

**The interactive influence of green market
orientation and green management values on green
practices and green performance of food and
beverage SMMEs**

BY

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***“LET’S REIMAGINE OUR FOOD SYSTEM AND
CREATE A WORLD WHERE FOOD WASTE IS A THING
OF THE PAST”***

(TRISTRAM STUART QUOTES, N.D.)

DEDICATION

I dedicate this thesis, firstly to my Heavenly Father, Lord God Almighty, who has been my provider and sustainer. He is the source of wisdom and has seen me through this doctoral journey. Through God I have overcome obstacles and fear; I have persevered and succeeded because He strengthened and upheld me (Isaiah 41:10 – “So do not Fear, for I am with You; do not be dismayed, for I am Your God. I Will Strengthen You and Help You; I Will Uphold You with My Righteous Right Hand”). I give all praise and glory to Him.

Secondly, I dedicate this thesis to my mother, Dr. Rosina Dorothea Shuping. Mommy, you didn't want me to become a medical doctor like you but thank you for showing me that hard work pays off. You went through so much adversity in becoming a doctor and through this, you gave me the strength to persevere and never give up. Like you, I have faced challenges, but knowing you endured gave me the courage to continue. Thank you for never limiting me and teaching me that everything is possible. You stood by me through your memories, and I will forever be grateful for your love and continuous support.

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DECLARATION

I, **Vanessa Eva-Ann Green** declare that the thesis, which I hereby submit for the degree of **Doctor of Philosophy** at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further declare that any and all errors are mine and mine alone.

Additionally, I declare that I have obtained the necessary authorisations and consent to conduct this research study.

Ethical clearance approval is presented in **Appendix G**

SIGNATURE: **Vanessa Green**

DATE: **24 May 2024**

ABSTRACT

Unlike larger companies, the practices of small, micro, and medium-sized enterprises (SMMEs) do not yet align with the growing consumer demand for environmentally friendly products and sustainable production processes. As a result, scholars suggest that Food and Beverage SMMEs should adopt a green market orientation to rebuild themselves after the COVID-19 pandemic. The South African government has also shown its commitment by prioritizing food security, green economy initiatives, and small businesses to drive economic recovery post the pandemic.

Focusing on F&B SMMEs in South Africa, and adopting a multidimensional view of green market orientation, this study quantitatively explored the relationships between green market orientation as the primary phenomenon, and companies' green performance. Green market orientation was examined in terms of its components, namely 1) green customer orientation, 2) green competitor orientation, and 3) green inter-functional coordination, furthermore, extending the examination to also consider the effect of companies' green management values on their implementation of green internal practices.

A total of 491 F&B SMMEs in South Africa participated in the study by completing a structured questionnaire, selected through non-probability, purposive sampling. Out of these, 376 complete and useful responses were statistically analyzed. The sample profile was described, and the reliability and validity of the constructs were verified through descriptive and inferential analyses. Multiple regression analysis was conducted to examine the relationships between selected variables based on the study's hypotheses, and to identify any moderating and mediating variables in the final model.

Green customer orientation has been identified as the most significant factor in driving green market orientation to improve green performance. The study also found that when F&B SMMEs embrace a green market orientation, implementing green internal practices can further enhance their green performance. Moreover, adopting related consumption and waste policies can boost companies' green performance, reduce food waste, and improve food security. Companies that integrate a green customer orientation and green

internal practices, guided by green management values, are likely to see improved green performance. It is clear that green management values should be an essential part of management's approach, and a green customer orientation that reflects management's attentiveness to their customers' evolving needs will heighten companies' awareness of changing market needs, ultimately leading to enhanced green performance.

