

**THE RELATIONSHIP BETWEEN GREEN
BEHAVIOURS AND THEIR EFFECT ON THE
PERFORMANCE OF SMALL BUSINESSES IN SOUTH
AFRICA**

By

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Submitted in fulfilment of requirements for the degree

MASTER OF COMMERCE



FACULTY OF MANAGEMENT AND COMMERCE

At the

UNIVERSITY OF FORT HARE

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JANUARY 2021

ABSTRACT

Purpose: Academics and the government are placing more emphasis and importance on the role that enterprises can play in response to challenges of the environment. This study aimed to establish the relationship between green behaviours and the performance of small businesses in South Africa. Green behaviours are measured as consisting of green entrepreneurial orientation, green technology dynamism and green innovation behaviour. Conversely, performance is defined as consisting of environmental performance, objective performance and subjective performance.

Design/methodology/approach: To achieve the purpose of this study, the study adopted a positivist paradigm which is motivated by the quantitative approach using a descriptive research design. Self-administered questionnaires were employed with a sample of 180 participants that were randomly selected across small businesses in the Buffalo City Metropolitan Municipality in the Eastern Cape province of South Africa.

Findings/results: The major findings of the study, using simple linear regression analysis, revealed that a significant positive relationship between green entrepreneurial orientation and environmental, objective and subjective performance does exist. However, the hierarchical regression analysis results revealed that green technology dynamism and green innovation behaviour do not moderate the relationship between green entrepreneurial orientation and performance as measured by environmental, objective and subjective performance dimensions.

Practical implications: Based on the findings of the study, small businesses need to develop policy related to promoting green behaviours, given that green entrepreneurial orientation has been found to be related to performance.

Originality/value: The results of this study could guide small business owners and managers in the implementation of environmentally-friendly practices in an effort to reduce green economy issues and environmental problems facing the present generation.

Key words: Green entrepreneurial orientation, green technology dynamism, green innovation behaviour, environmental performance, objective performance and subjective performance, South Africa.

DECLARATIONS

Declaration

I, the undersigned, Banana Zingisa (201406986), hereby declare that this dissertation is my own original work and it has not been submitted, and will not be presented at any other university or institution for a similar or any other degree award.



Signature:

Date: January 2021

Plagiarism Declaration

I, Zingisa Banana (201406986), hereby declare that am fully aware of the University of Fort Hare's policy on plagiarism and I have taken every precaution to comply with the regulations. All sources that inspired ideas presented in this dissertation are acknowledged in the text as well as at the reference list.



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Ethical Clearance Declaration

I, the undersigned, Banana Zingisa (201406986) hereby declare that that I am fully aware of the University of Fort Hare's policy on Research Ethics and I have taken every precaution to comply with the regulations. I have obtained an ethical clearance from the University of Fort Hare's Research Ethics Committee with ethical certificate reference number: CHI021SBAN01



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ACKNOWLEDGEMENTS

- ❖ Firstly, I would like to thank the good Lord in heaven for his faithfulness, for being the source of strength and refuge, for his guidance and making this project successful.
 - ❖ Secondly, my deepest appreciation goes to my Supervisor Prof W.T. Chinyamurindi and Co-Supervisor Dr H. Shava for supporting and guiding me through this research. Thank you for your encouragement, time, effort, advice, patience, sharing of knowledge and mentorship throughout the process of writing this dissertation. Thank you for challenging the way I think, reminding me that I am capable of more than I believe and gently pushing me to do better.
 - ❖ To my beautiful family – my Mom, sisters, nephews and nieces – thank you for the love, prayers and support over the years.
 - ❖ My appreciation goes to all small business owners and managers who participated in the study for their valuable contribution.
 - ❖ To my friends and colleagues, thank you for your assistance academically and for your companionship.
 - ❖ My appreciation also extends for the financial support I got from the RAVAC Bursary – may the good Lord remember what they did and reward them beautifully.
 - ❖ Lastly, I would like to thank the University of Fort Hare for their support academically, financially and through the use of workshops and activities that contributed to the accomplishment of this study.
- May God bless you all.

DEDICATION

I DEDICATE THIS WORK TO:

- My GOD for giving me power and strength to finish my dissertation. This is another living testimony that he will bring to pass whatever we commit ourselves to.
- My beloved parents. My mother, Madlamini Patience Banana, for her motherly care and support and to my late father, Aron Banana – they gave me the foundation of something they had never enjoyed – Education.
- My sisters, nephews and nieces: Ntombekhaya, Zoleka, Nontethelelo, Silindile, Bukho, Kwakhanya, Masilive, Likuwe, Zimasa, Kinono and Inam for being the source of motivation and strength during the moments of discouragement. **I will always love you.**



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ACRONYMS

BER	Bureau for Economic Research
DC	Dynamic capability
DCV	dynamic capability view
ECD	Department of Economic Development
EO	entrepreneurial orientation
GEO	green entrepreneurial orientation
GIB	green innovation behaviour
GTD	green technology dynamism
NGOs	non-government organisations
OP	objective performance
OSMEP	Office of Small & Medium Enterprise Promotion
R&D	research and development
RBV	resource-based view
SA	South Africa
SCA	sustainable competitive advantage
SEDA	Small Enterprise Development Agency
SEFA	Small Enterprise Finance Agency
SME	small business enterprise
SP	subjective performance
SPSS	Statistical Package for Social Sciences
UREC	University Research Ethics Committee
VRIN	Valuable rare imitable & non-substitutable



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CHAPTER ONE

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1. INTRODUCTION

The performance of small businesses is argued to be critical to various stakeholders, which include practitioners, researchers, educators and policy makers (Aroyeun, Adefulu & Asikhia, 2019). Jewwegaga, Ade-adeniji, Ibidunni, Olokundun, Borishade, Falola, and Obaoye (2018) argued that the economic development of any state depends on the performance of small businesses. With regard to this study, small business performance refers to the small business's success and the achievement of set objectives. The performance of small business remains an ultimate indicator for business success (Roxas, Ashill & Chadee, 2017). Performance is the major outcome of any business enterprise which is why both academics and practitioners pay so much attention to the phenomena (Hashim, Raza & Minai, 2018).

According to Neneh and Van Zyl (2017), the small business sector has been broadly acknowledged as a fundamental driver of economic growth, innovation, employment, and social integration in both developed and developing countries. As such, many governments and policy makers all around the world are focusing on developing the small businesses to promote financial growth and development.

Sadly, small businesses in South Africa no longer grow but continue to assume the survivalist position (Fatoki, 2014; Neneh & Van Zyl, 2017). In addition to the high failure, low survival, and low growth costs of small businesses, South Africa faces a high unemployment rate and in the third quarter of 2020, the unemployment rate was estimated to be 30,8% (Stats SA, 2020). Neneh and Van Zyl (2017) pointed out that besides the increase and sustainability of small businesses in South Africa, the country is in danger of economic stagnation. Furthermore, promotion of small business growth is essential as it will lead to sustainable job creation, which is crucial to South Africa's economic prosperity and growth (Neneh & Van Zyl, (2014). This further emphasises the need for improving the growth of small businesses in South Africa.

Government and academics are also giving more consideration to environmental degradation and place focus on the solution to environmental problems (Boons,

Montalvo, Quist & Wagner, 2013). The implementation of green activities as a business strategy remains unfamiliar to many small and medium enterprises (SMEs) in developing countries such as South Africa (Mafini & Okoumba, 2018). Studies advocate a positive role of government in furthering the environmental performance of entrepreneurs by instituting regulatory pressure and awarding contracts (Potluri & Phani, 2020; Horisch, Kollat & Brieger, 2017).

Concerns over human health and living conditions are regarded as integral parts of core business activities (Jiang, Chai, Shao & Feng, 2018). This is the reason why this study introduces the concept of green behaviours as those behaviours are not to harm the environment but maximise on the performance of the business. These behaviours can include: a) green entrepreneurial orientation (GEO), b) green technology dynamism, and c) green innovation behaviour (Guo et al., 2018). Environmental concerns and consumers' intention to buy environmental friendly and green products, rising health consciousness and slowly changing willingness to pay for more eco-friendly products and services have a significant effect on the emergence of green markets (Potluri & Phani, 2020).

Green behaviours are important to our country's sustainable future. Societies and businesses are expected to follow environmental protection, economic performance and social inclusion when designing their operational and growth strategies (Fatoki, 2018). Green entrepreneurs should be set as good examples and granted extra positive affective rewards, because moral satisfaction encourages individuals to engage in green entrepreneurship (Zhang, Fan, Zhang & Zhang, 2019). Green entrepreneurship appeared as a reaction to the environmental challenges that we are facing such as environmental protection, recycling, alternative energy source implementation and responsible investments (Sorana, 2017).

Recent research has advocated that GEO performs critical roles in achieving higher financial performance and in minimising the environmental influences (Jiang et al., 2018). Financial performance enhancements are more important in the long-term period than in the short term when operational synergies among furnished chain members are extra integrated. Green entrepreneurial orientation is an emerging field of interest in a world grappling with achieving economic growth, making frugal use of natural resources and preventing pollution (Potluri & Phani, 2020). GEO performs the

function of a dynamic capability by means of successfully and correctly initiating green activities, turning into proactive in taking new opportunities, and taking risks in transforming the systems (Jiang et al., 2018).

Measuring business performance in today's financial surroundings is an essential difficulty for academic students and practising managers (Zulkiffli, 2014). Business performance is the operational potential to fulfil the desires of the company's main shareholders and it should be assessed to measure a business's accomplishment (Neneh & van Zyl, 2014). However, this suggests that small business performance must be assessed to achieve businesses goals by way of measuring success or failure, and can be defined in various ways, such as subjective or objective, and monetary or non-financial. This study measured the overall performance of small businesses focusing on environmental, subjective and objective performance. Environmental overall performance is the measurable effect of an organisation's ability to meet environmental goals and goals set forth in the organisation's environmental layout or coverage (Laetitia, 2016). Objective performance consists of economic effectivity measures such as return on investment and return on equity, and profit measures such as return on income and net profit margin (Masona, Floreania, Miania, Beltramea & Cappellettoa, 2015). However, Roxas et al. (2017) pointed out that subjective performance measures consist of consumer satisfaction, income growth, employee growth and market share.

1.2 RESEARCH PROBLEM

This study explored the effect that green entrepreneurial orientation, green technology dynamism and green innovation behaviour may have on the performance of small businesses in South Africa. In a business and sector-level study, Albrizio, Kozluk, and Zipperer (2017) concentrated on green developments and performance, taking note that there are various issues with utilising patents as a proxy for innovation. The question of what drives green technology dynamism adoption related to resource efficiency therefore remains open and can provide new considerations for policy makers (Massimiliano, 2018).

According to Hall, Matos and Bachor (2017), the case of environmental sustainability strengthens each year and for that reason societies sense the need for

environmentally-concerned entrepreneurs. As Volery and Mazzarol (2015) explained, the common model of high-pollution and profit-driven businesses fails us now, as the globalising population faces the finite nature of resources and their enormous degradation, the speedy growth of the world population, and the loss of biodiversity. Much of society finds itself awakened and receptive to the necessity of a distinct type of business model: one that calls for sustainability and comprises environmental issues in its consideration of the bottom line (Albrizo et al., 2017).

Further inquiry into green entrepreneurial orientation may want to one day help us recognise how natural resource-dependent communities, which regularly deal with persistent poverty can connect the initiative of neighbourhood entrepreneurs to create sustainable, money-making businesses. Green entrepreneurship is about combining profit orientation with technological innovations that can help alleviate human impact on the environment addressing global environment issues such as land degradation, climate change and loss of biodiversity (Marouseket, Stehel, Vochozka et al., 2019). With a stronger economy, these corporations could assist in bringing about higher attention to natural useful resource consumption, while additionally encouraging greater sustainable monetary growth in tourism and recreation. Finally, initiatives such as these surrounding open area insurance policies may additionally be more readily obtained in communities with visible examples of green thinking, brought by green entrepreneurs (Massimiliano, 2018).

According to Demirel, Cher, Rentocchini and Tamvada (2019), there is little clarity on how green entrepreneurs and their actions evolve as they pass through the corporate and technology lifestyle cycles. Several current studies have revealed the complicated reality of entrepreneurs continuously negotiating multilevel tensions between being green and being entrepreneurial through the process of balancing competing pressures in economic activities, social contexts, and ecological philosophies (Hall, Daneke & Lenox, 2010; O'Neil & Ucbasaran, 2016; O'Neill & Gibbs, 2016). Yet, more data-based evidence is needed to better understand the green innovation behaviour and performance of green entrepreneurs. Hence, this study seeks to contribute to literature by providing more data-based evidence which seeks to answer the research question stated next.

1.3. RESEARCH QUESTION

What is the relationship between green behaviours (*green entrepreneurial orientation, green technology dynamism and green innovation behaviour*) and their effect on the performance of small businesses in South Africa?

1.4. RESEARCH OBJECTIVES

The study's objectives were grouped into primary and secondary objectives.

1.4.1 Primary objective

The primary objective of this study was to establish the relationship between green behaviours and their effect on the performance of small businesses in South Africa.

1.4.2 Secondary objectives

1. To determine the effect of green entrepreneurial orientation on the environmental performance of small businesses in South Africa.
2. To determine the effect of green entrepreneurial orientation on the objective performance of small businesses in South Africa.
3. To determine the effect of green entrepreneurial orientation on the subjective performance of small businesses in South Africa.
4. To determine whether green technology dynamism moderates the relationship between green entrepreneurial orientation and environmental performance of small businesses in South Africa.
5. To determine whether green technology dynamism moderates the relationship between green entrepreneurial orientation and objective performance of small businesses in South Africa.
6. To determine whether green technology dynamism moderates the relationship between green entrepreneurial orientation and subjective performance of small businesses in South Africa.
7. To determine whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and environmental performance of small businesses in South Africa.
8. To determine whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and objective performance of small businesses in South Africa.

9. To determine whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and subjective performance of small businesses in South Africa.

1.5. HYPOTHESES

H1: Green entrepreneurial orientation has a positive influence on environmental performance.

H2: Green entrepreneurial orientation has a positive influence on objective performance.

H3: Green entrepreneurial orientation has a positive influence on subjective performance.

H4: Green technology dynamism moderates the relationship between green entrepreneurial orientation and environmental performance.

H5: Green technology dynamism moderates the relationship between green entrepreneurial orientation and objective performance.

H6: Green technology dynamism moderates the relationship between green entrepreneurial orientation and subjective performance.

H7: Green innovation behaviour moderates the relationship between green entrepreneurial orientation and environmental performance.

H8: Green innovation behaviour moderates the relationship between green entrepreneurial orientation and objective performance.

H9: Green innovation behaviour moderates the relationship between green entrepreneurial orientation and subjective performance.

1.6 SIGNIFICANCE OF THE STUDY

Findings of this research will assist policy makers and small business owners to gain more insight into the relationship between green behaviours and their effect on the performance of small businesses. This information will help the small businesses to improve their performance (environmental, objective and subjective). The findings will help government agencies to get insight into what should be done to develop green

entrepreneurship as it has a significant impact on small businesses' performance. Further, results of the study will have important implications for policy makers and financial providers in designing satisfactory programmes that seek to address green economy-related issues and improve small businesses access to funding and performance (Horisch et al., 2017).

There has been limited research in green behaviours, and none focusing on business performance by SMEs. Therefore, further research is needed. The government of South Africa should also increase its support of green entrepreneurship by adopting interest rates and taxation, deregulation and simplification, financial assistance, information services, and venture capital subsidies (Ye, Zhou, Anwar, Ahmad & Fahad, 2020). South African business communities, industries, and policymakers are encouraged to develop new sustainable economic forms that can be labelled as green. Furthermore, the government of South Africa should increase the ecological concerns among consumers to enhance the acceptance of green consumption. Academic institutions should provide courses on green entrepreneurship. The findings of the study can help SMEs to be innovative as South Africa is in the era of the 4th industrial revolution, where small businesses have to reposition themselves so that they can adapt to the change for them to survive in this era (Sibanda, 2019).

Although still in infancy, the scholarship on green entrepreneurial orientation is gaining increased visibility in the face of social awareness of corporate responsibility toward the environment, and the growing importance of ecological sustainability in strategic business development (Hall et al., 2017). Green entrepreneurs exploit the opportunities that are essential in environmental issues applicable to market failures (Demirel et al., 2019). This research also suggests areas for further investigations and subsequently provides direction for future studies.

1. 7. LITERATURE REVIEW

This section discusses theoretical and empirical literature related to the study.

1.7.1. Theoretical literature

The dynamic capabilities view and the resource-based view theories are discussed in this section and adopted in this study.

1.7.1.1 Dynamic capability view theory

The theoretical background enlightening this study draws from a dynamic capability view (DCV) theory (Teece, 2007), which features how the business creates and supports competition and profitability. The DCV theory explains the exploitation of existing internal and external business-specific competencies to deal with the changes in the environment (Lavhelani, Omoruyi & Chinomona, 2018). Internal competencies can be related to organisational efficiency, functionality, technology, and management capabilities. This combination of capabilities is a new perspective of competitive advantage. According to Masnan, Saad and Ramlee (2018), organisations that are competent and have unique capability, can be regarded as those that possess dynamic capability. Additionally, small businesses can also build a sustainable dynamic capability by having a combination of assets and development as well as resource utilisation and protection.

According to Teece (2007), the concept of dynamic capabilities essentially says that what matters for business is corporate agility: that is the capacity to (1) sense and shape opportunities and threats, (2) seize opportunities, and (3) maintain competitiveness through enhancing, combining, protecting, and when necessary, reconfiguring the business enterprise's intangible and tangible assets. Along the way, many dimensions have been incorporated into components of absorption, adaptation and innovation (Wang, Feng & Lawton, 2017), substantive capability (Wilden & Gudergan, 2015), market responsiveness, learning, coordination and integration (Wang & Shi, 2011), and integrative capability (Jiang, Mavondo & Matanda, 2015).

The theory of DCV was introduced because of its uniqueness and difficulty in replicating. This capability is needed so that small businesses can adapt themselves with various customers and acquire opportunity technologies. According to MdSaad and Jedin (2014), a business's capability can be enhanced and used to improve organisational performance if it has the ability to exploit various competencies efficiently.

This study adopted the dynamic capability view of the firm to explain the causes of competitive advantage in companies. Teece (2007) claimed that small businesses which are operating abroad and even businesses which have opportunities and threats concerning technological change, can enjoy the benefits. Its importance has

intensified in the current situation due to the existence of a global economy, and various inventions and innovations (Jiang et al., 2018). Therefore, dynamic capability is needed to ensure that firms can remain steadfast in the marketplace. Teece (2007) further explained that firms require a combination of unique capability to satisfy their customers' needs.

