 below shows the environmental practices of the small businesses interviewed, the core areas in which these activities fit into and the environmental strategies that these businesses pursue.

Business	Environmental Practices of Firms	Core Area - Environment	Strategies
Bus A	• Shared Office Space,	• Human Settlement	Employee Focus
Bus B	• Public Transport,	• Human Settlement	Employee Focus
Bus C	• Living within 2 kilometres of work,	• Human Settlement	Employee Focus
Bus D	• Optimised Building Design	• Human Settlement	Manufacturing Focus
Bus E	• Energy efficient light bulbs, solar panels,	• Energy Systems	Manufacturing Focus
Bus F	• Biogas Digesters, bio-fertilizer.	• Energy Systems	Manufacturing Focus
Bus G	• Solar Panels, solar water heating	• Energy Systems	Manufacturing Focus
Bus H	• Water Efficiency	• Aquatic Systems	Manufacturing Focus
Bus I	• Paper and Plastic Recycling	• Carbon and Nitrogen Cycles	Employee Focus

Table 14 - Classification of Environmental Practices of Businesses including Core Areas and Actions

As mentioned in chapter five, this research identified a variety of environmental related practices. The practices identified are classified here using the work of Banerjee (2001) and Moldan et al. (2012). Table 14 above provides a view of the businesses interviewed and the environmental practices of these businesses.

The environmental practices of firms interviewed covered four out of the six core areas specified by Moldan et al. (2012). There were practices that could be categorised into human settlement, energy systems, carbon and nitrogen cycles and aquatic systems. Human settlement and energy systems related practices were the most prevalent and seemed to take priority over others.

In an attempt to categorise the environmental practices of firms Banerjee (2001) found that environmental actions of firms primarily focused on manufacturing and to a lesser extent marketing. It was also found that a significant number of firms focused their actions on corporate level strategies. In a more recent study, Brammer et al. (2012) found that marketing and employee related activities are relatively neglected while corporate or marketing related actions were mostly found during the course of the study.

The findings of this research report does not fully support the earlier findings in Brammer et al. (2012) and Banerjee (2001). This study finds that manufacturing and employee strategies are mostly supported, while corporate and marketing strategies are mostly neglected. Of all the strategies, manufacturing strategies appears to be the most supported strategy.

These findings are discussed further using the categories of environmental actions and strategies adapted from Brammer et al. (2012) as adapted from Banerjee (2001).

6.3.1 Employee Focused Strategies

As a Real Estate Developer, Bus A was particularly interested in the concept of the shared office space. He stressed that the physical environment is critical and suggested that companies can contribute to sustainable development by promoting and ensuring efficient use of space by employees through the open office concept. He explained that the concept of open office also referred to as the virtual office is concept that allows companies to reduce the traditional cost and space requirements associated with the conventional office. Bus A explained further that an office provides adequate information technology services and meeting rooms facilities that could be shared by more people than the traditional

Bus B is an advertising firm in Cape Town. The business echoed the support for employees to use public transportation to work. The respondent mentioned the Public Transport Day initiative (PT Days). On PT Days, which comes up once a month, all employees were required to travel to work on public transport. The aim of this activity was to ensure that employees become more aware of the impact that cars have on the environment and to change their attitude towards mobility. The respondent stated as follows:

> *"We are addicted to cars in this country. You pass by rows and rows of cars and you only find one person inside. Most people don't travel long distances from their homes and even if they do, they could have taken public transport. We want everyone in the company to be aware of this and be part of the solution not the problem". (Bus B)*

The third respondent Bus C is an energy safety-consulting firm based in Pretoria. The respondent was particularly proud of his policy to recruit within the proximity of the office. The respondent stated that although it proves difficult to recruit from the proximity of the office, the business gives preference to employees who are willing to relocate to between two and five kilometres of work. This action could be categorised as a human settlement initiative that is focused on the employees

The forth respondent is an architectural firm based in Cape Town. The respondent highlighted the need to design buildings that can enhance the efficient use of resources such as space, energy, light and waste. There was emphasis on natural light and heat and ensuring that a building is designed with the appropriate orientation so that the effect of the sun could be optimised. The respondent stated as follows

> *We make sure that we design buildings with the appropriate orientation. For instance, the main long axis of the building should run from East to West. If there is up to 20% glass in the building, we ensure that the building facing towards the Sun. We also take into consideration the natural landscape so that we can maximise the environment (Bus D)*

Bus I is a law firm based in Johannesburg. The business recognised that law firms use a lot of paper and might be considered environmentally unfriendly sometimes. The

respondent reiterated the firm's commitment towards the environment and particularly recycling and particularly recycling as follows:

> *"We use a lot of paper that is why we have decided to support paper-recycling initiative within the office. We make sure that all workstations have a recycling paper bin. We have a contract with the paper recycling company to pick up our paper. We hope to continue with this initiative and incentivise employees to use less paper by printing when it's necessary. We want to reward employees that use less paper". (Bus I)*

The respondent Bus A, B, C, D and I presented above have taken action that involves all employees to take part in environmental activities. Although, these activities are different in their nature, they are all common because they are targeted at employee within the firm.

6.3.2 Manufacturing Focused Strategies

As mentioned above, manufacturing strategies were the most prominent of all. Five respondents out of nine interviewed were engaged in a form of manufacturing related strategy. In this context, manufacturing strategy is not used in the strict sense of a manufacturing facility but used loosely to include any form of daily operation of a business to produce a product or deliver a service. This strategy addresses the ways in which firms can reduce the environmental impact of their (manufacturing or operation) process (S. B. Banerjee, 2001; Brammer et al., 2012)

Bus E is an engineering systems firm based in Johannesburg. The respondent provided insight into their energy efficiency initiatives. The small firm of eight employees initiated an energy efficiency initiative to reduce electricity cost. The firm installed a solar water heater, which was able to reduce their electricity cost by 30%, and replaced all their lighting with energy efficient light bulbs. The respondent expressed their actions as follows:

> *We used to pay a lot for electricity and as a small business it was affecting our bottom-line, we decided to install solar water heaters because it has been proven that it reduces electricity consumption by 30%. This we have been able to gain the benefit of. Changing our light bulbs from 40 Watts to 12 Watts has also greatly benefited us. (Bus E)*

Bus F, an integrated waste management company based in Eastern Cape. The company develops and implements waste management solutions in rural and peri-urban communities. The business shared his enthusiasm about waste management strategies and the potential that biogas digesters have in rural communities. The respondent reiterated the benefits that could be derived from utilizing the waste generated from daily operations to generate energy using simple systems.

Business G provides infrastructure solutions in rural communities. The business expressed its commitment towards energy in rural communities. They highlighted the benefits of renewable energy technologies especially for non-grid connected households and emphasised the need for more integrated solutions that focus on supporting small business operations in rural communities such as drying and processing of agricultural products. He stressed the benefit that this could have on local economic development especially in disadvantaged areas.

Business H, a construction firm based in Johannesburg ensures that every construction design incorporates some element of water efficiency. The firm emphasised the looming water problem that is still not being properly addressed. He expressed his concerns and interventions as follows:

> *We try to use less water in our construction process, although we are a small firm and are not able to purchase the new and cutting edge water and energy efficient construction materials. We are lucky to have younger mind that are able to apply new ways of doing things. It is sad that the government is not addressing the water scarcity issues that we as small businesses will be faced in the coming years as a result we have to try as much as we can to intervene. (Bus H)*

6.4 Discussion of Research Question Three – Motivations for Environmental Practices of SMEs

	CO	MG	I	SAM	PV	BAC	E	R	SSP	ROE	Total
Bus A	✓			✓			✓			✓	4
Bus B						✓					1
Bus C					✓			✓	✓		3
Bus D			✓	✓		✓					3
Bus E			✓		✓		✓		✓	✓	5
Bus F	✓	✓		✓	✓				✓		5
Bus G	✓	✓			✓		✓		✓	✓	6
Bus H	✓	✓		✓			✓				6
Bus I						✓					1
Total	4	3	2	4	4	3	4	1	4	3	

Table 15 – Factors Motivating SMEs to Engage in Environmental Practices

CO – Commercial Opportunity, MG – Market Gap, I – Innovation, SAM – Sustainable Alternative Methods, PV – Passion and Values, BAC – Bring about Change, E - Efficiency, R – Recognition, SSP – Solving Societal Problems, ROE – Reduce Operational Expenses.