1.7.1.2 Resource-based view theory

This study also adopted the resource-based view (RBV) of the firm because it provides a robust basis to the study on the effect of entrepreneurial orientation on the performance of small businesses. The RBV theory points out that a business organisation must have valuable, rare, inimitable and non-substitutable resources to have a sustainable competitive advantage (Wernerfelt, 1984; Barney, 1991). These resources include everything internal to the organisation (Samson & Mahmood, 2014). Under the theory of the firm, the resource-based view was produced in which an enterprise is defined as the summation of strategically important resources where everything matters.

The RBV is often related to entrepreneurial orientation performance and growth since entrepreneurs' values in terms of proactiveness, risk taking and autonomy have become of the most important estimation tools in the last decade for enterprise performance and competitive strength as well as innovation (Barney, 1991). The resource-based view perceives firm specific resources such as assets and capabilities as the drivers of a firm's business strategy (Kropp, Lindsay & Shoham, 2006). The ability and capability to ensure better organisation performance lie in superior managerial skills and knowledge (Samson & Mahmood, 2014). Therefore, entrepreneurial orientation and dynamic capabilities can be viewed as resources which have the potential to enhance export performance.

1.7.2. Empirical literature

This section outlines the existing empirical literature and hypotheses of the study.

1.7.2.1 Green entrepreneurial orientation (GEO)

According to Jiang et al. (2018), green entrepreneurial orientation may be defined as a new business start-up in the production industry or environmental services which focuses on the preservation of natural conditions or natural resources such as eco-

tourism, waste water treatment, recycling, renewable energy and biodiversity (Jiang et al., 2018). Green entrepreneurial orientation, a concept that came from EO, is a combination of entrepreneurial orientation and green entrepreneurship (Fatoki, 2019). GEO is reflected in green innovativeness, proactiveness and risk-taking of a firm. GEO allows the identification of business opportunities, while considering environmental aspects (Ge et al., 2016; Jiang et al., 2018). Green entrepreneurs can either provide green products and services such as waste management and energy saving appliances by working in an overtly green sector or they may offer products and services through an environment friendly process such as eco-tourism and organic products (Liu & Chen, 2014). Previous studies on green entrepreneurial orientation suggest that entrepreneurs embrace environmental values as the core component of their identity which they use to develop comparative advantage for their company in the green markets (Allen & Malin, 2008). However, recent studies argue that green entrepreneurs may be driven by a mix of green, social and ethical motives along with economic motives rather than being solely green oriented (Fatoki, 2019).

1.7.2.2 Green entrepreneurial orientation and environmental performance

According to Jiang et al. (2018), green entrepreneurial orientation action can also decrease environmental degradation and reduce economic cost by means of improving the efficiency of markets and lessening market failure. GEO can contribute to better environmental performance by creating green products and services, reducing waste and material, energy and water consumption and ensuring employee and customer safety (Fatoki, 2019). Dynamic capability is precious for identifying, exploring, and assessing viable possibilities in environmentally relevant market tragedies (Jiang et al., 2018). Since some market mishaps can also result in environmental degradation, it implies possibilities for green entrepreneurial orientation. The damage to the health and protection of personnel at work can be reduced through lowering consumption of poisonous substances and cutting damaging emissions (Chuang & Yang, 2014).

Teece (2014) argued that dynamic capabilities' emphasis is on building, renewing, and reconfiguring interior and exterior resources. A business possessing GEO will increase the effectivity of useful resource conversion (Ge et al., 2016). Green technologies utilised in the production processes can also decrease the consumption of water,

electricity, coal, or oil and also address the environmental issues of the public (Jiang et al., 2018). GEO deals with friendly products such as solar panels for power (Fatoki, 2019). Furthermore, the utilisation of recyclable or reusable cups rather than waste glass bottles or mirrors can also ensure bigger social welfare. Based on all that has been discussed above, it can be hypothesised that:

H1. Green entrepreneurial orientation has a positive influence on environmental performance.

1.7.2.3 GEO impact on objective performance and subjective performance of small businesses

According to Covin and Lumpkin (2011), GEO contributes to better objective performance through three mechanisms, which are related with three characteristics of entrepreneurial orientation which include innovativeness, proactiveness, and risk-taking. The innovativeness describes a propensity to exploit new ideas, have interaction in experimentation, and guide innovative strategies (Jiang et al., 2018). Specifically, new easy technologies are developed to make better use of resources as so as to limit consumption of water and fossil fuels (Xie, Huo, Qi & Zhou, 2016).

In addition, composite and recycling materials are generally used throughout the production or the shipping method (Graham & McAdam, 2016). According to DCT, proactiveness refers to a tendency of responding to consumer demands via introducing green products, service, or technology first. Under the vogue of customers' mind-set in the direction of green marketing, businesses can reap the financial benefits of becoming a pioneer in green innovation practices. Risk-taking displays a tendency to undertake an energetic posture when investing in tasks with high levels of uncertainty (Wang, Zhang & Zhou, 2015). Although materialising green innovation behaviour (GIB) is regularly related with complicated conditions and hesitations, it may additionally carry in new customers and sparkling revenue (Jiang et al., 2018). Based on what has been discussed above, it can be hypothesised that:

H2: Green entrepreneurial orientation has a positive influence on objective performance.

H3: Green entrepreneurial orientation has a positive influence on subjective performance.

1.7.3. Green technology dynamism (GTD)

Green technology dynamism is used to breathe life back into a damaged ecosystem. It is also referred to as environmental, technological or clean technology. The essential goal is to preserve nature, and to remedy the terrible influence that people have on it (Schilke, 2014). GTD is defined as the rate and uncertainty of the inexperienced technological paradigm alternate in the external environment. As indicated earlier, businesses need to align their assets and abilities with the altering market stipulations (Wilden & Gudergan, 2015). If businesses undergo fast technological changes, then the motivation to acquire knowledge about new applied technologies will be extended (Jiang et al., 2018). Although the altering technological prerequisites are related with uncertainty, eco-knowledge absorption capability may additionally be more crucial when dealing with GTD than facing steady environments (Costantin, Crespi, Marin & Elena, 2017). This is because the information absorption functionality can assist small companies to possess specific knowledge that supports eco-friendly business practices, such as research and development (R&D), technological leadership, and innovation (Jiang et al., 2018).



GTD states that the higher the grade of environmental dynamism is, the more appropriate the inclination to going through uncertainties will be (Jiang et al., 2018). In addition, the enthusiasm to make investment choices may also rely extensively on whether or not the circumstance is uncertain or not (Li, Zheng, Cao, Chen, Ren & Huang, 2017). In instances where uncertainty is high, companies will have little motivation to take risks (Hojnik & Ruzzier, 2016). Taken together, adopting GEO may additionally acquire larger performance beneath greater stages of GTD than lower stages of GTD (Jiang et al., 2018). Based on the discussion above, it can be hypothesised that:

H4: Green technology dynamism positively moderates the relationship between green entrepreneurial orientation and environmental performance.

H5: Green technology dynamism positively moderates the relationship between green entrepreneurial orientation and subjective performance.

H6: Green technology dynamism positively moderates the relationship between green entrepreneurial orientation and objective performance.

1.7.4 Green innovation behaviour (GIB)

According to Guo, Wang, and Xie (2018), green innovation behaviour is about developing and applying new products, new processes and services to achieve improvements in overall environmental performance, including innovations in product innovation, process innovation and project innovation. The green innovation behaviour of scientific researchers is the beginning point of organisation innovation activities. The nice implementation of a green innovation strategy sooner or later relies on green innovation behaviour of scientific researchers, as reflected in the work processes, methods, and services of researchers (Li, Wang & Wu, 2019).

According to Hatcher, Ijomah and Windmill (2011), based on different levels of technology innovation, green innovation behaviour consists of either green radical innovation or green incremental innovation. GIB is defined as a novel, unique and artistic creation caused by fundamental changes of current green products, processes or services (Chai & Zhou, 2014). Small businesses who use external knowledge to deal with their limited resources may bear risks that spring from the financial failure of green innovation behaviour (Demirel, Li, Rentocchini & Tamvada, 2017).

Determinants of green innovation behaviour are immense, for example government environmental regulations, consumer demand and factors from competitors (Guo et al., 2018). Many studies have analysed the antecedents of green innovation from the inter-organisational perspective, such as senior managers' environmental awareness (Gadenne, Kennedy & Mckeiver, 2013), green shared vision (Chen, Chang & Lin, 2014), cooperation with competitors (Cuerva, Triguero-Cano, & Corcoles, 2014), and environmental managerial concern (Bossle, Dutra De Barcellos, Vieira, & Sauvee, 2016). Empirical studies show that the enterprise's green innovation is influenced by the path of innovation, the accumulation of knowledge, the capabilities of organisation, and the learning of organisation (Bossle et al., 2016; Cuerva et al., 2014).

However, little empirical research has addressed the question of how green entrepreneurial orientation as an antecedent affects the improvement of green innovation (Demirel & Demirel, 2012). Peng and Liu (2016) stated they believe that organisational capabilities such as learning and continuous innovation may appear when entrepreneurial orientation is strong enough, promoting the environmental strategic initiatives. According to Nene and Van Zyl (2017), the rule of law and

enforcement of environmental legislation increase the penalty for not being green. Green innovation is of great significance to the sustainable growth of the country and businesses (Horisch et al., 2017).

Some studies show that green innovation behaviour practice not only reduces the negative impact on the environment but also generates a good level of business performance (Chang et al., 2018; Jiang, Lyu & Zhou, 2020). A large number of firms have implemented green innovation as a strategic activity to improve environmental performance (Jiang et al., 2020).

Previous research has found the existence of separate roles of green entrepreneurial orientation and inter-organisational learning in understanding green innovation issues (e.g. Mafini & Omuroyi, 2013; Lechner & Gudmundsson, 2014; O'Neil & Gibbs, 2016). According to Demirel, Cher, Rentocchini and Tamvada (2019), green entrepreneurs are involved in green start-ups, following an entrepreneurial route that fulfils the necessity for a greener and more environmentally friendly strategy to businesses, offering sensible and green innovation solutions for social and environmental concerns. Nevertheless, some scholars demonstrated that GEO has no significant effect on green innovation (Peng & Liu, 2016). Based on all the above discussions, it can be hypothesised that:

H7: Green innovative behaviour positively moderates the relationship between green entrepreneurial orientation and environmental performance.

H8: Green innovative behaviour positively moderates the relationship between green entrepreneurial orientation and subjective performance.

H9: Green innovative behaviour positively moderates the relationship between green entrepreneurial orientation and objective performance.

1.8 RESEARCH MODEL

The hypotheses outlined above are presented in Figure 1 in the form of a diagram that represents the research model. The diagram shows the path which the hypotheses in this study will follow. The environmental performance, objective performance and subjective performance are the dependent variables. Green entrepreneurial

orientation is the independent variable of the study. GTD and GIB are the moderating variables of the study.

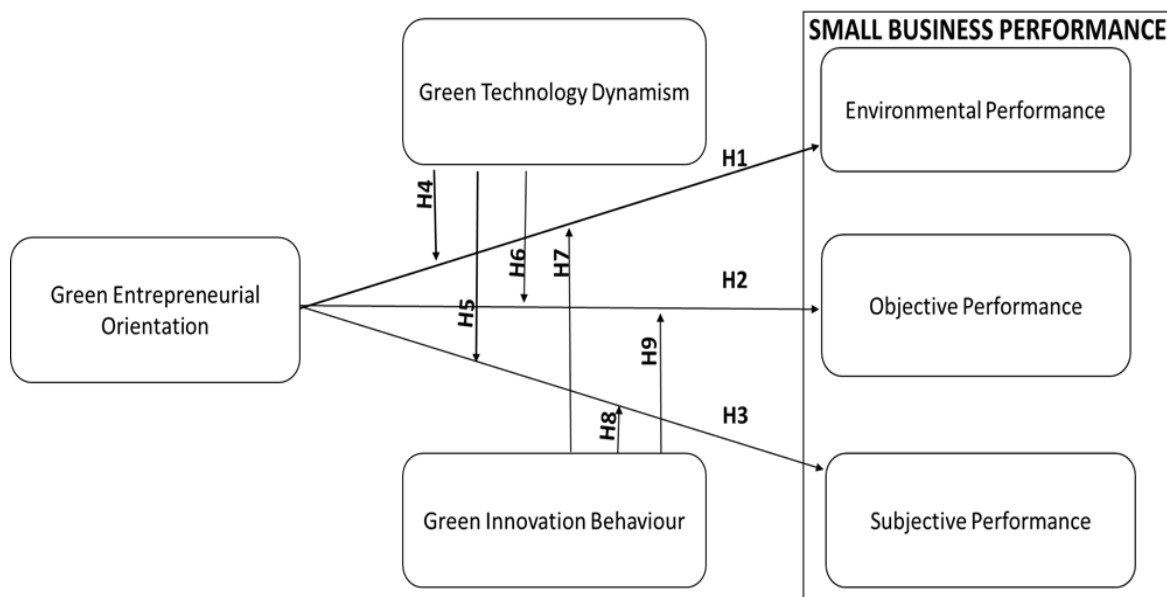


Figure 1.1: Research model

Source: Author's own creation



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1.9. RESEARCH DESIGN AND METHODOLOGY

The subsections below provide the preliminary discussion of the research approach, research design, population, the sample size, the data collection method and instruments, as well as the sampling technique.

1.9.1 Research approach

In this study, the quantitative approach was used since it generates generalisable and quantifiable data for a large population, and is directed at problems that are exactly described and for which the researcher requires detailed and exact results, such as testing relationships of variables. Through this approach, this research was able to achieve its intended objectives (Ahmed, 2014; Alexandra, Elaine & Christopher, 2017).

1.9.2 Research design

This study followed a descriptive research design. Descriptive research studies use statistical techniques to discover patterns. This research design is essential when information of a particular aspect is vague (Feinberg, Kinear & Tailor, 2013).

1.9.3 Population and sample

This research targeted small businesses operating within the confines of Buffalo City Metropolitan Municipality and are registered by the Eastern Cape Development Corporation.

1.9.4 Sample size

To determine the sample size, the researcher made use of the Raosoft sample size calculator. The Raosoft sample size calculator is an arithmetic computer software package that allows a researcher to electronically determine a sample size for a given population size (Meysamie, Tae, Mohammadi-Vajari, Yoosefi-Khanghah, Emamzadeh-Fard & Abbassi, 2014). It is beneficial because it enables a researcher to estimate the acceptable sample measurement with some grade of accuracy by way of getting into population sizes, self-assurance and margin of error (Albert & O'Connor, 2012). There is no reliable sample frame of SMEs in the Buffalo City Metropolitan Municipality. The researcher relied on a convenience sample.

1.9.5 Sampling

The researcher used the non-probability sampling method in selecting a sample for this study because it is relatively fast, cost effective and easy to measure. This study adopted the convenience sampling technique. In this technique, the sample is taken from a segment of the population that is readily available to the researcher and has the probability of being chosen to answer the questionnaire (Bradley, 2013). In this study, convenience refers to the accessibility of small businesses due to the proximity of their location to the researcher. The researcher used this method because it is easy, more affordable to implement and it is also faster to use.

1.10. RESEARCH INSTRUMENT

The researcher made use of a self-administered questionnaire. As a result of the large size of the samples, in quantitative research the questionnaire allows for the speedy

collection of data (Creswell, 2014). Each respondent receives the same questionnaire with the same questions, thus yielding information which is more related (Burns & Bush, 2013). For the development of the questionnaire, the items that were used were taken from previously validated instruments.

The questionnaire used for this study includes scales adopted from other studies in which they were used to collect data for related issues (Li, Wei & Liu, 2010; Zhou & Li, 2011; Zhou et al., 2008; Cadogan et al., 2002; Spangenberg & Theron, 2004; Green & Medlin, 2003; Zhou & Georges, 2001). The questionnaire contains six measurement scales with a total of 33 items. Respondents replied to questions framed on a 5-point Likert scale where they circled the appropriate response.

1.11. RELIABILITY AND VALIDITY

Cresswell (2014) states that reliability is when a researcher's approach is consistent across different researches and different projects. Reliability refers to the instrument which is consistently used to measure what it is supposed to measure if it is used under the same conditions with the same subjects. In brief, reliability is the repeatability of measurement (Burns & Bush, 2013).

Validity refers to the strength of conclusions, inferences or propositions made from a research study (Cooper & Schindler, 2006). The measurement scales in extant literature show enough consistency when they surpass the accepted reliability threshold of 0.70 and they have factor loadings above the threshold of 0.6 (Guadagnoli & Velicer, 1988). This information is shown in Table 1.

Table 1.1: Instrument reliability and validity

Scale	Number of Items	Cronbach Alpha	Example	Source
Green entrepreneurial orientation	5	0.796	In dealing with competitors, we typically initiate green actions that competitors correspond to	(Li, Wei & Liu, 2010)
Green technology dynamism	4	0.828	The technology in our industry is changing rapidly	Sheng, Zhou & Li, 2011)
Environmental performance	4	0.943	Environmental performance reduced pollution	Zhu, Sarkis & Lai, 2008)
Objective performance	8	0.78	How the firm's revenue performs compared to industry.	Cadogan, Diamantopoulos & Sigauu, 2002; Spangenberg & Theron, 2004)
Subjective performance	8	0.83	How the firm's market share performs compared to industry.	(Green & Mediln, 2003)
Green innovation behaviour	4	0.793	I will try my best to reduce the possible harm from a product to users in the product design.	(Zhou & Georges, 2001)



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1.12. RESEARCH PROCEDURE

The researcher started by obtaining an ethical clearance certificate. This was followed by a review of available literature. Through the use of the convenience sampling technique, the researcher then collected data from small businesses operating in Buffalo City Metropolitan Municipality. Respondents were informed of their right to participate or not to participate in the study.

1.13. STATISTICAL ANALYSIS

The Statistical Package for the Social Sciences (SPSS) version 25 was used to analyse the data collected. The SPSS software package is continually being updated and improved, and so with each major revision comes a new version of that package (Bazeley & Jackson, 2013). Biographical data such as sector in which the small businesses are operating, age of the enterprise and department which the respondent of the firm represents, was analysed through descriptive statistics. In addition, simple linear regression analysis and hierarchical regression analysis were performed to test the study's hypotheses.



1.14. ETHICAL CONSIDERATION

Ethics refers to a code or way of life, social norms for habits that distinguish between suitable and unacceptable behaviour (Akaranga & Makau, 2016). Many societies have legal rules which dictate behaviour; however, ethical norms are broader than laws. Frank and Wanner (2015) argued that the researcher should obtain informed consent, showcase no deception, grant full disclosure, and supply participants the right to withdraw, assure privacy and confidentiality and gather report data accurately. In adherence to the moral considerations of conducting the study, ethical clearance was acquired from the University of Fort Hare Ethics Committee before carrying out the research. Ethical certificate reference number: CHI021SBAN01.