The findings in this research supports the earlier finding by Babiak and Trendafilova (2011) where it was found that owner managers responsible for decision-making regarding sustainable management practices considered multiple motives for engaging in environmental responsibility practices. As shown in Table 14 above, none of the respondents is motivated by a single factor, at least two motives were found.

6.4.1 Commercial Opportunity

Four out of the nine respondents interviewed considered engaging in environmental practices as a commercial opportunity for their firm. They believed that environmental practices could be a product or service that could be sold for income and are willing to pursue the opportunity. Bus A, a real estate developer stated as follows

> *The idea of shared office not only helps to reduce impact of humans on the environment but offers a great deal of commercial opportunity. We believe that we can grow this business idea into a concept that could be known all over the world. We would like to see ourselves heading facilities like these all over the world. (Bus A)*

This finding supports the earlier findings by Parker et al (2009) and Battisti and Perry (2011) on the drivers of environmental practices of small firms.

6.4.2 Market Gap

Three of the nine respondents interviewed indicated that there exists a gap in the market for environmental products and services. These respondents stated that there are very few or no service providers to cater for the market for environmental products and services. Bus F called this the “green market gap”

> *There is definitely a discrepancy between environmental products and environmental concern. For instance, we are the only business in the Eastern Cape province that provides biogas digesters at household level. This is unfortunate especially because we get requests from customers on a daily basis, once clients become aware of the value of the product they enquire but the province is too big and we cannot serve everyone. (Bus F)*

This finding supports the earlier finding on factors motivating small businesses to engage in environmental practices by (L. J. Spence & Rutherfoord, 2001), Parker et al (2009) and Battisti and Perry (2011)

6.4.3 Innovation

Two of the respondents identified innovation as a key driver for engaging in environmental activities; this motive was not specifically identified in any of the literature reviewed. The Bus D and E mentioned innovation as one of the few factors that derive them to engage. Bus D stated as follows:

> *We are in a very competitive environment and we see ourselves as bringing new thinking into the industry through*

innovative designs. Hopefully this will give us the advantage as a green architectural firm if there is anything like that. (Bus D)

6.4.4 Sustainable Alternative Methods

Four of the nine respondents indicated that they are motivated by the need to structure their businesses in more sustainable ways. Bus G referred to this as an integrated approach that starts by understanding the impact of our actions. He stated his view as follows:

We have to constantly look for better ways of doing things; businesses should take an integrated view, which means that businesses should understand that every action has an impact, which could be positive or negative. Every business should look for sustainable ways to carrying out its operations. (Bus G)

This motive seems to be ethical in nature and seems to support earlier findings by Spence and Rutherfoord (2001), Parker et al (2009) and Battisti and Perry (2011)

6.4.5 Passion and Values

Four of the nine businesses interviewed identified their passion for the environment and their value system as the primary driver for environmental sustainability practices. These businesses indicated that feel obliged to contribute to reducing the impact of their activities on the environment. All the respondents in this category had an environmental activity in place no matter how small. The findings of this research does not support the notion of "value-action gap" as suggested by Revell et al (2009) and agrees with the suggestion by Battisti and Perry (2011) that environmental practices pursued by small businesses are consistent with their understanding of environmental responsibility.

6.4.6 Change

One of the motivating factors identified from the respondents interviewed was the intention to bring about change. Three of the nine businesses interviewed mentioned that that they are driven by the need to bring about change in their industry or society through some of their environmental activities. Bus B stated as follows.

> *We want to do our little best to bring about change in the communities that we work. Although we as a business might not be able to do much because of the type of business we operate but the little we are doing can bring about change in society. Some of our employees are already seeing this as the norm and someday when they become leaders in society they will be able to serve as change agents in their own small way. (Bus B)*

6.4.7 Efficiency

Four of the nine respondents identified efficiency as one of the drivers for environmental sustainability activities within their business. Efficiency in this context includes using less electricity through energy efficient practices, using waste generated in the course of business, using renewable energy and using less water through water efficient devices. These businesses either see these initiatives as a means to reducing cost of business operations or/and reducing their impact on the environment. Bus E stated as follows:

> *We took the decision to spend on energy efficient light bulbs and solar water heaters because we want to reduce the cost and become more efficient. (Bus E)*

6.4.8 Recognition

Only one respondent out of the nine interviewed identified recognition as the reason for engaging in environmental activities. Bus C, a management-consulting firm based in Pretoria stated that it would like to be known for addressing environmental issues and acknowledged for contributing to raising awareness about the issue of energy safety in South Africa. The respondent stated as follows:

> We want to be known for doing something for the environment. I feel the more we are known the more aware people will be about the issue itself and maybe awareness will be about the much needed change. (Bus C)

6.4.9 Solving Social Problems

Four of the nine businesses interviewed recognised solving societal problems as one of the motivational factors encouraging them to engage in environmental activities. Interestingly, these four respondents also stated that they are driven by passion and values. This suggests that businesses that are driven by passion and values are more likely to engage in activities for common good of society. This means that businesses driven by ethical concerns are likely to engage in environmental and social related activities. This finding support pervious findings by Tzschentke et al.(2008) and Cordano et al. (2010) where it was found that values and attitudes of owner-managers are highly influential factors in determining whether SMEs embrace environmental good practice. It further supports the research by Parisi and Maraghini (2010) where it was argued that environmentally sustainable strategies and practices are closely connected to ethical standards of owner-managers.

Furthermore, the findings of this research does not support the notion of “value-action gap” as suggested by Revell et al (2009) and concurs with the suggestion by Battisti and Perry (2011) that environmental practices pursued by small businesses are consistent with their ethics and values on environmental responsibility.

6.4.10 Reduce Operational Expenses

Three of the nine respondents highlighted reducing operational expenses as one of the factors motivating them to engage in environmental activities. All the businesses that mentioned efficiency as their driver also mentioned reducing operational expenses as motivation for engaging in environmental activities. This study supports the earlier identification of economic and financial advantage as a driver for environmental sustainability activities by Lee (2009) and Smerecnik and Andersen (2011). This study further supports the notion by Parry (2012b) that financial and economic benefits alone do not serve as sole motivators for SMEs to adopt environmental practices. This findings of this study is in alignment with the suggestions of Allen and Malin (2008) that environmentally pro-active entrepreneurs who display higher levels of concern about the environment tended to have low interest in economic success.

6.5 Discussion of Research Question Four – Barriers to Environmental Practices of SMEs

	GB	LGS	IGP	LSC	LPA	LTU	LOF
Bus A							✓
Bus B						✓	
Bus C					✓		
Bus D				✓			
Bus E			✓				
Bus F			✓				
Bus G	✓	✓					
Bus H			✓				✓
Bus I						✓	

GB – Government Bureaucracy, LGS – Lack of Government Support, I – Inconsistent Government Policies, LSC – Lack of Support from Large Corporates, LPA – Lack of Public Awareness, LTU – Lack of Technical Understanding, LOF – Lack of Funds.

6.5.1 Government Bureaucracy & Lack of Government Support

Bus G mentioned government bureaucracy and lack of government support as barriers to environmental practices of SMEs. This reason was not found in previous research as a cause for lack of action amongst SMEs. When this issue was probed further, the respondent stated as follows:

> *It's the role of government to put policies and incentives in place if this is really a priority. SMEs cannot do this by themselves; they don't have the capacity to, it is important for government to come to our rescue. Unfortunately, our government is not doing much if anything at all to encourage SMEs to participate the environmental actions. Bus G*

6.5.2 Inconsistent Government Policies

Three respondents, Bus E, F and H highlighted inconsistent government policies as one of the factors preventing SMEs to engage in environmental activities. They suggested that government gives an impression of support to SMEs that does not translate into actual policies. Government ends up implementing contradictory policies. Respondent F stated as follows:

> *"In 2007, government intimated that an energy programme will be implemented to encourage small businesses like ours sell energy to the national electricity grid, because of this idea some small business had started engaging banks to implement renewable energy projects with the hope that they will be able to sell to the grid but this was changed and left only to big businesses. This is not a good situation to be in as an SME who wants to support the environment". (Bus H)*

6.5.3 Lack of Support from Large Corporates

One of the respondents highlighted lack of support from large companies for SMEs to engage in environmental activities. The respondents mentioned that although, most of the large corporates have been able to establish business models for their sustainability activities, this approach has not been filtered to small businesses. He mentioned that small business still find it difficult to make a business sense of environmental sustainability practices. This finding supports the earlier suggestion by McKeiver (2005) and Revell and Blackburn (2007) that even with SMEs that try to be proactive with environmentally friendly products or to enhance relations with customers, regulators and shareholders, they frequently find it difficult to establish a business case for sustainability initiatives

6.5.4 Lack of Public Awareness

One respondent raised the issue of lack of public awareness as a barrier for SMEs to engage in environmental practices. He explained as follows.