1.15. DELIMITATION OF THE STUDY

The researcher focused on small businesses operating in Buffalo City Metropolitan Municipality. All small businesses were considered for data collection for this study regardless of the nationality or origins of the owner. The small businesses were formally registered with the Eastern Cape Development Corporation. Above that, the

researcher focused on locations within the Buffalo City Metropolitan Municipality where there is a concentration of small businesses.

1.16. CHAPTER OUTLINE

Chapter One – Introduction and background of the study

Chapter One serves as an introduction to the study. It further provides the introduction of the research and brief background of the research problem as well as objectives, hypotheses, literature review, the significance of the study, research methodology, statistical analysis, ethical consideration and delimitations of the study.

Chapter Two – SME overview and theoretical literature background

The main aim of Chapter Two is to provide a literature review on the state of small businesses in South Africa. A detailed outline of the challenges faced by small businesses in South Africa is highlighted. In addition, theoretical literature concepts of the research, which are the dynamic capability view theory and resource-based view theory, are dealt with.

Chapter Three – SME green behaviours and performance

Chapter Three discusses in detail the influence of green behaviours on small business performance. The first section of Chapter Three provides a discussion on constructs under study, namely green entrepreneurial orientation, green technology dynamism, and green innovation behaviour. A brief discussion of environmental performance is given as well, followed by objective and subjective performance measures. This chapter further focuses on the hypotheses development of the study.

Chapter Four – Research design and methodology

This chapter lays out the procedures that were taken in conducting the study. It further elaborates on the research design, population, and sampling procedures. Chapter Four also focuses on data analysis procedures.

Chapter Five – Results and interpretation

This chapter presents the analysis as well as the interpretation of data. Results that were obtained are compared with the findings of previous empirical studies and the theoretical framework on which this study was based.

Chapter Six – Conclusions and recommendations

Chapter six presents the conclusions drawn from the findings. Recommendations on how to employ green behaviours effectively are made by the researcher. The achievement of the objectives, the limitations of the study as well as the areas for further study are presented.



CHAPTER TWO

SME OVERVIEW AND THEORETICAL LITERATURE BACKGROUND

2.1 INTRODUCTION

This chapter focuses on the theoretical background around the existing constructs to the study. The chapter further highlights the state of small businesses and challenges faced by small businesses in South Africa. Finally, the chapter discusses theoretical and empirical literature related to the study. Swanson (2013), believes that the theoretical literature review helps establish what theories already exist, the relationships between them, to what degree the existing theories have been investigated, and to develop new hypotheses to be tested.

2.2 DEFINITION OF SMES

The World Bank defined SMEs as medium enterprises with less than 300 but more than 50 employees and more than 3 million dollars, but less than 15 million dollars as total assets and total annual turnover of more than 3 million but less than 15 million dollars. Small enterprises have more than 10 employees but less than 50 employees and an annual turnover of more than \$100 000 and less than 3 million dollars.

A comprehensive definition of an SME in South Africa is an enterprise with one or more of the following characteristics: Fewer than 200 employees, annual turnover of less than R64 million, capital assets of less than R10 million, and direct managerial involvement by owners (Banking Association of South Africa, 2018). SMEs are important because they are the drivers of inclusive economic growth not only in South Africa but globally (Nguyen, Phau & Matsui, 2018; Banking Association of South Africa, 2018). Small businesses are known as most essential and significant contributors to economic development, job creation, employment, innovation, and income generation in most countries.

Table 2.1 below shows how the South African government defined SMEs in each sector of the economy.

Table: 2.1 Definition of SMEs

Column 1	Column 2	Column 3	Column 4
Sectors or sub-sectors in accordance with the Standard Industrial Classification	Size or class of enterprise	Total full-time equivalent of paid employees	Total annual turnover
Agriculture	Medium	51 - 250	≤ 35,0 million
	Small	11- 50	≤ 17,0 million
	Micro	0 – 10	≤ 7,0 million
Mining and Quarrying	Medium	51 - 250	≤ 210,0 million
	Small	11- 50	≤ 50,0 million
	Micro	0 – 10	≤ 15,0 million
Manufacturing	Medium	51 - 250	≤ 170,0 million
	Small	11- 50	≤ 50,0 million
	Micro	0 – 10	≤ 10,0 million
Electricity, Gas and Water	Medium	51 - 250	≤ 180,0 million
	Small	11- 50	≤ 60,0 million
	Micro	0- 10	≤ 10,0 million
Construction	Medium	51 - 250	≤ 170,0 million
	Small	11- 50	≤ 75,0 million
	Micro	0- 10	≤ 10,0 million
Retail, motor trade and repair services.	Medium	51 - 250	≤ 80,0 million
	Small	11- 50	≤ 25,0 million
	Micro	0 – 10	≤ 7,5 million
Wholesale	Medium	51 - 250	≤ 220,0 million
	Small	11- 50	≤ 80,0 million
	Micro	0 – 10	≤ 20,0 million
Catering, Accommodation and other Trade	Medium	51 - 250	≤ 40,0 million
	Small	11- 50	≤ 15,0 million
	Micro	0 – 10	≤ 5,0 million
Transport, Storage and Communications	Medium	51 - 250	≤ 140,0 million
	Small	11- 50	≤ 45,0 million
	Micro	0 – 10	≤ 7,5 million
Finance and Business Services	Medium	51 - 250	≤ 85,0 million
	Small	11- 50	≤ 35,0 million
	Micro	0- 10	≤ 7,5 million
Community, Social and Personal Services	Medium	51 - 250	≤ 70,0 million
	Small	11- 50	≤ 22,0 million
	Micro	0 – 10	≤ 5,0 million

Source: Ministry of Small Enterprise Development (2019).

2.3 THE STATE OF SMALL BUSINESSES IN SOUTH AFRICA

According to the SME Landscape Report (2018/2019), the majority of South African small businesses generate revenue of less than R200 000 annually and nearly half of

small businesses employ between two to five employees. Small businesses, play an important role in an economy. Small businesses can be key drivers of economic growth, innovation and job creation. In South Africa, government recognises the importance of this segment of business activity, so much so that a new Ministry of Small Business Development was established in early 2014 (Bureau for Economic Research (BER), 2016). The aim of the Ministry is to facilitate the promotion and development of small businesses. These enterprises contribute significantly to national gross domestic product and have proved to be major contributors to job creation (The Department of Trade and Industry, 2008). South Africa struggles with an alarmingly high national unemployment rate of 30, 8% (Statistics South Africa, 2020), which is partly worsened by a chronic shortage of skilled labour. Against this backdrop, government is aiming to put policies, strategies and programmes in place which aim to create an enabling environment for small business development (BER, 2016).

Orbis (2019) stated that small businesses represent more than 90% of enterprises in all economies and also constitute a majority of a country's employment virtually worldwide. The highest percentage of involvement by the Black population is in the survivalist class where returns are very low and limited value is added to the economy.

The National Development Plan highlights the importance of small businesses for job creation, innovation and competitiveness. SMEs and cooperatives bring diversity into rural and township economies and act as a foundation to the industrial sector (Sefa Annual Report, 2018/2019). Although the current unemployment rate in South Africa stands at 29% as at Q2 2020, research shows that the probability of finding employment in a small business (SME) from being inactive or unemployed is more than three times that of finding employment in a large business. The unemployed are more likely to find jobs in small businesses than in large businesses, which demonstrates small businesses' capacity to absorb labour which will enhance competitiveness and economic growth (Stats SA, 2018).

The Department of Small Business Development is focused on improving access to finance through the Small Enterprise Finance Agency (Sefa). Sefa's role is investing in small businesses, supporting them grow and scaling up over the long term (Sefa, 2018/219). This investment has played an important role for small businesses and will continue playing a meaningful role towards growing this sector by creating a

sustainable environment through provision of funding and various business support activities. In practice, the opportunities for a greener economic system have yet to be grasped in South Africa (Amis, Montmasson, Lugogo & Benson, 2018).

Despite some successes and areas of progress, the economy remains locked into brown energy systems and investments, the benefits of which are not reaching most people – particularly the poorest. South Africa has made some important efforts to transform key industrial sectors. Urban transport systems and manufacturing are becoming less resource intensive. Sustainable agricultural practices are more widely taken up, and the market for organic farming is starting to emerge (Amis et al., 2018). The mining sector has committed to the transition. The research done by the Small Enterprise Development Agency (SEDA) (2018/2019) confirmed the need to establish a sound ecosystem to support entrepreneurs and that all elements of the entire ecosystem must be mobilised to resolve the challenges faced by small medium and micro enterprises and cooperatives.

2.4 CHALLENGES FACED BY SMALL BUSINESSES IN SOUTH AFRICA

Small businesses in South Africa are facing many challenges despite the growth of the SME sector. These challenges vary, including such issues of green economy, technological capabilities of small businesses, globalisation, lack of infrastructure, lack of access to finance, skilled labour and low levels of R&D. To shed a light on how these challenges influence SME failure, a detailed discussion is given in the paragraphs that follow.

2.4.1 Issues of the green economy

The SA Department of Environmental Affairs (2019) defined the issue of green economy as a system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over the long term, while not exposing small businesses, employees and future generations to significant environmental risks or ecological scarcities. Most countries have failed to drive structural changes by focusing on environmental stability on its own. Economic development and environmental protection have largely remained separate for a long period of time (Gibbs & O'Neill, 2015). It is therefore imperative to link environmental protection to conventional aims of industrial policy such as job creation,

competitiveness and innovation (Aoyi, Seodigeng, Modiba, Otieno, Mabuza, & Masedisho, 2016).

Increased economic growth in most African countries is as a result of the immense utilisation of these natural resources (Collier & Venables, 2012). Despite the reported economic performance, African countries still remain poverty stricken with high unemployment rates (Aoyi et al., 2016). Due to its environmental degradation, changes in climatic conditions and desertification, Africa's economic growth is currently at risk. The green economy framework is results-focused in terms of increasing innovation for new low-carbon production technologies, increasing productivity from the efficient use of resources, recycling, reusing and reducing waste; and increasing the potential for employment from green jobs, alternative income and socially inclusive growth (Timothy, 2012). In addition, the green economy framework also embraces the low-technology, renewable energy, resource efficiency and sustainable lifestyles, cities and societies of the Sustainable Consumption and Production initiative.



The paradox of Africa having enormous wealth in natural resources and yet being the poorest continent with worsening environmental degradation may still be the case 20 years from today (Timothy, 2012). The South African government recognises a green economy as providing potential to transition to a low carbon economy, resource efficiency and the creation of pro-poor jobs (Smit & Musango, 2015). Generally, the concept of green economy is not new but a re-emerging one, and it is gaining prominence in international and national policy debates. There are more protected and conservation areas in South Africa than ever before. There is also a growing recognition amongst public institutions of the value of nature (Amis et al., 2018). Even so, the country's ecological footprint continues to exceed the country's bio capacity, and shows no signs of shrinking.

2.4.2 Technological capabilities of SMEs

Sekhametsi (2017) stated that small businesses in South Africa have a tendency of being businesses with a low productivity charge and because these small businesses make use of technologies which are no longer advanced, this leads to small businesses being uncompetitive in relation to the large firms. According to the Office

of Small and Medium Enterprises Promotion (OSMEP) (2007), small businesses do not maximise their machinery utility as they have limited access to finance. In addition, small businesses face obstacles in the use and choice of technology. The Small Enterprise Development Agency has started to look at strengthening capacity to increase efficiencies internally, and to improve technology because most young people are into social media (2018/19).

Small businesses are on the whole customers of technological expertise as a substitute rather than adaptors of technology (OSMEP, 2007). The small businesses in South Africa are not innovative with their science and additionally, they lack knowledge in the deployment of the technology. Phangwana (2014) made a similar observation and pointed out that most small businesses are not up to date with their technology, nor are they aware that they can access appropriate technology through the use of the services provided by the National Research Foundation and the South African Bureau of Standards.

2.4.3 Globalisation

Globalisation brings the strain for small businesses to limit manufacturing costs, enlarge productivity and grow to be extra knowledge intensive (Sebastian, Paul & Alan, 2016). Globalisation increases the competition in the industry in which they are working. In order for small businesses in Africa to survive, thrive and reap success, the owners and administration have to attain a place where they have a full grasp of the dynamics at play, and can strengthen the skills and abilities that will give them a competitive edge (Chosniel, 2014). In order for small businesses to combat the improved opposition that they experienced as a result of globalisation, their owners ought to be able to interpret environmental changes that may shape current and future competition (Sebastian et al., 2016). This will help the SMSs to remain viable and survive competition.

2.4.4 Lack of Infrastructure

Infrastructure is a basic physical and organisational structure that is needed for the operation of small businesses, society or the services and facilities necessary for an economy to function. Mzileni (2017) asserted that the Infrastructure Dialogues of South Africa found that South Africa's township economy has been failing to prosper

because of the lack of infrastructure, ease of access to products, and lack of skills. Quality of infrastructure is a great challenge for most developing countries, and South Africa is no different. The quality of infrastructure in a country can heavily affect the growth prospects for small businesses. Infrastructure in this context includes telecommunication, electricity and transportation, which is in an unacceptable condition in South Africa (Telecommunications and Postal Services, 2017).

The lack of access to physical infrastructure is a key impediment to business growth and adds significantly to the cost of doing business (Chimucheka, 2012). Limited access to public infrastructure services is a major constraint to small business survival and growth as it limits the operations and restricts access to markets and raw materials. However, 90% of the electricity generated in South Africa is still based on coal-fired power plants (Amis et al., 2018). Initial successes and progress towards transforming South Africa's brown energy systems have stalled due to a gridlock between the national power utility and independent power producers (Okuboyejo, 2013). The transformation of the key economic sector also remains too superficial to deeply change the patterns of sustainability (Amis et al., 2018).

2.4.5 Lack of access to finance

Limitations of access to finance for SMEs are very common (Financial Services Regulatory Task Group, 2007). Given their highly conservative nature, South African banks and lenders are more inclined to put resources in small businesses in their later stages of development. They are less likely to lend to start-up SMEs (Financial Services Regulatory Task Group, 2007). The degree of these inclinations, however, can vary depending primarily on locational differences. The Small Business Survey (2010) reported that small businesses in Gauteng and North West tend to have greater access to finance relative to small businesses in other provinces. This is mainly due to the predominantly rural nature of these provinces.

According to the GEM South Africa (2014), lack of access to finance and poor profitability are among the main reasons for business discontinuance in South Africa. The GEM report also pointed to the fact that poor profitability, as a reason for discontinuance, was rising sharply. Small businesses in South Africa continue to be hampered from accessing financial support from traditional banking institutions due to

the models that are used to assess creditworthiness (Small Enterprise Finance Agency (SEFA) Annual Report, 2018/2019). Such traditional models are not suitable for small businesses that lack a track record and credit history (BER, 2016; Finfind, 2017).

Research estimates the access to finance gap to be between R86bn and R346bn in South Africa (Sefa Annual Report, 2018/2019). Focusing on access to finance and capacity, a new approach to understand and work with the informal economy is imperative if the transition is to improve the lives of the majority (Amis et al, 2018). Both public and private investment are flowing towards the green economy. South Africa has pioneered some key innovations in sustainable finance over the years (Amis et al., 2018). However, key brown investments, such as fossil fuel subsidies, are still in place. The funding will give local manufacturers and suppliers an opportunity to produce and strengthen their place in the market, which may lead to long-term contracts post the COVID-19 pandemic (Department of Small Business Development, 2020). Loan facilities will be provided at an interest rate of prime less 5% pa. It must be emphasised that the business needs will be assessed thoroughly to ensure that the fund is exclusively used for the finance stated, as misuse will not be tolerated under any conditions (Department of small business). The majority of SMEs will experience severe reduction in demand and subsequent reduction in revenues due to the COVID-19 pandemic. As a result, it is important to ensure that SMEs do not close down completely and that they are supported with working capital to ensure that jobs are retained in the economy (SEDA & SEFA, 2020).

2.4.6 Skilled labour

The labour market in South Africa is highly regulated with a high level of labour market rigidity. In this regard, problems experienced include the inability to attract and retain suitable staff, loss of key employees, low productivity and inadequate training and development of employees (Brink & Cant, 2003). In addition to the lack of basic skills, South African small businesses also lack the skills required for management level. However, developing and developed countries should likewise face the lack of highly green-skilled and experienced professionals, which pose a constraint on green economy, and such a situation has not significantly improved (Ye et al., 2020). This deficiency in management skills amongst small business owners and managers can

be explained by lack of education and their reluctance to enrol in short courses meant to improve their understanding of and skills in business functions.

Managerial competencies are defined as a set of emotional, social and cognitive intelligence which can be used to predict the effectiveness in professional management and leadership roles (Boyatzis, 2011). The ability for managers and business owners to effectively navigate through these competencies is critical to the growth and success of any business venture. Herrington and Wood (2003) pointed out that there is a clear gap in the South African education system and training and this has greatly reduced the management capabilities in the small business sector. Lack of education and training is one of the reasons why there is a very high failure rate of small businesses (especially the newly established), and low level of entrepreneurial creation (Karami, 2013).

2.4.7 Low levels of research and development (R&D)

Building R&D capacities is important for small businesses, as it can help determine the feasibility of transforming ideas into actual businesses. Investing in this aspect of business also allows businesses to access innovative solutions through the process of discovery. According to Maas, De Coning and Smit (1999), innovating firms are likely to grow faster than traditional start-up businesses. They found South African small businesses to be less innovative compared to those in developed countries. Booyens (2011) said that innovation in South Africa is stifled by the failure of small businesses to form strong upward linkages with larger firms. This failure denies them opportunities for technology diffusion. The GEM Report (2014) proposed that government should provide incentives for R&D. The aim would be to foster innovation, and to attract and strengthen lasting linkages among domestic and foreign knowledge intensive firms.

The main gap in South Africa's endeavour to build a fair and inclusive economy is the lack of effective measures to address the concerns of marginalised people and the informal sector (Amis et al., 2018). Small, micro and informal enterprises are too often forgotten in national efforts to grow and green the economy. Through developmental policies and programmes, the South African government has managed to widen access to key public services to millions of citizens, notably education, health, housing

and electricity (Amis et al., 2018). In addition, environmental awareness has grown significantly amongst South African citizens, the government, the private sector, non-government organisations (NGOs) and local communities, which have started to understand their ecological impact. The green transition is already happening around the world, but there is a need to ensure that it is rooted in local economies, brings real investment to the ground, and is owned and shaped by the people.

2.5 THEORETICAL LITERATURE

The dynamic capabilities view (Teece, 1997) and the resource-based view theories (Barney, 1991) are discussed in this section.

2.5.1 Dynamic capability theory of competitive advantage

The dynamic capability (DC) theory emerged as both an extension to and a reaction against the inability of the RBV to interpret the development and redevelopment of resources and capabilities to address rapidly changing environments (Bleady, Ali & Ibrahim, 2018). The DC theory may be considered as a source of competitive advantage in small businesses (Teece, Pisano & Shuen, 1997). The DC theory goes beyond the idea that sustainable competitive advantage is based on a firm's acquisition of valuable, rare, inimitable and non-substitutable (VRIN) resources. The dynamic capability theory is responsible for enabling organisations to integrate, arrange and reconfigure their resources and capabilities to adapt to rapidly changing environments. Thus, DCs are processes that enable an organisation to re-configure its strategy and resources to achieve sustainable business performance in rapidly changing environments (Bleady et al., 2018). Small businesses' internal resources and capabilities are the source of their competitive advantage over rival businesses and if applied effectively would give superior value to the extent that these competencies can be kept unique to the business and can be used to generate good environmental performance (Delery & Roumpi, 2017).

GEO is one of the youngest and most valuable researched topics in both entrepreneurship and environmental literature (Altinay et al., 2016). The competitiveness in the business environment has been forcing the organisation to remain exploring new opportunities (Habib et al., 2020). A strategic orientation, consequently, directs the businesses and finds them in identifying customer needs

and wants proactively by introducing new products and services in advance of the competitor's actions (Altinay et al., 2016).

Further, DC is a set of abilities that enable a firm to respond quickly to new opportunities, and is concerned with how to rejuvenate and integrate a business's resources (Schilling, 2006; Zhou & Li, 2010). DC involves repeated processes that influence the small business's resource base and hence governs business's VRIN (Adeniran & Johnston, 2012). Valuable resources are operational capabilities, superior capabilities or substantive capabilities which allow firms to meet current needs or immediate demands that can improve the effectiveness of the business (Winter, 2016). Valuable resources further provide firms with the required flexibility to respond to environmental opportunities and pressures (Galvin, Rice & Liao, 2014). Rareness indicates that the resources are scarce and are not possessed by the competitors (Adeniran & Johnston, 2012). Inimitable implies that the resources cannot be easily duplicated or copied by rivals, such as scientific discovery and brand name as some of them can be legally protected (Galvin et al 2014). Non-substitutable means the resources are not easily replaced or substituted (Bleady et al., 2018). The ability of a business to continually assemble specific resources (which are VRIN) and develop in-house routines to handle unforeseen events, provides a firm with the risk resilience and acumen to survive in unpredictable environments (Bogodistov & Wohlgemuth, 2017).

Adeniran and Johnston (2012) proposed six major DC constructs, namely sensing, absorptive, adaptive, innovative, networking and integrative. Table 2.2 further expands on the mentioned constructs.

Table 2.2: Six major dynamic capability constructs

Construct	Explanation
Sensing capability	Sensing capability is known as one of the main sources of competitive advantage and the ability of the business to learn promptly about competitors, customers and the business environments. Businesses with sensing capability demonstrate anticipatory skills, making it possible to understand the customer's demands ahead of competitors.
Absorptive capability	Significantly in dynamic environments, absorptive capability is a source of competitive advantage as the new/acquired knowledge is transformed into usable knowledge. A small business with high levels of absorptive capability is highly innovative, as the capability complements and reinforces the business's resource base to accurately predict future technological developments.
Adaptive capability	Adaptive capability is the business's ability to quickly reconfigure and coordinate its resources in response to rapid environmental changes.
Innovative capability	Innovation is a significant source of competitive advantage in changing or dynamic business environments, and it is basically a new way of doing things: a new good or a new quality of good, a new method of production, a new market, a new source of supply, or a new organisational structure.
Networking capability	Networking capability is the ability of the business to create and utilise inter-organisational relationships to acquire various resources. Small businesses must be able to use inter-organisational relationships to improve business performance and acquire sustainable competitive advantage in fast changing business environments.
Integrative capability	Integrative capability is the ability of a business to effectively manage internal and external changes. Small businesses with integrative capability can synchronise past experiences with capabilities (resources and competencies), and exploit them in a business without causing any havoc to the firm.

Source: Adeniran and Johnston (2012)

2.5.2 Resource-based view theory

The resource-based view theory was introduced to address the limitations of environmental models of competitive advantage and attempts to provide a link between heterogeneous resources controlled by an organisation, mobility of the resources within the particular industry and the strategic or competitive advantage enjoyed by an organisation. As indicated by Hill et al. (2017), a valuable asset must empower a business to do things and transfer them in ways that prompt high sales, low expenses, and high margins or in other ways increase financial value of the firm. This therefore means that, instead of looking for a suitable environment for the business, South African small businesses should look inside the business to find the resources that could improve their performance (Beyene, Shi, & Wu, 2016). These resources should be valuable, tangible or intangible resources at the business's disposal which are required to be heterogeneous and not perfectly mobile and unique to avoid imitation. The RBV theory helps by providing a theoretical mechanism through which it is possible to establish the connection between green practices, a friendly environment and small business performance (Maziriri, 2020), hence its adoption in this study. A small business's resources are used to enable it to establish strategies to improve the overall efficiency and performance of the business and these can be quite wide ranging. Barney (1991) classified these resources into three categories, which are physical, human and organisation capital resources. Table 2.2 briefly explains these resources.

Table 2.3: Resources

Resources	Explanation
Physical capital resources	Includes the physical resources of the organisation such as plant and equipment, technology, location and access to raw materials.
Human capital resources	Includes the training, experience, judgment, intelligence, insight from managers and workers within the organisation.
Organisation capital resources	Includes the formal structure of the organisation, planning, controlling and coordinating systems, formal and informal reporting and planning systems, as well as informal relation among groups with the organisation and between external organisations in the competitive environment.

Source: Barney (1991)

The resource-based view of the firm focuses on the internal organisation of firms and factors market imperfections. Clark (2010) emphasised that this focus of a resource-based view toward a firm highlights the heterogeneity of firms, their varying degrees of specialisation, and the limited transferability of corporate resources. The strategy process then revolves around identification and exploitation of idiosyncratic resources and distinctive competencies (Garg & Kumar De, 2014). The RBV also conceptualises small businesses as unique collections of resources and routines from which competitive advantages can be drawn when those are valuable, rare, inimitable and non-substitutable (Barney, 1991).

The logic of the RBV has been taken further in the (core) competence approach to formulate strategies. Garg and Kumar (2014) argued that unlike the physical assets of a firm, which diminish over time, the core competencies of a firm are enhanced as they are applied and used, and are the source of sustainable competitive advantage. These core competencies in turn lie behind the firm's ability to bring together intangible resources (such as skills and technologies), enabling it to provide unique value to the customers (Clark, 2010).

The logic is that the RBV does not satisfactorily explain how and why certain small businesses sustain their competitive advantage in dynamic business environments. Teece, Pisano and Shuen (1997), on the one hand, expanded the resource-based view of the small businesses to explore the possibility of a theory of dynamic capabilities, which they defined as 'the firm's ability to appropriately adapt, integrate, and reconfigure internal and external organisational skills, resources and functional competences or in other words, intangible assets like knowledge, expertise, skills, and processes of learning take a precedence. Zollo and Winter (2012) suggested that dynamic capability should be defined more specifically in terms of the generation and modification of a firm's operational routines. Although dynamic capabilities as such are special to each firm due to path dependencies and firm-specific resource configurations as well as related to specific industrial settings, it is emphasised in the literature that their formation and articulation also depend on external relations (Garg & Kumar, 2014). Furthermore, it is possible to identify fundamental capability patterns across a range of small businesses, which allows for drawing general conclusions.

2.6 CHAPTER SUMMARY

This chapter reviewed the relevant theories of this study. This chapter also reviewed some theories of the resource-based view and dynamic capability view. This chapter further provided the state of small businesses in South Africa and highlighted the challenges that cause small businesses to fail in SA. The next chapter presents the SME green behaviours and performance.



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CHAPTER THREE

SME GREEN BEHAVIOURS AND PERFORMANCE

3.1 INTRODUCTION

This chapter discusses empirical literature related to the study. It pays attention to the existing literature on green behaviours and their effect on small business performance. Finally, the chapter explores the possible relationships between green behaviours and performance of small businesses.

3.2 CONSTRUCTS UNDER-STUDY

3.2.1 GREEN ENTREPRENEURIAL ORIENTATION (GEO)

Green entrepreneurial orientation (GEO) can be described as a small business's inclination to focus on opportunities that produce both financial and environmental benefits through the introduction of environmentally-friendly products and services. GEO involves green innovations and a proactiveness to capture green opportunities and risk-taking behaviour (Gibbs & O'Neill, 2014; Pratono, 2018). One of the ways to examine the impact of a small business's sustainability initiatives such as GEO is to measure their effect on performance. Many terminologies are often used by researchers to denote entrepreneurial orientation (EO). These include intrapreneurship, corporate entrepreneurship, corporate venturing, and internal entrepreneurship (Fatoki, 2019). EO is a business decision-making proclivity favouring entrepreneurial activities. EO is the process through which an organisation pursues innovative entrepreneurial opportunities without inhibition by the nature and level of currently available resources. The set of firm behaviour that reflects EO include autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness (Covin & Wales, 2012; Dickel, 2018).

Originally, entrepreneurship and the natural environment were thought to be incompatible by economists; however, management researchers lately have found that the two concepts can play an important role in modern economic development (Fatoki, 2019). Businesses are responsible for many environmental challenges (pollution and high material, water and energy consumption). These challenges can actually present opportunities for new and established entrepreneurial ventures

(Nikolaou, Tasopoulou & Tsagarakis, 2018). This has led to the development of green entrepreneurship, a business model that takes into consideration profit and environmental protection (Kirkwood & Walton, 2010). Various terms with slightly different meanings have been associated with green entrepreneurship.

A green business can be defined as a firm or business set up with the motive of contributing to a sustainable society either by adapting innovative processes and producing products which do not have a negative impact on the environment or firms which have adapted innovative processes and or products over time, which reduce their impact on the environment (Haldar, 2018). Green entrepreneurship is the inclination of a firm to focus on opportunities that produce financial and environmental benefits through the use of green activities.

3.2.2 Small business performance

The main purpose of this section is to highlight on the phenomenon of business performance in respect to small businesses. Small businesses are a key driver of economic development, poverty alleviation and job creation strategy (Agwa-Ejon & Mbohwa, 2015). According to Samson and Mahmood (2014), in South Africa, the government recognises the significance of small businesses.

Performance can be defined as a measure of how best an establishment can put to use the resources that it possesses to generate income (Brewer, 2010). Thus, Brewer (2010) defined performance in relation to the accomplishments of an organisation or venture the organisation undertakes over a given period of time. Performance is also described in terms of achievements of set organisational goals measured in contrast to known standards, completeness and cost (The Business Dictionary, 2013). Fatoki and Garwe (2010) also related performance to business failure as they defined weak performance as discontinuance of business for any reason and formal bankruptcy with subsequent losses accruing to the business owner(s). This study measured entity performance focusing on environmental, subjective and objective performance.

3.2.2.1 Environmental performance

Small businesses are the corporate enterprises and the main contractors in industrial supply chains that affect the environmental performance. Small businesses have an enormous impact on social and environmental issues and play an important role in

sustainable development, small businesses drive economic development, job creation and skills development opportunities (Higgs, 2015). The natural environment is a critical component of business life. Managers or owners of businesses are confronted with environmental problems that have a direct impact on firms' financial performance and sustainability.

The ability of businesses to manage their environmental performance is a strategic issue and can help to improve their competitiveness (Fousteris, Didaskalou, Tsogas & Georgakellos, 2018). An important way of improving environmental performance is through environmental innovations, which can be defined as new or improved technologies, products, processes, or organisational forms that are beneficial to the environment as they reduce or avoid negative environmental impacts (Andries & Stephan, 2019). Environmental problems, unfulfilled social needs, and the financial crisis have increasingly influenced the natural ecosystem and human society; thus, the contradiction between economic development and ecological protection has been formed, thereby negatively affecting sustainable development (Ye et al., 2020)

3.2.2.2 Objective performance

Objective performance also known as financial performance measurement generally looks at the firms' financial ratios (derived from their financial statements) such as liquidity ratios, activity ratios, profitability ratios, and debt ratios (Haber & Reichel, 2005). It is important to be able to assess whether or not a firm has performed well over a certain period of time. From its profit and loss account, analysts can observe the profit it has generated. Jacobs (2001) highlighted commonly used ratios, which are classified into the following four main categories:

- (a) Liquidity – this is a business's ability to pay its short-term debts when they are due. It refers to the solvency of the enterprise's total financial position. For example, current ratio.

This is the ratio between your assets over your liabilities. It allows you to understand solvency and ensure that you have good enough credit ratings to expand.

- Current ratio = current assets/current liabilities.
- (b) Activity ratios – these measure how quickly various accounts are converted into money or sales. For example, account receivables turnover.

Account receivables mean your cash flow is affected by how often you collect money that is owed.

- Account receivables turnover = net credit sales/average account receivables.
- (c) Debt ratios – these measure the extent of debt in relation to total assets. For example, debt ratio.

Debt ratio businesses rely on investors and shareholders with a stake in your overall financial health. To make sure that you can protect their investment, you have to regularly check in with your total liabilities against your shareholders' equity.

- Debt ratio = Average total liabilities/average total assets.
- (d) Profitability – the various criteria for measuring profit relate to the enterprise's earnings to sales, assets, owner's equity and share value. For example, gross profit margin.

Gross profit margin is used to assess a company's financial health by calculating the amount of money left over from product sales after subtracting the cost of goods sold.

- Gross profit margin = gross profit/net sales

These ratios were used to measure objective performance in this study.

3.2.2.3 Subjective performance

Subjective performance also known as non-financial performance measurement is more subjective and may look at customer service, employee satisfaction, perceived growth in market share, perceived change in cash flow, and sales growth (Haber & Reichel, 2005). These were used to measure subjective performance in this study.

3.2.2.4 Customer satisfaction

In this study, customers comprise external and internal (employees) customers as well. Kotler and Keller (2006) defined customer satisfaction as a feeling of pleasure or disappointment resulting from comparing a good or a service's performance against the customer's own expectations. Satisfied customers are likely to return for repeat purchases and engage in word-of-mouth publicity of the firm, which therefore makes customer satisfaction one of the essential non-financial measures of performance. Further, satisfied customers are likely to become loyal to the firm, resultantly the firm

will obtain positive net operating margins and referrals resulting in greater market share (Shava & Rungani, 2016).

The measure that reflects how a product or service that an organisation produces meets or exceeds the expectations of its consumers is what is referred to as customer satisfaction (Topolosky, 2014). Since organisations operate in a competitive market where rivalry over customers is high, customer satisfaction has been regarded as a key differentiator and is now a key factor in business strategy (Hakimpoor, 2014).

3.2.2.5 Growth in market share

Growth in market share refers to an increase in the firms' percentage of sales in a particular industry during a given time frame (Shava & Rungani, 2016). Since increases or decreases may affect profits, small business owners/managers adjust operations and marketing strategies to increase growth in market share. Organisations can determine their market share by dividing the organisation's total sales over a given period of time by the total sales in the industry during the same time frame (Zimmermann, 2012). The calculation provides a general view of the percentage that a particular organisation controls and also the percentage that will be controlled by its competitors (Topolosky, 2014).



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3.2.2.6 Capacity utilisation

Capacity utilisation is the extent to which an organisation uses its installed productive capacity. Capacity utilisation can also be described as the fraction of total capacity that is actually being achieved in specific given time (Sunder, 2011). Organisations tend to worry about their capacity utilisation because it is a measure that provides information on the organisation's productive efficiency (Topolosky, 2014).

3.2.2.7 Product quality

Product quality refers to features and attributes that have a capacity to meet consumer needs (wants) and gives customer satisfaction by improving products (goods) and making them free from any deficiencies or defects (Hakimpoor, 2014). Therefore, it is every organisation's desire to provide a service or product that meets the requirement of the regulating organisation and that is way better than its competitors (Demirel et al., 2019). The manufacturers aim to improve the quality of the product through reducing product imperfections and eliminating the need for any rework on products.

A high-quality product to the consumer is a product that is able to meet their needs, inclinations and expectations (Ghemawat, 2012).

3.2.2.8 On-time delivery of products or services

On-time delivery is a measure of process and supply chain efficiency which measures the amount of finish goods or services delivered to customers on time and in full (Hakimpoor, 2014). On-time delivery increases customer satisfaction. On-time delivery is measured by dividing the orders delivered in time by the total number of orders delivered (Bragg, 2012). It is the organisation's goal to have an on-time delivery ratio of a hundred percent. This measure of performance helps the manager or owner of the business to work hard in reducing the number of future projects they may lose due to failing to deliver the present ones on time (Ramachandran, 2017).

3.2.2.9 Customer retention

Customer retention is a strategy that is used by firms to retain as many customers as possible, often through customer loyalty and brand loyalty initiatives. Customer satisfaction bears a strong influence in determining how successful an organisation is retaining customers. However, some scholars argue that satisfying a customer is not enough to retain them, customer delight is what retains customers (Hermann, 2009). Delighted customers are the ones who are most likely to stay with an organisation. Customers are said to be delighted when the organisation is able to offer products or services that exceed their expectations (Hennig-Thurau & Hansen, 2013).

3.2.2.10 Employee satisfaction

Employee satisfaction is an expression used to describe whether employees are happy, satisfied and fulfilling their desires and needs and requirements at work (Sunder, 2011). Employee satisfaction is the term used to define high levels of satisfaction among employees, which is good for the organisation especially when the work force is highly productive (Nelson, 2015). Knowing how employees think about these subjects is very important to organisations that want to keep their workers happy and maintain a low worker turnover (Santos & Brito, 2012).

3.2.2.11 Employee growth

Employee growth refers to an increase in the number of employees that are employed by the entity (Machirori, 2012). Decreases in the number of employees indicate a

decrease in the entity's performance, whereas increases in the number of employees indicate an increase in the entity's performance (Topolosky, 2014). A decrease in the number of employees may be due to some obtaining a better position at another organisation or any other personal reason.

3.3 HYPOTHESES DEVELOPMENT

This section reviews existing empirical literature leading to the development of the study's hypotheses.

3.3.1 Green entrepreneurial orientation and environmental performance

Green entrepreneurial business has been defined by Mafini et al. (2018) as an environmentally-oriented purchasing activity based on the purchase of products or materials that meet the concern of the environment in terms of reduction of wastage, promotion of recycling, reuse, resource reduction and substitution of materials. Jiang et al. (2018) found a significant positive relationship between GEO and environmental performance. GEO can contribute to better environmental performance by creating green products and services, reducing waste and material, energy and water consumption and ensuring employee and customer safety. Dickel (2018) supported a positive relationship between GEO and environmental performance. Environmental performance is indicated by the reduction of material and energy consumption and waste and compliance with environmental regulations (Ge et al., 2016).