> *"We lack general public awareness of environmental impact and what to do about it in this county as a result businesses go scot-free where they should not. Most of the things we do as businesses here even as SMEs will*

not be acceptable to the public in Europe and America".
(Bus B)

The explanation provided by Bus B could be interpreted as lack of stakeholder pressure as a reason why small businesses are not involved in environmental activities. This seems to support the previous studies by Drake et al. (2004) and Revell (2007) that suggests that lack of pressure from customers and the supply chain to green initiatives limits adoption

6.5.5 Lack of Technical Understanding

Two of the respondents indicated that lack of technical understanding is a barrier to engaging in environmental practices. They explained that mostly SMEs find it difficult to understand the technicalities of some of the technologies and solutions proposed for environmental management especially businesses not in the technology field. They suggested that service providers of environmental friendly solutions and technologies have to communicate in layman terms what the technology can do and how it will benefit a common SME. Respondent B stated as follows

> *We need better understanding of these solutions. Most of the time, we find it difficult to understand the functionalities and some of these technologies become quite complicated. Solution providers sometime need to explain to us in layman's terms. (Bus B)*

6.5.6 Lack of Funds

Two of the nine respondents mentioned lack of funds to implement sustainability initiatives as one of the primary barriers. Lack of funds usually referred to as resource poverty or termed "discretionary slack" by Lepoutre and Heene (2006) was often cited in literature as the reason why SMEs are not able to engage in environmental practices. Although, this study supports the earlier findings by Vernon et al. (2003), Lepoutre and Heene (2006) and Lewis and Cassells (2010) it does not support the findings that lack of funds is the most dominant reason why SMEs do not engage in environmental activities. Interestingly, none of the respondents mentioned lack of human resources as a reason for not engaging in environmental practices.

6.6 Conclusion to Chapter Six

This chapter presented the discussion of the result in line with the relevant literature reviewed in chapter two. It is the finding of this chapter that the South Africa SMEs sampled are not generally lacking in information about the environment, as it has been earlier found by previous research and that owner-managers appeared to have superior understanding of environmental management and environmental issues covering aspects of the environment. As mentioned during the course of this chapter, the businesses interviewed demonstrated clear knowledge and understanding of environmental sustainability issues. Therefore this research does not support the findings by Lepoutre and Heene (2006) and Lewis and Cassells (2010).

Furthermore, this research concludes that environmental practices of SMEs in South Africa cover a wide range of areas. The environmental practices of firms interviewed covered four out of the six core areas specified by Moldan et al. (2012). These practices range from human settlement, to energy systems, carbon and nitrogen cycles and aquatic systems. This research report does not totally support the earlier findings in Brammer et al. (2012) and Banerjee (2001). This study finds that manufacturing and employee strategies are mostly supported by the South African SMEs interviewed in this research, while corporate and marketing strategies are mostly neglected. Manufacturing strategies appears to be the most supported strategy of all the four environmental strategies.

In addition, the findings of this research supports the earlier finding by Babiak and Trendafilova (2011) where it was found that owner managers responsible for decision-making regarding sustainable management practices considered multiple motives for engaging in environmental responsibility practices. This research suggests that South African SMEs interviewed are mostly motivated by commercial opportunities, sustainable alternative methods, personal values, efficiency and intention to solve societal problems. It can be further concluded that the environmental sustainability strategies and practices of SMEs in the sample are closely linked to the ethical standards of owner managers.

The findings of this research does not support the notion of “value-action gap” as suggested by Revell et al (2009) and agrees with the suggestion by Battisti and Perry (2011) that environmental practices pursued by small businesses are consistent with their understanding of environmental responsibility. Lastly, this research finds that SMEs in the sample expect favourable government interventions and policies to engage in

environmental activities. The SMEs interviewed mentioned government bureaucracy, lack of government support and inconsistent government policies as one of the barriers to engaging in environmental activities. Also, the literature reviewed this subject does not suggest these factors as barriers to environmental activities.

7. CHAPTER SEVEN: CONCLUSION

7.1 Introduction

This chapter presents research findings in the perspective of the existing academic literature on environmental sustainability orientation of SMEs. This chapter reiterates the research problem and restates the research objectives. This research makes recommendations to government and business and presents management implications of the findings.

7.2 Research Objectives

The objective of this research was to understand the nature, practices and motivations of environmental sustainability in SMEs in South Africa. Previous research of small businesses in the United Kingdom and New Zealand found that many SMEs individually perceive little or no impact on the environment and may attempt to relieve themselves of environmental responsibility and the need to act (L. J. Spence et al., 2012). Notwithstanding, scholars have suggested that the collective impact of SMEs is significant (Cassells and Lewis, 2011; Lewis and Cassells, 2010; Morsing and Perrini, 2009). In view of this, the research sought to achieve the following;

- Gain more insight into how SMEs in South Africa understand environmental sustainability in the context of their business,
- Understand the types of environmental practices adopted by SMEs in South Africa and how these practices integrated into the business,
- Comprehend the factors motivating SMEs in South Africa to engage in environmental sustainability activities, or factors preventing others from engaging,
- Uncover the barriers that SMEs in South Africa face in implementing environmental practices.

7.3 Findings

7.3.1 Question One: How do Small and Medium Sized Enterprises Understand Environmental Sustainability in the Context of their Business?

This research project found that South African SMEs interviewed have broad insight and clear understanding of environmental sustainability issues in the context of their business. Furthermore, it was found that the sample SMEs are not lacking information about the environment and that the owner-managers interviewed appeared to have superior understanding of environmental issues. The insight of the SMEs covered the key aspects of the environment, which includes:

1) Climate Change including mitigation and adaptation
2) Human settlement
3) Energy Systems
4) Carbon and Nitrogen Cycles
5) Aquatic Systems

7.3.2 Question Two**:** What are the Environmental Practices Adopted by Small and Medium Sized Businesses, and how are these Practices Integrated into the Business?

This research found that environmental practices of South African SMEs interviewed covered a diverse area. These practices are:

1) Shared office space
2) Use of public transport
3) Living close to work
4) Optimised building design
5) Energy Efficiency
6) Biogas Digesters
7) Solar Panels
8) Water Efficiency
9) Paper and Plastic Recycling

The environmental practices of small firms in South Africa covered four out of the six core areas specified by Moldan et al. (2012). These practices range from human settlement, to energy systems, carbon and nitrogen cycles and aquatic systems. This research partly supports the earlier findings in Brammer et al. (2012) and Banerjee (2001). It was found that that manufacturing and employee strategies are mostly supported by the South African SMEs sampled, while corporate and marketing strategies are mostly neglected. Manufacturing strategies appears to be the most supported strategy of all the four environmental strategies.

7.3.3 Question Three: What are the Factors Motivating Small Businesses to act Proactively Towards Environmental Concerns?

This research found that owner managers of small businesses in the sample responsible for decision-making considered multiple motives for engaging in environmental responsibility practices. These motives are:

1) Commercial Opportunity
2) Market Gap
3) Innovation
4) Sustainable Alternative Methods
5) Passion and Values
6) Bring about Change
7) Efficiency
8) Recognition
9) Solving Societal Problems
10) Reduce Operational Expenses

This research suggests that South African SMEs interviewed are mostly motivated by commercial opportunities, personal values, efficiency and intention to solve societal problems. It further suggests that the environmental sustainability strategies and practices of SMEs in the sample are closely linked to the ethical standards of owner managers

The findings of this research does not support the notion of “value-action gap” as suggested by Revell et al (2009) and agrees with the suggestion by Battisti and Perry

(2011) that environmental practices pursued by small businesses are consistent with the ethics and values of the owner manager..

7.3.4 Question Four: What are the Barriers to Environmental Sustainability Practices in Small and Medium Sized Businesses

The SMEs interviewed in this research suggested seven factors that limit or prevent them from engaging in environmental sustainability practices. These factors are:

1) Government Bureaucracy
2) Lack of Government Support
3) Inconsistent Government Policies
4) Lack of Support from Large Corporates
5) Lack of Public Awareness
6) Lack of Technical Understanding
7) Lack of Funds.

Interestingly the SMEs interviewed did not identify lack of human resources as suggested by Lepoutre and Heene (2006, p. 262). The SMEs sampled appear to be focused on the external factors such as government policy, government support and support from larger corporates.