According to Ge et al. (2016), green entrepreneurial businesses are more likely to see environmental performance indicators as business opportunities. Sustainable entrepreneurs create and change business models in order to positively influence ecological and social impact (Jiang et al., 2018). GEO provides reflexivity which is the ability of the entrepreneur to evaluate environmental constraints and visualise or construct alternative opportunities. GEO allows a sustainable entrepreneur to create and evaluate unclear decision alternatives between entrepreneurial opportunities and sustainability values (DiVito & Bohnsack, 2017). Ge et al. (2016) found that green proactiveness has a significant positive impact on green performance through reduction in pollution, waste and energy consumption. Based on all that has been discussed above, the study hypothesised that:

H1. Green entrepreneurial orientation has a positive influence on environmental performance.

3.3.2 GEO impact on objective performance and subjective performance of small businesses

The findings of the study by Jiang et al. (2018) indicate that a significant positive relationship exists between GEO and financial performance. GEO improves business financial performance through innovation that reduces the consumption of materials, energy and water and process efficiency. GEO also allows a business to comply with regulations and avoid paying penalties. This has the advantage of cost reduction. Customer attitude and preference are shifting toward green purchasing and consumption. GEO allows a firm to be proactive and gain first-mover competitive advantage. According to Demirel et al. (2019), green entrepreneurship enhances business performance through increased transparency, cost-efficiency, better risk management and revenue growth as a result of product differentiation. Shrivastava and Tamvada (2017) found a negative relationship between the offering of green products and services and financial performance. Sustainability issues, such as green awareness, do not directly affect firm financial performance (Fatoki, 2019). However, small businesses with a strong GEO are innovative and proactive and take risks in order to gain competitive advantage in the marketplace. The competitive advantage can improve sales and market share and translate into better financial performance. Based on what has been discussed above, this study hypothesised that:

H2: Green entrepreneurial orientation has a positive influence on objective performance.

H3: Green entrepreneurial orientation has a positive influence on subjective performance.

3.3.3 Green technology dynamism (GTD)

Green technology dynamism (GTD) is an environmental healing technology that reduces environmental damages created by the products and technologies for people's conveniences (Aithal & Aithal, 2016). It is believed that GTD promises to increase businesses' profitability while reducing environmental degradation and conserving natural resources (Xia, Chen & Zheng, 2015). Green technologies are

sustainable technologies which will not create a footprint when used for various processes/applications (Urda & Loch, 2013). Green technologies support the use of natural organic resources and avoid production of green gasses (Xia et al., 2015). They support automation of every process and hence avoid human intervention. Since they do not support environmental degradation and contribute to creating the footprint, they are sustainable, improve the lifestyle of the people and contribute to human comfortability (Aithal et al., 2016).

3.3.4 Green technology dynamism and environmental performance

With the condition of the environment changing from bad to worse, governments are launching a host of measures to address the issue, such as carbon tax and new environmental regulations, special funding for environmental protections, compensation for the use of green products and equipment, among others (Xia et al., 2015). These campaigns are underscored by a very strong environmental commitment (Lopez-Gamero, Claver-Cortes & Molina-Azorin, 2008). Small businesses are thus driven to intensify their investment in environmentally friendly processes and products and innovation, to reduce pollution and improve environmental performance (EP) (Xia et al., 2015). Furthermore, in an effort to receive positive feedback from stakeholders, they also actively promote this mission among certain actors, such as staff, partners, customers and NGOs, through education, communication and even advertising, which may benefit their brand awareness (Praxmarer-Carus, Sucky, & Durst 2013).

Natural environment, phases of social and technological development, and legislation are the macro factors that indirectly influence a business's environmental decision-making process. Together, they significantly shape a business's daily operations and affect its environmental management (Urda & Loch, 2013). The widespread deterioration of the environment and depletion of natural resources have awakened a general consciousness about sustainable development, leading to an emphasis on green strategies and practices among the public, governments and businesses. Along with this social progress comes an increased push toward environmental protection, highlighting business performance and positively shaping consumer habits (Xia et al., 2015).

Reasonable macro-circumstances have a positive effect on a business's behaviour in adopting certain technologies, but also its environmental performance. This ensures, that environmental regulations and financial incentives encourage small businesses to embrace positive environmental strategies, which usually leads to better environmental performance. Empirical studies have confirmed the fundamental relationship between task-oriented circumstances and green technology (Miles, 2012). Baron and Tang (2011) showed that businesses that invest positively in environmental green technologies and green product innovation and applications always achieve better environmental and business performance. Based on the discussion above, the study hypothesised that:

H4: Green technology dynamism positively moderates the relationship between green entrepreneurial orientation and environmental performance.

3.3.5 GTD impact on objective performance and subjective performance of small businesses

Generally, businesses that take effective green action in response to stakeholders' needs will receive extensive, high-level support from the public for better environmental performance (Wagner & Schaltegger, 2004). This intangible capital, plus the stakeholders' trust, usually produces market advantages, leading to greater product popularity, more green investment enthusiasm, lower financing costs and better public opinion (Xia et al., 2015). Better environmental performance may produce different types of positive effects in terms of organisation, competence and circumstances, explicitly boosting a business's market share (Ghemawat, 2011). The study by Xia et al. (2015) showed that circumstances, green technologies and a business's environmental and financial or non-financial performance constitute a dynamic system. Their results make it clear that the adoption of green technology contributes to environmental performance, which produces a positive effect on a business's performance. Based on the above discussions, the study hypothesised that:

H5: Green technology dynamism positively moderates the relationship between green entrepreneurial orientation and subjective performance.

H6: Green technology dynamism positively moderates the relationship between green entrepreneurial orientation and objective performance.

3.3.6 Green innovation behaviour (GIB)

Green innovation can be defined as new or modified processes, technologies, systems, and products to reduce or avoid environmental problems. Green innovation is divided into two types: green process innovation and green product innovation (Chen, 2008). Green innovation behaviour (GIB) refers to green process technologies such as clean production, pollution control, pollution prevention, environmental efficiency, and recirculation, with new or improved activities contributing from an environmental perspective to the production of goods or services (Arundel & Kemp, 2009). Green product innovation means that the nature or purpose of an enterprise's goods or services is new or noticeably improved in terms of the environment.

Green innovation behaviour involves a process, technology or management model that can reduce energy consumption, environmental pollution and enhances corporate social responsibility performance, which, in turn, facilitates sustainable development (Yang, Ali, Ali, Sarwar, & Khan, 2020). Institutional pressures in the host country may impose requirements on corporate environmental standards or absorbing new knowledge in interaction with international supply chains, new consumers and new regulatory policies from the social network which help small businesses to enhance green innovation (Xing, Xia, & Guo, 2019). On the contrary, green innovation involves the changes in existing processes or standards, which will break the inertia of the firms (Yang et al., 2020). Directly driven by mandatory isomorphic pressure, the marginal benefits of green innovation will gradually increase, otherwise, these firms will face penalties or barriers (Papanastassiou, Pearce & Zanfei, 2020). Green innovation is the effective means of responding to challenges faced by small businesses and forming competitive advantages when faced with threats from potential entrants and existing competitors (Yang et al., 2020).

Green process innovation has recently gained much attention in that manufacturing companies are making great efforts to minimise waste and pollution generated in the production process and optimise resource utilisation (Klemmer, Lehr & Lobbe, 1999). Such efforts are required by businesses because in many cases, including the

domestic market, strict environmental standards are applied when entering foreign markets, and consumers purchasing them are also becoming more focused on reducing pollutants rather than the characteristics of the finished products (Chen, 2008).

3.3.7 Green innovation behaviour and environmental performance

The study by Weng, Chen and Chen (2015) showed that green innovation behaviour has a positive and significant relationship with environmental performance, indicating that a business that engages in green innovation will indeed observe better environmental performance. Through implementing green innovation practices, businesses can fulfil governmental and industry requirements, decrease waste and pollution, protect the environment, and simultaneously increase their competitiveness (Chen, 2008). Andries and Stephan (2019) argued that environmental innovations generally lead to improved financial performance, as they allow firms to reduce waste disposal and raw material cost, increase product value and firm competitiveness, reduce public and community pressure, and even help shape future regulations which raise competitors' relative costs.



Based on the above discussions, the study hypothesised that:

H7: Green innovative behaviour positively moderates the relationship between green entrepreneurial orientation and environmental performance.

3.3.8 GIB impact on objective performance and subjective performance of small businesses

A business's performance can be measured both objectively and subjectively (Gounaris, Papastathopoulou & Avlonitis, 2003). With respect to objective performance, companies can cover their environmental costs by increasing resource productivity through green innovation behaviour (De Burgos-Jimenez, Vazquez-Brust, Plaza-Ubeda & Dijkshoorn, 2013). In addition, small businesses can develop new markets and increase their market share through implementing environmental practices (Chen, Lai & Wen, 2006). As a long-term operational objective, improved subjective performance may be manifested by increased customer loyalty, new customers, and an enhanced image and reputation of a business (Chen, Tsou & Huang, 2009). Chen (2008) proposed that companies who are pioneers in green

innovation will gain the first-mover advantage, for example higher product prices, an improved corporate image, new market opportunities, and competitive advantages.

Weng, Chen and Chen (2015) indicated that green innovation behaviour has positive effects on business performance, both subjective and objective. Through these practices, businesses can generate better financial performance (e.g., increase their market share, increase sales revenues) as well as improve their corporate image to attract additional customers (Gounaris et al., 2003). Based on all the above discussions, this study hypothesised that:

H8: Green innovative behaviour positively moderates the relationship between green entrepreneurial orientation and subjective performance.

H9: Green innovative behaviour positively moderates the relationship between green entrepreneurial orientation and objective performance.

3.4 RESEARCH MODEL

The hypotheses outlined above are presented in Figure 3.1 in the form of a diagram that represents the research model. The diagram shows the path which the hypotheses in this study followed. The environmental performance, objective performance and subjective performance formed the dependant or outcome variables. Green entrepreneurial orientation comprised the study's independent variable. GTD and GIT formed the study's moderating variables.

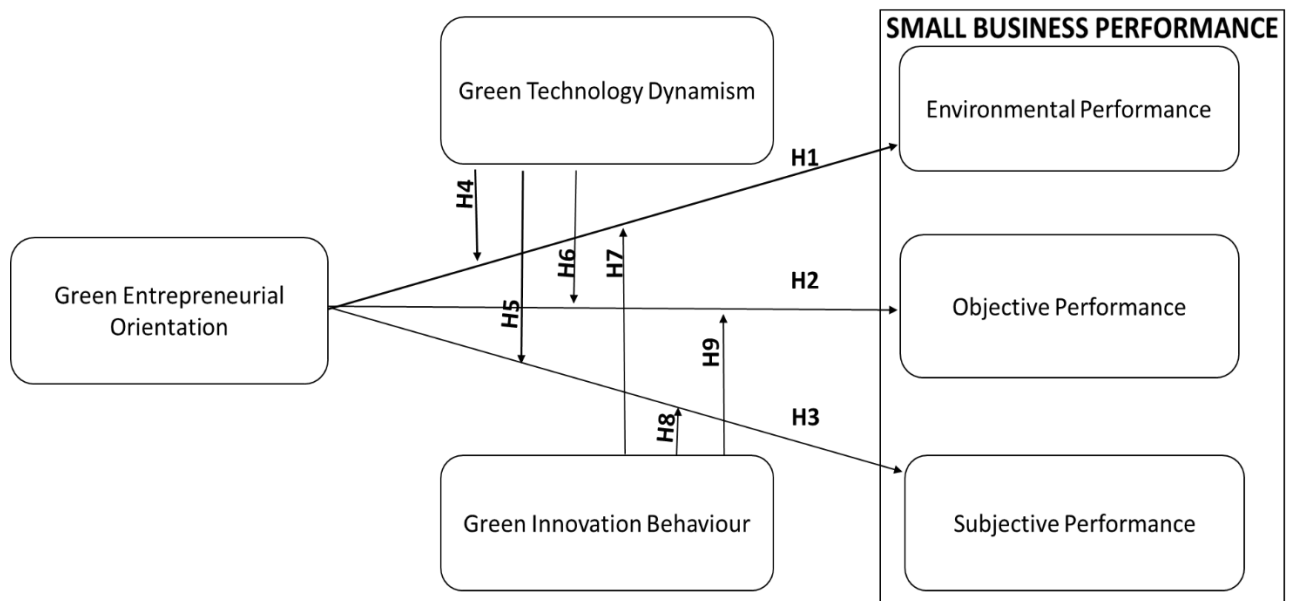


Figure 3.1: Research model

Source: Author's own creation



3.5 CHAPTER SUMMARY

Considering the scarcity of academic literature on green behaviours and their effect on performance of small businesses in South Africa, this research attempted to cover the gap by exploring this topic within South African context. This chapter reviewed the major themes and theories relevant to this study. This chapter also reviewed the theoretical framework where the theory of the dynamic capability view and resource-based view theory was discussed. Specific research objectives that were explored and methodology adopted are set out in Chapter Four, which discusses the research methodology.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

The purpose of this study was to investigate whether green behaviours have an effect on the performance of small businesses in South Africa. This chapter presents the methodology for investigating the suggested relationship between green behaviours and the performance of small businesses. The chapter gives a detailed discussion on the research design, population and sample, and the data collection techniques. Moreover, the research instrument and the data analysis techniques used are discussed.

The methodology was used to address the research objectives and to test the hypotheses mentioned in Chapter 1 and elaborated on Chapter 2. This chapter begins with the objectives of the study since they provided the guidelines for the research. The hypotheses of this study were derived from the objectives as supported by empirical literature.

4.2 THE RESEARCH OBJECTIVES

This section is divided into primary and secondary objectives.

4.2.1 Primary objective

The primary objective of this study was to establish the relationship between green behaviours and performance of small businesses in South Africa.

4.2.2 Secondary objectives

Secondary objectives were formulated as follows:

1. To determine the effect of green entrepreneurial orientation on the environmental performance of small businesses in South Africa.
2. To determine the effect of green entrepreneurial orientation on the objective performance of small businesses in South Africa.
3. To determine the effect of green entrepreneurial orientation on the subjective performance of small businesses in South Africa.

4. To determine whether green technology dynamism moderates the relationship between green entrepreneurial orientation and environmental performance of small businesses in South Africa.
5. To determine whether green technology dynamism moderates the relationship between green entrepreneurial orientation and objective performance of small businesses in South Africa.
6. To determine whether green technology dynamism moderates the relationship between green entrepreneurial orientation and subjective performance of small businesses in South Africa.
7. To determine whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and environmental performance of small businesses in South Africa.
8. To determine whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and objective performance of small businesses in South Africa.
9. To determine whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and subjective performance of small businesses in South Africa.



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4.3 RESEARCH APPROACH

The quantitative approach was used for this study. This approach allows the gathering of large sums of data so that the results can be generalised to the whole population (Malebana & Swanepoel, 2015). Quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analysed using statistical procedures (Creswell & Poth, 2018). The quantitative approach fits well in the aim of the study to determine the relationship between green behaviours and their effect on the performance of small businesses. The quantitative approach provides this platform since its data can be converted into numbers and it seeks to quantify data by applying some form of statistical analysis. The approach was

chosen since it is most suitable for a wider population such as that of the small businesses in the Buffalo City Metropolitan Municipality.

4.4 RESEARCH PARADIGM

A research paradigm refers to an all-encompassing system of interrelated practice and thinking that define along two dimensions which are either positivist or interpretivist (Albaum & Smith, 2012). Beri (2013) suggested that positivism is the conventional philosophical position of management studies and is closely related to the logic and ways of quantitative research. Positivism is a philosophical concept which follows that behaviour of human beings can be objectively and scientifically measured in as much the same way as the subject matter of natural sciences (Mcneill & Chapman, 2005). The researcher employed a positivist paradigm as the basis for carrying out this investigation. This is because it enables variables to be investigated independently without control or influence of the researcher. Concepts and thoughts are guided strictly by assumptions and theories when the positivism paradigm is used in carrying out a research study (Creswell, 2014).



4.5 RESEARCH DESIGN

Research design is the conceptual structure within which research is conducted, it constitutes the blueprint for the collection, measurement and data analysis (Devi, 2017). This study followed a descriptive research design. Descriptive research studies use statistical techniques to discover patterns. According to Musasa (2017), descriptive research design is used to explain what is happening, an event or to offer accurate and factual description of the population being studied; and in a descriptive study, things are measured as they are. In this study, a descriptive research design was employed. The reason for this was that it provided clarity to the aim of this study, which was to find answers to the formulated objectives. These objectives entailed finding the respective relationships between the given variables. This design was used because it makes use of formal and rigid measures in analysing the data which is easier and more straightforward to interpret.

4.6 POPULATION AND SAMPLE

4.6.1 Population

This research targeted small businesses operating within the confines of Buffalo City Metropolitan Municipality that are registered by the Eastern Cape Development Corporation. Hence, this target population comprised all the small business owners/managers that operate in the Buffalo City Metropolitan Municipality. The sample was a representative frame drawn from SMME owners/managers operating in the Buffalo City Metropolitan Municipality. Initially, 180 questionnaires were distributed. Of this number, 180 questionnaires were returned, providing an acceptable response rate of 100%. A sample size of 180 respondents was randomly selected. The respondents were small business owners and managers.

4.6.2 Sampling method

Non-probability sampling was used in selecting a sample for the study. Burns and Burns (2008) defined a non-probability sample as one which is selected in some less random and more deliberate way, without reliance on chance.

4.6.3 Sampling technique

The convenience sampling technique was used in selecting a sample for the study. In convenience sampling, the sample is taken from a segment of the population that is readily available to the researcher and has a probability to be chosen to answer a questionnaire (Bradley, 2013). In this study, convenience refers to the accessibility of small businesses due to proximity of their location to the researcher.

4.7 RESEARCH INSTRUMENT

This study employed a self-administered questionnaire as a data collection instrument. Betram and Christiansen (2014) defined a questionnaire as a list of questions, to which the respondents must give answers. Furthermore, questionnaires simplify and quantify responses, and people are more inclined to tick boxes rather than write or type out long answers (Cilliers, Davis, & Bezuidenhout, 2014). The items used in the development of the questionnaire were based upon theoretically derived, previously validated instruments.

Section A of the questionnaire solicited details about the owner or manager of the small business in Buffalo City Metropolitan Municipality. Thus, section A consisted of the demographic questions about the owner or manager of the SME, with four questions.

Section B was comprised of organisational information

Section C of the questionnaire solicited information regarding the small business green behaviours. This section of the questionnaire also consisted of questions on performance of the small businesses. The owner or manager then best described how the firm performed compared to the industry average.

All the constructs were assessed with self-report measures based on multi-item scales, on 5-point Likert scales ranging from strongly disagree (1) to strongly agree (5). All scales that were used in this study were derived from past studies of a similar nature. All this information is listed in Table 4.1 below.



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Table 4.1: Instrument reliability and validity

Scale	Number of items	Cronbach alpha	Example	Source
Green entrepreneurial orientation	5	0.796	In dealing with competitors, we typically initiate green actions that competitors correspond to	(Li et al., 2010)
Green technology dynamism	4	0.828	The technology in our industry is changing rapidly	(Sheng et al., 2011)
Environmental performance	4	0.943	Environmental performance reduced pollution	(Zhu et al., 2008)
Objective performance	8	0.78	How the firm's revenue performs compared to industry.	(Cadogan et al., 2002) (Spangenberg & Theron, 2004)
Subjective performance	8	0.83	How the firm's market share performs compared to industry.	(Green & Medlin, 2003)
Green innovation behaviour	4	0.793	I will try my best to reduce the possible harm from a product to users in the product design.	(Zhou & Georges, 2001)

4.8 RELIABILITY AND VALIDITY

Betram and Christiansen (2014) defined validity as the extent to which an instrument and data collection methods measure the construct which they are intended to measure. They also defined reliability as the extent to which the measure or instrument can be repeated with the same or a similar group of respondents and still produce the same or very similar results. Although empirical studies indicated that the scales were reliable, the researcher further tested for reliability using Cronbach's alpha coefficient. According to Bell and Njoli (2016), Cronbach alpha coefficients must be more than 0.70 to be considered to have a satisfactory level of internal consistency. The higher the score the more reliable the scale or instrument.

To ensure the validity of this study, a thorough review of literature was conducted – as discussed in Chapters Two and Three. A large sample of 180 small businesses was used and self-administered questionnaires which allow high response rate were distributed to the respondents. The researcher consulted experts in the field of business management and made use of a statistician to evaluate the research instrument. Specifically, the statistician was engaged to carry out statistical tests on the validity of the research instrument and results were confirmed positive.

4.9 RESEARCH PROCEDURE

The researcher started by applying for an ethical clearance certificate from the University Research Ethics Committee (UREC) and it was granted. The researcher reviewed the available literature. Through the use of the convenience sampling technique, the researcher collected data from small businesses operating in Buffalo City Metropolitan Municipality. Respondents were informed of their right to participate or not to participate in the study. A self-administered questionnaire was given to respondents for data collection. Analysis of collected data was performed using SPSS version 25. The last steps are the presentations of findings and recommendations.

4.10 DATA COLLECTION

This study made use of a self-administered questionnaire as an instrument to collect data. Cooper and Schindler (2006) defined self-administered questionnaires as those that are completed by respondents on their own. Advantages accruing to the use of self-administered questionnaires are that they ensure anonymity and privacy of respondents, thereby encouraging honest responses. Questionnaires were dropped off or hand-delivered or emailed to respective small businesses around Buffalo City Municipality in King Williams Town and East London. This implies that the researcher personally distributed the questionnaires to respondents who were either the SME owner or manager since they are the ones who are mainly responsible for market orientation of the business.

4.11 DATA ANALYSIS

The data collected was analysed through the use of Statistical Package for the Social Sciences (SPSS) version 25. SPSS is a package of programs for manipulating, analysing and presenting (Landau & Everitt, 2003). Biographical data such as the

sector in which the small businesses are operating, age, person in charge of the business and level of education of the respondent with the firm was analysed through descriptive statistics. In addition, simple linear regression and hierarchical regression analysis were performed to test the study's hypotheses. Furthermore, tests for instrument reliability and validity were performed through obtaining the Cronbach's alpha coefficients.

Simple linear regression analysis and hierarchical regression analysis are the statistical tests that were used to analyse data. The study had one dependent variable with three dimensions, namely: environmental performance, objective and subjective performance, and one independent variable (green entrepreneurial orientation) and two moderating variables, namely: green technology dynamism and green innovation behaviour.

Simple linear regression was used to test the effect of green entrepreneurial orientation on the environmental, objective and subjective performance of SMEs. Hierarchical regression testing is more precise and utilises analytic techniques that examine predictive associations between the dependent and independent variables.

4.12 ETHICAL CONSIDERATION

Ethics can be referred to as norms and values governing a particular enterprise's actions and conduct (Wild, Cant & Nierkek, 2014). Ethics in research serve as a directional compass that guides the researcher's behaviour and actions along sound ethical principles to do what is correct and in the best interest of all stakeholders. Being aware of the principles to be upheld, the researcher obtained ethical clearance from the University of Fort Hare's Research Committee before carrying out the research. The researcher obtained an ethical clearance certificate (Reference certificate number: CHI021SBAN01), from the relevant authority of the University of Fort Hare (refer to APPENDIX A). Further, permission was sought from the participating owners of the small businesses. Some general guidelines around ethics were followed. Respondents were assured of their confidentiality and anonymity by not being asked to share their names or identities. All participant responses and information shared in the course of the study were kept in a secret secure place. Data collected from respondents is kept in confidence. Because of the nature of this study, no form of

physical harm was expected. The results were presented in an anonymous way indirectly to safeguard the identities of participants.

4. 13 CHAPTER SUMMARY

This chapter has presented the procedures that were involved in conducting the research. It described the research design, population and sampling procedures. The chapter also focused on the data analysis procedures. The next chapter is premised on the results and interpretation of the data.



CHAPTER FIVE

RESULTS AND INTERPRETATION

5.1 INTRODUCTION

The primary purpose of this chapter is to present and interpret the research findings. The chapter discusses the statistical procedures used in order to address the hypotheses of the study. The data analysis was done by utilising the Statistical Package for Social Sciences (SPSS) program, version 25.

5.2 RE-CAP OF RESEARCH OBJECTIVES

This section is divided into primary and secondary objectives.

5.2.1 Primary objective

The primary objective of this study was to establish the relationship between green behaviours and performance of small businesses in South Africa.

5.2.2 Secondary objectives

Secondary objectives were formulated as follows:

1. To determine the effect of green entrepreneurial orientation on the environmental performance of small businesses in South Africa.
2. To determine the effect of green entrepreneurial orientation on the objective performance of small businesses in South Africa.
3. To determine the effect of green entrepreneurial orientation on the subjective performance of small businesses in South Africa.
4. To determine whether green technology dynamism moderates the relationship between green entrepreneurial orientation and environmental performance of small businesses in South Africa.
5. To determine whether green technology dynamism moderates the relationship between green entrepreneurial orientation and objective performance of small businesses in South Africa.

6. To determine whether green technology dynamism moderates the relationship between green entrepreneurial orientation and subjective performance of small businesses in South Africa.

7. To determine whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and environmental performance of small businesses in South Africa.

8. To determine whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and objective performance of small businesses in South Africa.

9. To determine whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and subjective performance of small businesses in South Africa.

The following was the research question proposed at the onset of this research:

- What is the relationship between green behaviours (green entrepreneurial orientation, green technology dynamism and green innovation behaviour) and their effect on the performance of small businesses in South Africa?

5.3 SECTION A: DEMOGRAPHIC DISTRIBUTION OF THE RESPONDENTS

5.3.1 Gender

Table 5.1 provides a distribution of respondents. The purpose of the question was to determine whether the respondent were males or females. In this case, 53% were male business owners or managers, and 47% were female business owners or managers who participated in this study.

Table 5.1: Gender distribution

		Frequency	Percent	Valid percent	Cumulative percent
Valid	male	95	52.9	52.9	52.9
	female	85	47.1	47.1	100.0
	Total	180	100.0	100.0	

Source: Data analysis

5.3.2 Age

Table 5.2 shows the age of the respondents who participated in the study. The results show that 2% of the respondents were within the range of 18 to 25 years. Approximately 4% were within the range of 26 to 35 years, 52% were within the range of 36 to 45 years, 39% were within the age of 46 to 55, and 3% were 65 to 75 years of age.

Table 5.2: Age distribution of the respondents

		Frequency	Percent	Valid percent	Cumulative percent
Valid	18-25 years	4	2.0	2.0	2.0
	26- 35years	7	3.9	3.9	5.9
	36-45 years	94	52.0	52.0	57.8
	46-55 years	70	39.2	39.2	97.1
	65-75 years	5	2.9	2.9	100.0
	Total	180	100.0	100.0	

Source: Data analysis

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5.3.3 Education level

Table 5.3 shows the highest educational qualifications of the SME owners and managers that participated in this study ranging from no schooling to postgraduate qualification. It is clear from the table that at the time of the study, 2% of the respondents had a diploma followed by 23% with undergraduate qualifications. Approximately 75% of the respondents had a postgraduate qualification as the highest qualification.

Table 5.3: Education level

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Diploma	4	2.0	2.0	2.0
	Undergraduate	41	23	23.0	25.0
	Postgraduate	135	75	75.0	100.0
Total		180	100.0		

Source: Data analysis

5.3.4 Person in charge of entity operations

Table 5.4 below provides details of the person in charge of the business. The purpose of the question was to determine the position in business of the respondents that participated. In this case, 56% of owners participated in this survey, and 44% were managers representing the company.

Table 5.4: Person in charge of operations


		Frequency	Percent	Valid percent	Cumulative percent
Valid	Owner	101	55.9	55.9	55.9
	Manager	79	44.1	44.1	100.0
	Total	180	100.0	100.0	

Source: Data analysis

5.3.5 Industry

Table 5.5 shows the industry category that best describes the firm. The data analysed shows that at the time of the study, 44% of the respondents were in the construction industry, approximately 16% in the services industry, 16% in the agriculture sector, another 16% in the category of retail industry, and 9% in the manufacturing category.

Table 5.5: Industry

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Manufacturing	17	9.3	9.3	9.3
	Construction	79	43.89	43.9	53.2
	Retailing	28	15.6	15.6	68.8
	Agriculture	28	15.6	15.6	84.4
	Services	28	15.6	15.6	100.0
	Total	180	100.0	100.0	

Source: Data analysis

5.3.6 Age of the firm

Table 5.6 reports on the duration or the age of operation for the participating SME. As shown in the table, 29% of SMEs had existed for up to 4-6years, 17% for between 7 to 9 years, and 62% for 10 or more years. This implies that most of the surveyed firms had been in operation for 10 or more years at the time of study.

Table 5.6: Age of the firm

		Frequency	Percent	Valid percent	Cumulative percent
Valid	4-6 years	39	21.6	21.6	21.6
	7-9 years	30	16.7	16.7	38.2
	10 or more years	111	61.8	61.8	100.0
	Total	180	100.0	100.0	

Source: Data analysis

5.3.7 Entity capital size

In Table 5.7 the capital size of SMEs is shown in rand. It was important to determine the capital size by rand of respondents' firms in order to enable the researcher to make demographic inferences concerning the respondents. Table 5.7 shows that most SMEs (42%) used more than R100 000 and 42 % also used R10 000 – 50 000 to start

their business. Approximately 16% used capital within the range of R50 000 to 100 000 respectively.

Table 5.7: Capital size

		Frequency	Percent	Valid percent	Cumulative percent
Valid	10 k - 50K	76	42.2	42.2	42.2
	50k - 100k	28	15.7	15.7	57.8
	>100K	76	42.2	42.2	100.0
	Total	180	100.0	100.0	

Source: Data analysis

5.3.8 Reliability of the scales

The reliability of the scales is presented in Table 5.8 below. The Cronbach alpha of each individual construct surpasses 0.7, which is the acceptable measure for reliability and it indicates acceptable internal consistency. The Cronbach's alpha for green entrepreneurial orientation section in the questionnaire consisting of 5 items was 0.731. This indicated the reliability of the questionnaire. The green technology dynamism of the business section had 4 items and a Cronbach's alpha coefficient of 0.753, which also reveals that the scales were reliable. Green innovation behaviour with 4 items with a Cronbach alpha coefficient of 0.764 is a reliable scale. Environmental performance had 4 items with a Cronbach's alpha coefficient of 0.833 and it is a reliable scale. Objective performance scale had 8 items with a reliability coefficient of 0.862 and it is a reliable scale. Subjective performance scale also has 8 items and a Cronbach alpha coefficient of 0.77 and it is a reliable scale because it meets the requirements.

Table 5.8: Reliability of the scales

Scale	No. of items	Cronbach alpha coefficient
Green entrepreneurial orientation	5	.731
Green technology dynamism	4	.753
Green innovation behaviour	4	.764
Environmental performance	4	.833
Objective performance	8	.862
Subjective performance	8	.770

Source: Data analysis

5.4 SECTION B: HYPOTHESES TESTING AND DISCUSSION

Simple linear regression analysis was performed to test hypotheses H1 to H3. The independent variable was green entrepreneurial orientation and the dependent variable data comprised environmental performance, objective performance and subjective performance. The Shapiro Wilk's test was used and a result of $p = .000$ was obtained signalling that the data violated the assumptions of normality. Given this result, the bootstrapped confidence intervals and their significance levels were requested when the simple linear regression analysis was being performed. This is because the bootstrapped confidence intervals and their significance levels do not rely on assumptions of normality and heteroscedasticity.

5.4.1 H1: Green entrepreneurial orientation has a positive influence on environmental performance

Simple linear regression was performed with green entrepreneurial orientation being the predictor variable and environmental performance as the outcome variable. The results in Table 5.9 reveal that green entrepreneurial orientation (GEO) is positively related to SME environment performance, $r = .365$ and GEO explains 13.3% of the variation in SME environmental performance. This implies that if we want to know more with regard to the concept of SME environmental performance, there is a need to pay more attention to the concept of green entrepreneurial orientation. Table 5.9 further reveals that the model achieves goodness of fit with an F -ratio indicating $F=$

15.366 that is significant at $p = .000$. In other words, this model reliably predicts SME environmental performance.

Table 5.9: Simple linear regression model fit and summary for green entrepreneurial orientation on environmental performance

Source	df	Sum of squares	Mean square	F value	Pr>F
Regression	1	1.458	1.458	15.366	.000*
Residual	178	9.490	.095		
Total	179	10.949			
<i>Model Summary</i>					
<i>r</i>	R^2	Adjusted R^2		Est. standard error	
.365	.133	.125		.308	

*Significant fit. Note: Independent variables: Constant, green entrepreneurial orientation, Dependent variable: environmental performance.

Source: Data analysis

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Results in Table 5.10 reveal parameter estimates of the model, $b_0 = 1.954$ and $b_1 = .444$. From this result, we are informed that GEO has a positive influence on SME environmental performance and with a unit increase in GEO, there will be a corresponding positive increase in SME environmental performance equivalent to .444 units. More importantly, this increase is significant given $p = .000$. With this result, this study fails to reject the hypothesis stating that GEO has a positive influence on SME environmental performance as there is enough evidence to support this claim.

The results of this study reveal that there is a positive relationship between green entrepreneurial orientation and environmental performance. The results of this study are similar to the study of Jiang et al. (2018) which showed that there is a significant positive relationship between GEO and environmental performance. GEO businesses are encouraged from their core heart in small business performance and hence their footprint lies on their green practices in thinking, creations, innovations, motivations, operations and all the supply chain activities which bring superior competitive

advantages. Recent study also supports the findings of this study that green entrepreneurial orientation has a significant relationship with both market orientation and sustainable firm performance through sustainable environmental practices such as green innovation behaviour, eco-design, and risk-taking (Habib et al., 2020).

In the study by Ge et al. (2016) their findings also revealed that green proactiveness has a significant positive impact on green performance through reduction in pollution, waste and energy consumption. Therefore, GEO can contribute to better environmental performance by creating green products and services, reducing waste and material, energy and water consumption and ensuring employee and customer safety (Fatoki, 2019). Green entrepreneurial businesses are more likely to see environmental performance indicators as business opportunities (DiVito & Bohnsack, 2017). Sustainable entrepreneurs create and change business models in order to positively influence ecological and social impact (Jiang et al., 2018). Therefore, consistent with their findings, our study revealed there is a relationship between green entrepreneurial orientation and environmental performance.

Table 5.10: Parameter estimates for green entrepreneurial orientation in environmental performance

Parameter	Unstandardised coefficients		Standardised coefficients		
	B	Std Error	B	t	Sig
constant	1.954	.351		5.573	.000*
Green entrepreneurial orientation	.444	.113	.365	3.920	.000*

*Significant fit. Note: Independent variables: Constant, Green entrepreneurial orientation, Dependent variable: Environmental performance.

Source: Data analysis

5.4.2 H2: Green entrepreneurial orientation has a positive influence on objective performance

Simple linear regression analysis was performed with GEO being entered as the predictor variable and SME objective performance as the outcome variable. Results in Table 5.11 indicate there is a weak to moderate positive relationship between GEO and SME objective performance, $r = .406$. The results further indicate that GEO explains 16.4% of the variation in SME objective performance ($R^2 = .164$), an indication that if we want to better understand the concept of SME objective performance, it is worth paying more attention to the GEO concept. From Table 5.11 it is also evident that this model achieves goodness of fit with an F -ratio revealing $F = 19.681$ and significant at $p = .000$. In other words, with this model it is possible to better predict SME objective performance as opposed to the use of the mean value.



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Table 5.11: Simple linear regression model fit and summary for green entrepreneurial orientation on objective performance

Source	df	Sum of squares	Mean square	F value	Pr>F
Regression	1	.798	.798	19.681	.000*
Residual	178	4.054	.041		
Total	179	4.852			
Model Summary					
<i>r</i>	R^2	Adjusted R^2		Est. standard error	
.406	.164	.156		.201	

*Significant fit. Note: Independent variables: Constant, green entrepreneurial orientation, Dependent variable: Objective performance.

Source: Data analysis

From Table 5.12 it is clear that parameter estimates of the model are $b_0 = 2.496$, and $b_1 = .329$, revealing that GEO has a positive influence on SME objective performance. This result indicates that with a unit increase in GEO, there is a corresponding positive change in SME objective performance equivalent to .329 and this change is significant at $p = .000$. Given this result, this study fails to reject the hypothesis stating that GEO has a positive influence on SME objective performance as there is enough evidence to back this claim.

The study findings are consistent with the findings in the past. The results of this study are similar to the study of Pratono et al. (2019) who found that GEO has a positive impact on firm performance. In his study, Collado Agudo (2018) also demonstrated that green entrepreneurial orientation is a significant predictor of FP in terms of profitability and growth and competitive advantage of the firm. Green businesses improve their financial performance through innovation that reduces the consumption of materials, energy and water and process efficiency. On the contrary, the study of Shrivastava and Tamvada (2017) found that there is a negative relationship between green products and services and financial performance and Fatoki (2019) also

revealed that sustainability issues do not directly affect business financial performance.

Based on the findings of this study and the findings of other researchers, the simple linear regression revealed that green entrepreneurial orientation has a positive influence on objective performance.