7.4 New Framework for Understanding the ESO of Small Firms in South Africa

This research proposes a basic framework termed the Motivation, Strategies, Practices and Integration (MSPI) Framework. This framework provides an integrated approach to exploring the environmental sustainability orientation of small businesses.

The framework is exploratory and proposes that there are four key aspects to understanding the environmental sustainability orientation of a small business. These are motivation, strategies, practices and integration.

- Motivation refers to the factors driving the adoption of environmental practices of small businesses. Factors that have been found in literature include regulation, stakeholder pressure, economic and financial advantage, owner manager's ethic

and values, family influence, firm size etc. Exploring the factors motivating SMEs to engage in environmental practice will help to uncover the SMEs perspective of the environment at a high level.

- Strategies refer to specific vision and goals that the SME has set for itself in relation to the environment. These goals could be focused on the market, employees, manufacturing and operations or driven by a corporate agenda.
- Practices refer to the specific activities carried out by SMEs to execute the environmental goals set by the SME. Practices include energy efficiency, waste recycling, renewable energy, green buildings etc.
- Integration refers to the ways in which the SME brings the motivations, strategies and practices together to create a meaningful environmental result. This will include a scorecards or a form of measurement framework to ensure successful outcomes.

An illustration of the framework is shown in figure 3. This framework could also be applied broadly in exploring the social and economic aspects of sustainability within the SME context. The framework is exploratory is nature and intends to provide a guide at a basic level to anyone interested in understanding how SMEs approach the environment.

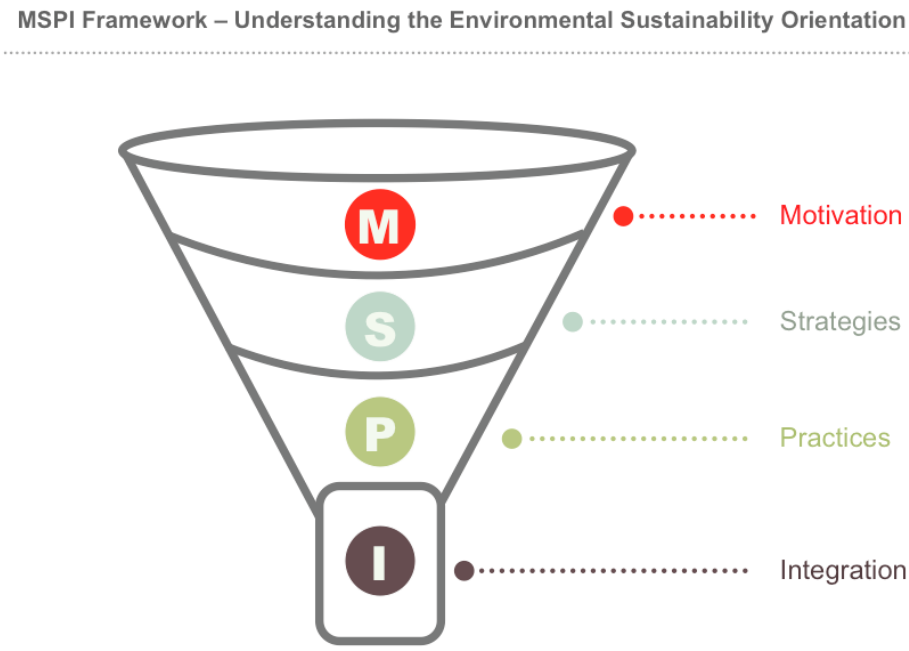

Figure 3 – Motivation, Strategies, Practices and Integration Framework

7.5 Recommendations to Stakeholders

7.5.1 Government and Regulatory Agencies

The result from SMEs sampled suggests that government bureaucracy and red tape as one of the factors that limit SMEs from engaging in environmental practices. Although, it is not clear how this directly affects SMEs, it is advisable that the relevant agencies overseeing the activities of small businesses particularly the Department of Trade and Industry review the relevant processes applicable to help boost the participation of SMEs in environmental activities. This is in line with New Growth Path Framework and plans to strengthen and consolidate initiatives to support small and medium sized businesses with a comprehensive strategy that includes eliminating unnecessary red tape and strengthening access to finance (Department of Economic Development, 2011).