Table 5.12: Parameter estimates for green entrepreneurial orientation on objective performance

Parameter	Unstandardised coefficients		Standardised coefficients		Sig
	B	Std Error	B	t	
Constant	2.496	.229		10.889	.000*
Green entrepreneurial orientation	.329	.074	.406	4.436	.000*

*Significant fit. Note: Independent variables: Constant, Green entrepreneurial orientation, Dependent variable: Objective performance.

Source: Data analysis

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5.4.3 H3: Green entrepreneurial orientation has a positive influence on subjective performance

Simple linear regression analysis was performed with GEO being the predictor variable and SME subjective performance being the outcome variable. Results in Table 5.13 reveal that GEO has a weak to moderate positive relationship with SME subjective performance, $r = .449$, and that GEO explains 20.1% of the variation in SME subjective performance, which is an indication that if we are to better understand the concept of SME subjective performance, there is need to pay attention to the concept of green entrepreneurial orientation. Further, Table 5.13 reveals that this model achieved goodness of fit with an F -ratio showing $F = 25.185$ and significant at $p = .000$. This informs us that with this model, we are better at predicting SME subjective performance as opposed to the use of a mean value.

Table 5.13: Simple linear regression model fit and summary for green entrepreneurial orientation on subjective performance

Source	df	Sum of squares	Mean square	F value	Pr>F
Regression	1	1.193	1.193	25.185	.000*
Residual	178	4.738	.047		
Total	179	5.931			
Model Summary					
<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²		Est. standard error	
.449	.201	.193		.218	

*Significant fit. Note: Independent variables: Constant, green entrepreneurial orientation, Dependent variable: subjective performance.

Source: Data analysis

Parameter estimates of the model displayed in Table 5.14 reveal $b_0 = 2.182$ and $b_1 = .402$. This result reveals that GEO has a positive influence on SME subjective performance and given a unit increase in GEO, there will be a corresponding positive change in SME subjective performance equivalent to .402 units. This change is significant at $p = .000$. With this result, this study fails to reject the hypothesis stating that GEO has a positive influence on SME subjective performance as there is enough evidence to support this claim.

The simple linear regression test used in this study to test this hypothesis revealed that there was a relationship between green entrepreneurial orientation and subjective performance. Similar to this study's findings, Vu (2017) found GEO to be highly related to non-financial outcomes. The owner-managers in small businesses not only pursue subjective outcomes (e.g., employment growth and market expansion) but also satisfaction with their small businesses' performance (Murphy & Callaway, 2004).

Hussain et al. (2017) found that GEO results in improving subjective performance. More importantly, the owner-managers are motivated by their objectives and thus construct performance to align with their strategic intent (Jarvis et al., 2000; Raymond

et al., 2013). As such, the small business performance could be captured through the owner-managers' perception of how well their businesses are running from both objective and subjective perspectives. The competitive advantage can improve sales and market share and translate into better subjective performance (Jiang et al., 2018).

Based on the findings of this study and other studies also conducted by other researchers, this study concludes that green entrepreneurial orientation has a positive relationship with subjective performance.

Table 5.14: Parameter estimates for green entrepreneurial on subjective performance

Parameter	Unstandardised coefficients		Standardised coefficients		
	B	Std Error	B	t	Sig
Constant	2.182	.248		8.805	.000*
Green entrepreneurial orientation	.402	.080	.449	5.018	.000*

*Significant fit. Note: Independent variables: Constant, Green entrepreneurial orientation, Dependent variable: subjective performance.

Source: Data analysis

5.4.4 H4: Green technology dynamism moderates the relationship between green entrepreneurial orientation and environmental performance

Hierarchical regression analysis was performed with green entrepreneurial orientation being entered as the predictor variable, environmental performance as the outcome variable and green technology dynamism being entered as the moderating variable. The results are summarised in Table 5.15.

Table 5.15: Linear predictors of environmental performance

	B	SE B	t	p
Constant	3.357 [3.280-.3434]	.039	86.562	.000
GEO	.339 [.029-.648]	.156	2.173	.032
GTD	.215 [-.066-.496]	.142	1.520	.132
GTD*GEO	-.652 [-1.607-.304]	.482	-1.353	.179

$$R^2 = .17$$

Source: Data analysis

The results in Table 5.15 reveal a negative non-significant relationship between GEO and SME environmental performance, $b_1 = -.652$, 95% CI [-1.607 - .304], $t = -1.353$, $p = .179$. Given this result, we can conclude that green technology dynamism does not moderate the relationship between GEO and SME environmental performance. Therefore, the hypothesis stating that green technology dynamism moderates the relationship between GEO and SME environmental performance is rejected as there is not sufficient evidence to support it.

Consistent with the argument raised by Hughes et al. (2017) and Real et al. (2014), this study revealed that GSCM practices act as an intermediary link between GEO and sustainable firm performance.

The use of green technology by the firm is the demand for the environmentally-conscious customer and also the policy of the governments (Demirel, Li, Rentocchini, & Tamvada, 2019). In this way, GEO can help firms to improve process efficiency, reduces waste, and reduce costs through the practice of GIB (Jiang et al., 2018). Small businesses need to align their resources and capabilities with the changing market conditions (Wilden & Gudergan, 2015). A stable environment provides certainty for continued investment in entrepreneurial activities, yielding less incentive to actively

take risks (Gathungu et al., 2014). On the contrary, GTD positively moderates the relationship between GEO and environmental performance (Jiang et al., 2018).

5.4.5 H5: Green technology dynamism moderates the relationship between green entrepreneurial orientation and objective performance

Hierarchical regression analysis was performed with GEO being entered as the predictor variable, SME objective performance being entered as the outcome variable and GTD as the moderating variable. The results are displayed in Table 5.16.

Table 5.16: Linear predictors of SME objective performance

	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
Constant	3.530 [3.479 – 3.581]	.026	137.311	.000
GEO	.339 [.134 - .544]	.103	.277	.001
GTD	.026 [-.160 - .212]	.094	.277	.783
GTD*GEO	-.412 [-1.046 - .221]	.319	-1.291	.200

$R^2 = .18$

Source: Data analysis

The results in Table 5.16 reveal that there is negative non-significant relationship between GEO and SME objective performance, $b_1 = -.412$, 95% CI [-1.046 - .221], $t = -1.291$, $p = .200$. Given this result, the study concludes that green technology dynamism does not moderate the relationship between GEO and SME objective performance. With this finding, the study therefore rejects the hypothesis stating that green technology dynamism moderates the relationship between GEO and objective performance as there is not sufficient evidence to back this claim. The results of this study are different from the study by Jiang et al. (2018) who found that GTD positively moderates the relationship between GEO and financial performance. If the level of GTD increases, then small businesses adopting GEO are likely to emphasise building

the capabilities of absorbing new eco-knowledge. As a result, they may take advantage of eco-friendly technologies, and in turn increase firm performance. Objective performance improvements are more noticeable in the long term than in the short term when green technology among green activities is more integrated (Mafini & Muposhi, 2017).

5.4.6 H6: Green technology dynamism moderates the relationship between green entrepreneurial orientation and subjective performance

To test the stated hypothesis, hierarchical regression analysis was performed with GEO being the predictor variable, subjective performance as the outcome variable and green technology dynamism as the moderating variable. The findings are displayed in Table 5.17 which reveals that there is a non-significant positive relationship between GEO and SME subjective performance, $b_1 = .080$, 95% CI $[-.609 - .770]$, $t = .231$, $p = .818$. This result informs us that green technology dynamism does not moderate the relationship between GEO and SME subjective performance. Therefore, the hypothesis stating that green technology dynamism moderates the relationship between GEO and subjective performance is rejected as there is little evidence to back this claim. However, Jiao et al. (2013) suggested that dynamic capabilities improve new venture performance by a rapid response to customers' needs facing changing uncertainties and opportunities in the market. GEO may achieve greater performance under higher levels of GTD than lower levels of GTD

Table 5.17: Linear predictors of SME subjective performance

	B	SE B	t	p
Constant	3.416 [3.361 – 3.472]	.028	122.057	.000
GEO	.438 [.215 - .661]	.113	3.891	.000
GTD	-.059 [-.262 - .661]	.102	-.579	.564
GTD*GEO	.080 [-.609 - .770]	.348	.231	.818

$R^2 = .205$

Source: Data analysis

5.4.7 H7: Green innovation behaviour moderates the relationship between green entrepreneurial orientation and environmental performance

To test the stated hypothesis, hierarchical regression analysis was performed with GEO as the predictor variable, environmental performance as the outcome variable and green innovation behaviour as the moderating variable. Table 5.18 provides the results which reveal that there is a non-significant positive relationship between GEO and environmental performance, $b_1 = .162$, 95% CI [-.845 – 1.168], $t = .319$, $p = .751$. This finding indicates that green innovation behaviour does not moderate the relationship between GEO and SME environmental performance. With this finding, the study rejects the hypothesis stating that green innovation behaviour moderates the relationship between green entrepreneurial orientation and environmental performance as there is no evidence to support this claim. On the contrary, Xue, Boadu and Xie (2019) argued that the implementation of effective and sustainable green innovation practices in a business should attract all talents to tackle environmental deficiencies, which can enhance environmental benefits. In fact, such practices can reduce environmental menaces (e.g. air emissions, prevalence of environmental accidents) to enhance firms' environmental performances (Kammerer, 2009) and their

images in the industry (Dangelico & Pondolfo, 2015). Indeed, the correlation between green innovation and environmental performance can be mediated by the high or low economic-financial results that firms obtain. Environmental problems, unfulfilled social needs, and the green issues have increasingly influenced the natural ecosystem and human society. The contradiction between economic development and ecological protection has been formed, thereby negatively affecting sustainable development (Ye et al., 2020).

Table 5.18: Linear predictors of SME environmental performance

	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>P</i>
Constant	3.314 [3.231 – 3.397]	.0419	79.161	.000
GEO	.276 [.000 - .552]	.139	1.985	.050
GIB	.212 [.006 - .419]	.104	2.039	.044
GIB*GEO	.162 [-.845 – 1.168]	.507	.319	.751

$R^2 = .17$

Source: Data analysis

5.4.8 H8: Green innovation behaviour moderates the relationship between green entrepreneurial orientation and objective performance

The abovementioned hypothesis was tested through hierarchical regression analysis where GEO was entered as the predictor variable, objective performance as the outcome variable and green innovation behaviour as the moderating variable. The results are shown in Table 5.19.

Table 5.19: Linear predictors of SME objective performance

	<i>b</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
Constant	3.481 [3.428 – 3.535]	.027	128.030	.000
GEO	.218 [.038 - .397]	.090	2.411	.018
GIB	.139 [.005 - .273]	.068	2.051	.043
GIB*GEO	.474 [-.179 – 1.128]	.330	1.440	.153

$R^2 = .21$

Source: Data analysis

The results in Table 5.19 reveal that there is a non-significant positive relationship between GEO and SME objective performance, $b_1 = .474$, 95% CI [-.179 – 1.128], $t = 1.440$, $p = .153$. This finding indicates that green innovation behaviour does not moderate the relationship between GEO and SME objective performance. With this result, this study therefore rejects the hypothesis stating that green innovation behaviour moderates the relationship behaviour between GEO and objective performance as there is not sufficient evidence to back this claim. Similarly, the study of Xue, Boadu and Xie (2019) found that green innovation has negative effects on the financial performance of a business. In fact, they are of the view that firms that develop a habit of pursuing environmental objects can definitely end up with negative profitability.

The relationship between GIB and objective performance has been extensively researched and the results do not match the results of our study. They indicate a significant positive relation between GIB and FP (Birkner & Máhr, 2016; Leitner, Warnke, & Rhomberg, 2016; Naidoo & Hoque, 2018; Nwachukwu, Chladkova, & Fadeyi, 2018; Reiche, de Zubielqui, & Boyle, 2016). Furthermore, those businesses

that practice GIB and utilise their resources efficiently as compared to their competitors have a competitive advantage over a competitor.

5.4.9 H9: Green innovation behaviour moderates the relationship between green entrepreneurial orientation and subjective performance

The above stated hypothesis was tested through hierarchical regression analysis where GEO was entered as the predictor variable, subjective performance as the outcome variable and green innovation behaviour as the moderating variable. The results are shown in Table 5.20.

Table 5.20: Linear predictors of SME subjective performance

	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>p</i>
Constant	3.437 [3.377 – 3.497]	.030	114.494	.000
GEO	.367 [.169 - .565]	.100	3.677	.000
GIB	.045 [-.103 - .193]	.075	.607	.545
GIB*GEO	-.292 [-1.013 - .430]	.364	-.801	.425

$R^2 = .211$

Source: Data analysis

The results in Table 5.20 reveal that there is a non-significant negative relationship between GEO and SME subjective performance, $b_1 = -.292$, 95% CI [-1.013 - .430], $t = -.801$, $p = .425$. This result indicates that GIB does not moderate the relationship between GEO and SME subjective performance. With this finding, the study therefore rejects the hypothesis stating that green innovation behaviour moderates the relationship between green entrepreneurial behaviour and subjective performance as there is no evidence to support this claim. This is in contrast with other studies that report a positive relationship between GIB (product and process) and subjective performance in a different industry context using different moderating variables

(Fernando, Chiappetta Jabbour, & Wah, 2019; Tariq, Badir, & Chonglerttham, 2019). On the other side, the relationship studied by different scholars reveals that there is a positive relationship between GIB and subjective performance (Juniati, Saudi, Astuty, & Mutalib, 2019; Suryanto & Komalasari, 2019; Tariq et al., 2019).

5.5 SUMMARY OF HYPOTHESES TESTS

Table 5.21 indicates a summary of the hypotheses testing.

Table 5.21: Summary of hypotheses testing

Hypothesis	Variables	Outcome
H1	Green entrepreneurial orientation has a positive influence on environmental performance.	Accepted
H2	Green entrepreneurial orientation has a positive influence on objective performance.	Accepted
H3	Green entrepreneurial orientation has a positive influence on subjective performance.	Accepted
H4	To moderates the relationship between a) GTD, b) GEO and environmental performance.	Rejected
H5	To moderates the relationship between a) GTD, b) GEO and objective performance.	Rejected
H6	To moderates the relationship between a) GTD, b) GEO and subjective performance.	Rejected
H7	To moderates the relationship between a) GIB, b) GEO & c) environmental performance.	Rejected
H8	To moderates the relationship between a) GIB, b) GEO & c) objective performance.	Rejected
H9	TO moderates the relationship between a) GIB, b) GEO, & c) subjective performance.	Rejected

Source: Author's own creation

5.6 CHAPTER SUMMARY

This chapter presented the research findings. The objectives and the hypotheses were revisited. The results summarising the responses from the questionnaires were also explained in graphical and tabular form. The hypotheses tested, and the conclusions drawn, were related to empirical studies to see outcomes of the hypotheses, that is

whether they were accepted or rejected. Chapter Six summarises the complete study, gives recommendations and highlights areas that still need further research.



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CHAPTER SIX

RECOMMENDATIONS AND LIMITATIONS

6.1 INTRODUCTION

The preceding chapter presented the analysis of the data. Further, the previous chapter presented the various statistical tests conducted to investigate the relationship between green behaviours and performance of small businesses in South Africa. This chapter serves as the last aim of this study which is to provide a discussion of the findings leading to a conclusion of the current study. The limitations and recommendations for further research are proposed in this chapter.

6.2 SUMMARY

This study comprises six chapters. The following paragraphs present a brief summary of each chapter.

6.2.1 Chapter One – Introduction and background of the study

The aim of Chapter One was to establish the relationship between green behaviours and their effect on the performance of small businesses in South Africa. This chapter further provided the introduction of the research and a brief background of the research problem as well as objectives, hypotheses, literature review, the significance of the study, research methodology, statistical analysis, ethical consideration and delimitations of the study.

6.2.2 Chapter Two – SME overview and theoretical literature background

The main aim of Chapter Two was to provide a literature review on the state of small businesses in South Africa. A detailed outline of the challenges faced by small businesses in South Africa was highlighted. In addition, theoretical literature concepts of the research which are the dynamic capability view theory and resource-based view theory were dealt with.

6.2.3 Chapter Three – SME green behaviours and performance

Chapter Three discussed in detail the influence of green behaviours on small business performance. The first section of the chapter provided a discussion on the constructs under study, namely green entrepreneurial orientation, green technology dynamism,

green innovation behaviour. A brief discussion of environmental performance was given as well, followed by objective and subjective performance measures. This chapter further focused on hypotheses development of the study.

6.2.4 Chapter Four – Research design and methodology

This chapter laid out the procedures followed in conducting the study. It further elaborated on the research design, population, and sampling procedures. Chapter Four also focused on data analysis procedures.

6.2.5 Chapter Five – Results and interpretation

The primary purpose of this chapter was to present and interpret the research findings of the methodology discussed in Chapter Four. The chapter discussed the statistical procedures used in order to address the hypotheses of the study. The data analysis techniques used were based on those of the Statistical Package for Social Sciences (SPSS). The study's hypotheses were either accepted or rejected depending on the statistical analysis outcome. Table 6.1 presents the null hypotheses and the results of the study.



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Table 6.1: Null hypotheses and results

Hypothesis	Variables	Outcome
H1	Green entrepreneurial orientation has a positive influence on environmental performance.	Accepted
H2	Green entrepreneurial orientation has a positive influence on objective performance.	Accepted
H3	Green entrepreneurial orientation has a positive influence on subjective performance.	Accepted
H4	TO moderates the relationship between a) GTD, b) GEO and environmental performance.	Rejected
H5	TO moderates the relationship between a) GTD, b) GEO and objective performance.	Rejected
H6	TO moderates the relationship between a) GTD, b) GEO and subjective performance.	Rejected
H7	TO moderates the relationship between a) GIB, b) GEO & c) environmental performance.	Rejected
H8	TO moderates the relationship between a) GIB, b) GEO & c) objective performance.	Rejected
H9	TO moderates the relationship between a) GIB, b) GEO, & c) subjective performance.	Rejected

6.2.6. Conclusions

The study concludes that green entrepreneurial orientation has an effect on the performance of SMEs in Buffalo City Metropolitan Municipality. However, GTD and GIB do not moderate the relationship between GEO and the performance of SMEs in Buffalo City Metropolitan Municipality. It can therefore be accepted that green behaviours have an effect on the performance of SMEs in Buffalo City Municipality. It is important to note that these competencies are important for every manager or owner if they are to improve the performance of their businesses.

The results of this research indicate that green behaviours are instrumental factors that enhance small business performance. The growing environmental concern among SME owners'/manager's needs to be translated into concrete green business practices. Such actions will not only lead to improved profitability for the small

businesses involved, but also a sustainable future for all South Africans. SMEs are drivers of inclusive economic growth not only in South Africa but globally (Nguyen, Phau & Matsui, 2018; Banking Association of South Africa, 2018). Green behaviours are the best way for the business to limit the adverse effect of their activities on the environment and only GEO business can reduce this negative impact through green behaviour practices; hence, GEO and green behaviours have become an important research topic nowadays.