Furthermore, lack of government support and inconsistent government policies were identified by the SMEs sampled. It will be worthwhile for the relevant government agencies to revisit the current support for SMEs especially in relation to green activities such as energy efficiency, renewable energy, water efficiency and waste to energy. The policies of government in relation to the environmental activities should be reviewed. Incentives to encourage and support environmental activities of SMEs may be initiated. These incentives should be designed such that they could be used to drive the broader economic development goals of government such as job creation and local economic development.

7.5.2 Small and Medium Sized Business

The findings of this research show that small businesses sampled focus mostly on manufacturing and employee related strategies and tend to neglect the corporate and market related environmental strategies. It is recommended that small businesses should initiate environmental strategies at market and corporate level to help them achieve a fully integrated approach to environmental engagement.

7.5.3 Large Corporates

Large corporates can play a significant role in promoting environmental activities of SMEs by procuring from SMEs that engage in sustainable environmental practices. This might help to encourage SMEs that are willing to engage to take action by adopting some of the relevant environmental practices.

7.6 Recommendations for Future Research

Environmental sustainability orientation of small businesses is a relatively new but fast growing area of academic interest (Roxas & Coetzer, 2012). Chapter two highlighted some of the research that has been conducted in this area. However, further research is needed to explore this concept especially in the South African environment. Some of suggestions for further research in this area are stated below

7.6.1 Larger Sample Study

This research focused on one area of sustainability, namely environmental sustainability. There is space for expanding the work done by exploring some of the issues that this research reveals using a quantitative research design. This research is a small-scale study that covered only nine SMEs in four provinces in South Africa. A large sample study covering the provinces, business sectors, different sizes of South Africa SMEs will be more appropriate in generalising findings.

7.6.2 Sustainable Supply Chain

This research suggests that large corporates are not doing enough to support the environmental activities of small businesses in South Africa. However, some South African companies such as Woolworths and Anglo American have been acclaimed for their integrated supply chain activities developed to encourage small businesses to embrace environmentally friendly practices.

For example, the Woolworths Farming for the Future Programme initiated the adoption of more environmentally sensitive farming practices throughout the supply chain and the Anglo American Supplier Sustainable Development Code sets standards for suppliers to act in safe, sustainable and responsible manner. It will be interesting to evaluate the effectiveness of these activities from the perspective of the SMEs that benefit from these initiatives.

7.6.3 Innovation

Innovation does not appear to be a key driver for environmental activities amongst the SMEs interviewed. A study to explore the role of innovation in environmental activities of SMEs in South Africa will be useful in filling this gap. Additionally, a comparative analysis of the role of innovation in environmental activities of SMEs in emerging markets and

developed markets will help to uncover the role that innovation plays as a driver of environmental practices in South Africa compared to other countries

7.6.4 Government Policy

Government policy and support was found to be a barrier to environmental activities of SMEs interviewed. A study to explore the impact of government policy on environmental activities of SMEs will provide useful insight to policy makers and guide them providing the necessary support required by SMEs to engage in environmental activities

7.7 Management Implications

The SMEs interviewed in this research were found to have clear understanding of environmental issues and do engage in a variety of environmental activities for a various reasons such as commercial opportunity, personal values, efficiency and intention to solve societal problems. The environmental activities of the South African SMEs interviewed are not different from the types of activities found in other countries. It appears that business to business opportunities for environmentally friendly products and services exists within the South African SME sector.

By capitalising on the level of awareness and exposure of SMEs to environmentally friendly products and services. It might be possible to create a new industry in South Africa that could help fulfil broader development objectives of the country.

7.8 Conclusion to Research Project

Previous researchers have suggested that SMEs lack the knowledge, willingness and ability to engage in environmental activities. This research suggests otherwise. The SMEs interviewed in this research appear to have clear understanding of environmental issues. The SMEs sampled were engaged in a variety of environmental activities ranging from energy efficiency to water efficiency. They were mostly motivated by passion and values, commercial opportunity and need for efficiency.

SMEs are able to play a major role in addressing environmental concerns provided they are aware of the impact they have on the environment and are motivated to engage. Government can play a major role in encouraging and supporting SMEs to engage in environmental activities by providing incentives to support environmental initiatives and removing unnecessary bureaucracy that might prevent SMEs from benefiting from these

incentives. Large corporates can also play a role by developing integrated sustainable supply chain models that will involve and support SMEs to engage in environmental activities.

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