The study found the positive effect of GEO on environmental performance. Finally, this study has made a unique contribution to the GEO and business performance literature, and provides a guideline for small business owners and managers for developing an environmentally sustainable society to prove themselves as legitimate businesses.

6.3 ACHIEVEMENT OF OBJECTIVES

The main purpose of this study was to establish the relationship between green behaviours and performance of small businesses in Buffalo City Municipality, South Africa. The research aimed to determine:

- ❖ the effect of green entrepreneurial orientation on the environmental performance of small businesses in South Africa.
- ❖ the effect of green entrepreneurial orientation on the objective performance of small businesses in South Africa.
- ❖ the effect of green entrepreneurial orientation on the subjective performance of small businesses in South Africa.
- ❖ whether green technology dynamism moderates the relationship between green entrepreneurial orientation and environmental performance of small businesses in South Africa.
- ❖ whether green technology dynamism moderates the relationship between green entrepreneurial orientation and objective performance of small businesses in South Africa.

- ❖ whether green technology dynamism moderates the relationship between green entrepreneurial orientation and subjective performance of small businesses in South Africa.
- ❖ whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and environmental performance of small businesses in South Africa.
- ❖ whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and objective performance of small businesses in South Africa.
- ❖ whether green innovation behaviour moderates the relationship between green entrepreneurial orientation and subjective performance of small businesses in South Africa.

The abovementioned objectives were achieved through the review of literature as evidenced in Chapters Two and Three of the study. Chapter Two provided an SME overview and theoretical literature background. Chapter Three of the study reviewed literature on SME green behaviour and performance. The review of literature in stated chapters enabled the researcher to identify various questionnaire items which were used to gather primary data to achieve the study's main objectives.

The objectives were further achieved through Chapters Four and Five of the study. Chapter Four, as indicated earlier, focused on the research methodology used for the empirical study. The research design, the type of research used, the population, the sample design, the research instrument, as well as the reliability and validity, research procedure and statistical analysis were examined in Chapter Four. Chapter Five of the study presented the research results, analysis and interpretation of the results. Finally, this chapter, Chapter Six, provides the study recommendations, implications of the study, limitations, and concludes the study.

6.4 KEY FINDINGS AND DISCUSSION

Results presented in Chapter Five show that, at the time of the study, the owners were managing most SMEs in Buffalo City Municipality. The majority of owners and managers were males and they were in the construction industry. It was also noted

that most SMEs in Buffalo City Municipality had been operating for at least ten or more years with the majority of these business operators being 36 - 45 years of age. It was also found that the majority of SME owners and managers in this municipality, at the time of the study, had formal education and the majority were postgraduates.

The study focused on green behaviours, namely green entrepreneurial orientation, green technology dynamism and green innovation behaviour. Based on the results of this study, not all the green behaviours have an effect on the performance of the SMEs. GTD and GIB do not moderate the relationship between GEO and the performance of SMEs. However, green entrepreneurial orientation has an effect on the performance of the SMEs in Buffalo City Municipality. It therefore becomes clear that green entrepreneurial orientation has an effect on the performance of small businesses. Businesses that are inclined towards promoting green behaviours will perform better in terms of how they deal with issues of the environment.

6.5 THEORETICAL IMPLICATIONS

Theoretically, this study makes a noteworthy progression in business theory as it has methodically examined the interplay between green behaviours and business performance (objective and subjective performance). In this manner, the study is an important contributor to the existing literature on this subject. This study contributes to literature by drawing on a dynamic capability perspective, with business strategic and decision-making orientation (i.e. GEO) being identified as a dynamic capability. GEO and dynamic capability are intertwined with each other in three contemporary procedures and tasks such as a desire to take initiative in green innovation, proactive behaviour towards capturing new opportunities, and risk-taking with a courageous attitude towards transforming to the environmentally benefited economy (Habib et al., 2020). The moderation effect of GTD and GIB practices fulfils the missing linkage between GEO and small business performance. The GEO business can achieve superior performance through properly following and implementing green behaviour practices in their business.

In the resource-based view theory, GEO adds a new dimension of this study by aligning with customers' and competitors' orientation which motivates GEO business to initiate and develop green practice capabilities that improve sustainability

performance. According to the resource-based view theory, the green entrepreneur business can properly identify the actual customer demand and at the same time become affiliated with friendly environmental practices, hence getting higher business performance. GEO helps a business to discover and exploit green opportunities and depicts how a firm uses resources to achieve the desired end and focus on green innovativeness, proactiveness and the tendency to take risks with positive influences on performance (Fatoki, 2019).

6.6 MANAGERIAL IMPLICATIONS

Managers may implement policies and practise green behaviours to have a competitive edge and to boost the business performance of their small businesses. It is of particular importance that SME owners/managers become better informed about existing environmental legislation and incentives, the financial benefits of going green and their role in terms of environmental performance. It is thus suggested that more research be conducted on green behaviours in the local small business sector and that the findings be communicated to SME owners/managers via appropriate channels. The business's growth and value creation of the small businesses depends on entrepreneurial dynamic capability in the form of innovation, proactive behaviours, risk-taking decisions and finding new opportunities (Habib et al., 2020).

Dynamic capabilities strengthen the entrepreneurial strategies and decision-making power towards value delivery to the market and performing environmentally friendly activities such as green practices to achieve a sustainable goal. Growing global environmental concerns, customers' demand of an environmentally responsible process and product demand are increasingly rising (Habib et al., 2020). Hence, the GEO business should keep an eye on the potential customer's eco-friendly product demand and then plan-source-make delivery the product as meeting with sustainable practice. Finally, this study can help owners and managers of small businesses with how to develop green practices and a profit-seeking business to gain sustainable business performance.

6.7 POLICY RECOMMENDATIONS

Small business owners/managers – It is suggested that small business owners/managers build on the green efforts currently undertaken and that more

attention be given to environmental performance and green entrepreneurial orientation. The current study provides significant implications for small business owners and managers, recent business students, new entrepreneurial initiators, self-employees, and fresh start-up business owners to enhance green entrepreneurial orientation (Ye et al., 2020).

Academic institutions – It is suggested that green practices education should be more strongly integrated into business and ethics curricula at tertiary education institutions. Academic institutions should provide courses on green entrepreneurship. Hence, for academics in the field of green and small business management, these findings would enhance their understanding of the relationship between green practices, and business performance, making this study an important contribution to the existing literature.

Policy makers at the national and provincial levels of government seek to create policies and incentives to support business performance of small businesses and to deal with green economy issues facing small businesses. South African policy makers and small businesses have an important role to play in conserving our natural environment and limiting the factors causing climate change.

Government and other stakeholders should create more awareness of policy to ensure that the green behaviours are followed by owners of businesses and the society in order to protect the environment. The government of South Africa should increase the ecological concerns among consumers to enhance the acceptance of green consumption. Lastly, the government should offer fiscal subsidies to green products to reduce the price gap with traditional goods.

6.8 LIMITATIONS OF THE STUDY

As this research only evaluated the green behaviours and performance of 180 small business owners/managers in the Eastern Cape at the Buffalo City Municipality, it is suggested that the study be extended to include small businesses in other provinces too. The questionnaire could also be refined to allow for a more sophisticated statistical analysis. Only a 180 respondents participated in this study out of all small businesses around South Africa due to Covid-19 (Corona virus). The owners and managers of small business were complaining about the issue of meeting face to face in order for

them to complete the questionnaires. They suggested that the researcher must email questionnaires and some of them took their time to fill in and return the questionnaires. The time frame was also a limitation of this study due to strikes that were happening in 2019 and the lockdown that was happening in 2020 due to the Corona virus disease. The research study followed a quantitative research approach only which meant that the conclusions were based on numerical data. If the research had followed both qualitative and quantitative approaches, both numerical and qualitative data would have been collected which would have resulted in a more balanced conclusion of findings.

6.9 AREAS FOR FURTHER RESEARCH

Future research should use a different sampling methodology. More in-depth qualitative studies are required to understand the nature, practices and motivations of green practices in small businesses, particularly in South Africa where small businesses are considered to have a major role to play in job creation and local economic development. The researcher proposes that other studies on the effects of green behaviours on SMMEs be conducted in larger companies. It is also important to extend the same study to other geographical areas to compare the findings. A qualitative study of the effects of green behaviours on the performance of small businesses will also be important, as it will shed light on some aspects that could not be explained through quantitative research findings.

6.10 CHAPTER SUMMARY

This chapter presented the study's conclusions and implications of the investigation grounded on the findings of the study. Results from previous studies show conflicting findings on the relationship between green behaviours and performance of small businesses. This study has attempted to make a contribution to this area from a South African perspective and has come up with remarkable discoveries and recommendations. The chapter provided a revisit to the research objectives set out in Chapter One and highlighted whether they were met or not. Furthermore, the results of the test hypotheses were discussed in comparison to the findings of previous findings provided in the literature.

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APPENDIX A: ETHICAL CLEARANCE CERTIFICATE



University of Fort Hare
Together in Excellence

ETHICS CLEARANCE REC-270710-028-RA Level 01

Project Number: CHI021SBAN01

Project title: **The relationship between green behaviours and their effect on performance of small businesses in South Africa.**

Qualification: Masters in Business Management

Principal Researcher: Zingisa Banana

Supervisor: Prof W.T. Chinyamurindi

Co-supervisor: N/A

On behalf of the University of Fort Hare's Research Ethics Committee (UREC), I hereby grant ethics approval for CHI021SBAN01. This approval is valid for 12 months from the date of approval. Renewal of approval must be applied for BEFORE termination of this approval period. Renewal is subject to receipt of a satisfactory progress report. The approval covers the undertakings contained in the abovementioned project and research instrument(s). The research may commence as from the 25/03/20, using the reference number indicated above.

Note that should any other instruments be required or amendments become necessary, these require separate authorisation.

Please note that the UREC must be informed immediately of

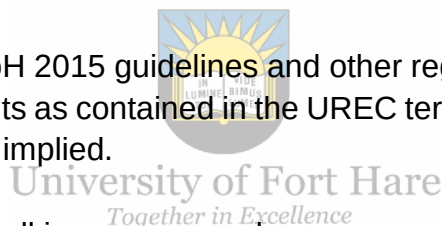
- Any material changes in the conditions or undertakings mentioned in the document;
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research.

The Principal Researcher must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

The UREC retains the right to

- Withdraw or amend this approval if o Any unethical principal or practices are revealed or suspected; o Relevant information has been withheld or misrepresented; o Regulatory changes of whatsoever nature so require; o The conditions contained in the Certificate have not been adhered to.
- Request access to any information or data at any time during the course or after completion of the project.

Your compliance with DoH 2015 guidelines and other regulatory instruments and with UREC ethics requirements as contained in the UREC terms of reference and standard operating procedures, is implied.



The UREC wishes you well in your research.

Yours sincerely

Professor Renuka Vithal
UREC-Chairperson
 30 July 2020

APPENDIX B: GATE KEEPER LETTER



University of Fort Hare
Together in Excellence

Questionnaire

UFH Department of Business Management - Masters Research Questionnaire

'The relationship between green behaviours and their effect on the performance of small businesses in South Africa'

Dear Respondent



My name is Zingisa Banana (201406986). I am a postgraduate student at the University of Fort Hare studying Master of Commerce in Business Management. I am conducting a research on the **'The relationship of green behaviours and their effect on the performance of small businesses in Buffalo City Metropolitan Municipality, South Africa'**. This data is collected for academic purposes only. Your responses will be kept confidential. Confidentiality will be taken note of and your identity will not be exposed in any way in this research. I will not be recording your name anywhere on the questionnaire and no one will be able to link you to the answers you give. The information will remain confidential. With respect to the questionnaire, all you need to do is indicate the correct answer in relation to the statement provided, for most of the questions you need to indicate with a cross how strongly you agree or disagree with the statement. Please try to be as honest as possible when answering the questions.

If you have any questions about the questionnaire feel free to contact me at 201406986@ufh.ac.za or contact my supervisor Prof Willie Chinyamurindi at wchinyamurindi@ufh.ac.za or my Co- Supervisor Dr Herring Shava at

HShava@ufh.ac.za. This questionnaire will not take more than 15 minutes to complete. Your participation in this study and answering questions honestly will be greatly appreciated

Yours sincerely,

Zingisa Banana

Email address: 201406986@ufh.ac.za

UFH Masters in Business Management Student



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APPENDIX C: QUESTIONNAIRE



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QUESTIONNAIRE

SECTION A: DEMOGRAPHIC INFORMATION

Please put an X where appropriate

1. Gender

Male	☐	1
Female	☐	2



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2. Age

Below 18	☐	1	18-25 years	☐	2
26- 35years	☐	3	36-45 years	☐	4
46-55 years	☐	5	65-75 years	☐	6
76 years and above	☐	7			

3. Level of education

No schooling		1	Primary school		2
Grade 11		3	Grade 12/Matric		4
Certificate		5	Diploma		6
Undergraduate		7	Postgraduate		8

4. Person in charge of the business

Owner		1	Manager		2
Supervisor		3	Other		4



SECTION B: ORGANISATIONAL INFORMATION

1. Please indicate the industry category that best describes your business:

Manufacturing	1	Construction	2
Wholesaling	3	Agriculture	4
Service	5	Other	6

2. Age of the firm

1-3 years	1	3- 6 years	2
6- 9 years	3	10 or more years	4

3. Firm's capital size by Rand

Less than 10 000	1	10 000 – 50 000	2
50 000 – 100 000	3	More than 100 000	4

SECTION C: Business Survey Questionnaire

No	Please put a cross in the appropriate block indicating whether you strongly disagree(SD), disagree(D), neither agree nor disagree(N), agree(A) or strongly agree(SA) with each of the following statements;	Strongly disagree	disagree	Neutral	Agree	Strongly agree
	<u>Business-related questions</u>					
	<u>Green entrepreneurial orientation</u>					
1.	In general, our firm favours a strong emphasis on green practices such as R&D, technological leadership and innovation.					
2.	When facing uncertainty, we typically adopt a proactive posture in order to catch potential green opportunities.					
3.	In dealing with competitors, we typically initiate green actions that competitors respond to.					
4.	Our firm favours a tendency to be a leader, and always introduces green products, services, or technology first.					
5.	In dealing with competitors, we typically adopt a competitive undo-the-competitors posture.					
	<u>Green technological dynamism</u>					
1.	The green technology in our industry is changing rapidly.					
2.	It is very difficult to forecast the green technology development direction in our industry.					
3.	Most green technological innovations in our industry are radical changes on existing techniques.					
4.	The green technological changes in our industry can bring many opportunities for firms.					
	<u>Green innovation behaviour</u>					
1.	I will actively participate in the development of green products and propose an appropriate plan and progress schedule.					

2.	I will try my best to reduce the possible harm from a product to users in the product design.					
3.	I will try to eliminate technical risks and reduce material waste in R&D.					
4.	Overall, I have already started working on product development by following green standards.					

For each of the statements below, please mark with an X the number that best describes how firm performs compared to the industry average.

	<u>Environmental performance</u>	Weaker	1	2	3	4	5	Stronger
1.	Reduced pollution							
2.	Reduced energy and material consumption							
3.	Reduced consumption for hazardous/ harmful/ toxic materials							
4.	Reduced frequency for environmental accidents							
	<u>Objective performance</u>	Weaker	1	2	3	4	5	Stronger
1.	Revenue							
2.	Net income							
3.	Cash flow							
4.	Return on equity							
5.	Return on asset							
6.	Return on invested capital							
7.	Total debt of equity							
8.	Long-term debt to equity							
	<u>Subjective performance</u>	Weaker	1	2	3	4	5	Stronger
1.	Market share							
2.	Capacity utilisation							
3.	Product quality							
4.	On time delivery of products or services							
5.	Customer satisfaction							
6.	Customer retention							
7.	Employee satisfaction							
8.	Employee turnover							

RESPONDENTS INFORMED CONSENT:

I hereby agree to participate in research regarding. The relationship between green behaviours and their effect on the performance of small businesses in South Africa. I understand that I am participating freely and without being forced in any way to do so.

I also understand that I can stop at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to benefit me personally. I have received the contact details of a person to contact should I need to speak about any issues which may arise in this interview.

I understand that this consent form will not be linked to the questionnaire, and that my answers will remain confidential. I also understand that if at all possible, feedback will be given to me if I so wish once the research is complete.

.....

Signature of respondent

Date





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ETHICS CLEARANCE
REC-270710-028-RA Level 01

Project Number: CHI021SBAN01

Project title: **The relationship between green behaviours and their effect on performance of small businesses in South Africa.**

Qualification: Masters in Business Management

Principal Researcher: Zingisa Banana

Supervisor: Prof W.T. Chinyamurindi

Co-supervisor: N/A

On behalf of the University of Fort Hare's Research Ethics Committee (UREC), I hereby grant ethics approval for CHI021SBAN01. This approval is valid for 12 months from the date of approval. Renewal of approval must be applied for BEFORE termination of this approval period. Renewal is subject to receipt of a satisfactory progress report. The approval covers the undertakings contained in the above-mentioned project and research instrument(s). The research may commence as from the 25/03/20, using the reference number indicated above.

Note that should any other instruments be required or amendments become necessary, these require separate authorisation.

Please note that the UREC must be informed immediately of

- Any material changes in the conditions or undertakings mentioned in the document;

- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research.

The Principal Researcher must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

The UREC retains the right to

- Withdraw or amend this approval if
 - o Any unethical principal or practices are revealed or suspected;
 - o Relevant information has been withheld or misrepresented;
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- Request access to any information or data at any time during the course or after completion of the project.

Your compliance with DoH 2015 guidelines and other regulatory instruments and with UREC ethics requirements as contained in the UREC terms of reference and standard operating procedures, is implied.

The UREC wishes you well in your research.



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Yours sincerely

Professor Renuka Vithal
UREC-Chairperson

30 July 2020



Editing certificate

TO WHOM IT MAY CONCERN

I, Jeanne Enslin, acknowledge that I did the language editing of **Zingisa Banana's** dissertation submitted in the fulfilment of the requirements for the degree Master of Commerce in Business Management at the University of Fort Hare.

The title of the thesis is:

THE RELATIONSHIP BETWEEN GREEN BEHAVIOURS AND THEIR EFFECT ON THE PERFORMANCE OF SMALL BUSINESSES IN SOUTH AFRICA



All corrections or changes are evident in the version of the document in track changes and with several comments for the student's attention.

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The quality of the final document, in terms of language, formatting and references remains the student's responsibility.

Jeanne Enslin
Language editor
+27 826961224.

28 December 2020.

BA English and History (University of Stellenbosch)
Honours in Translation Studies cum laude (Unisa)
Post-graduate diploma in Editing cum laude (University of Stellenbosch)

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