Keywords:

Green market orientation, green customer orientation, green competitor orientation, green inter-functional coordination, green management values, green internal practices, green performance, F&B SMMEs

ABBREVIATIONS

BER	B ureau for E conomic R esearch
BFAP	B ureau for F ood and A griculture P olicy
BSDC	B usiness and S ustainable D evelopment C ommission
CAGR	C ompound A nnual G rowth R ate
CoP	C onsumption P olicies
DAFF	D epartment of A griculture, F isheries, and F orestry
DEA	D epartment of E nvironmental A ffairs
DFFE	D epartment of F isheries, F orestry, and the E nvironment
DALRRD	D epartment of A griculture, L and R eform and R ural D evelopment
DTI	D epartment of T rade and I ndustry
DTIC	D epartment of T rade, I ndustry, and C ompetition
EC	E uropean C ommission
ERRP	E conomic R econstitution and R ecovery P lan
FAO	F ood and A griculture O rganization
F&B	F ood and B everage
GCoO	G reen C ompetitor O rientation
GCuO	G reen C ustomer O rientation
GDP	G ross D omestic P roduct
GEP	G reen E nvironmental P erformance
GFP	G reen F inancial P erformance
GHG	G reenhouse G ases
GHI	G lobal H unger I ndex
GIfC	G reen I nter-functional C oordination
GIP	G reen I nternal P ractices
GMO	G reen M arket O rientation
GMV	G reen M anagement V alues
GP	G reen P erformance
GSP	G reen S ocial P erformance
IBP	I nternal B usiness P ractices
ISP	I nternal S upplier P ractices
MSME	M icro, S mall, M edium E nterprises
NDP	N ational D evelopment P lan
NEP	N ew E cological P aradigm
OECD	O rganisation for E conomic C o-operation and D evelopment

PAGE	P rogramme for the A doption of the G reen E conomy
PMG	P arliamentary M onitoring G roup
R-A	R esource- A dvantage theory
SA	S outh A frica
SAHRC	S outh A frican H uman R ights C ommission
SEDA	S mall E nterprise D evelopment A gency
SDG	S ustainable D evelopment G oals
SME	S mall and M edium-sized E nterprises
SMME	S mall, M edium, M icro E nterprises
TISA	Department of T rade and I ndustry in S outh A frica
UN	U nited N ations
UNDP	U nited N ations D evelopment P rogramme
UNECE	U nited N ations E conomic C ommission for E urope
UNEP	U nited N ations E nvironmental P rogramme
VRIN	V aluable, R are, I mitable, N on-substitutable
WEF	W orld E conomic F orum
WsP	W aste P olicies

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CHAPTER 1: INTRODUCTION TO THIS STUDY

“One cannot think well, love well, sleep well if one has not dined well.”

- (Woolf, 1967)

1.1 CHAPTER INTRODUCTION

As writer Virginia Woolf observed back in 1967, food plays a central role in our society and how we live. Few products are as ubiquitous and vital to our daily lives as food. It powers and pleases our bodies, but it also exhilarates, repels, invigorates, and teases our sensory receptors (Lowe et al., 2015). Food is both functional and serviceable, also self-indulgent and pleasure-seeking. Food consumption is often perceived as a social act and our environment greatly influences what we consume. Furthermore, our mood, health status, and physical being affect what we consume. Amid the obvious importance of food to our well-being, food consumption presents several difficult challenges that beg us, as both consumers and businesses, to change the way we think about food choices and consumption practices (Lowe et al., 2015).

Pressure on the food and beverage sector (F&B hereafter) is progressively increasing to provide solutions to a range of diverse contemporary social issues such as the tenacious growth of obesity, economic inequality, and environmental degradation (Cairns et al., 2016; Souza-Monteiro & Hooker, 2017). It encompasses various environmental issues such as water usage, wastewater treatment (Valta et al., 2013), plastic pollution, packaging (Phelan et al., 2022), air pollution, and the emission of greenhouse gases (GHG) (Salim et al., 2018; United Nations Economic Commission for Europe (UNECE), 2022). Excessive consumption of the “wrong foods” and related consequences such as obesity, type 2 diabetes, heart disease, and so forth have begun to reverse earlier concerns about the shortfall of food consumption (Lowe et al., 2015). To improve the level of behavioural control, high-profile influential leaders such as Michelle Obama, and famous chefs such as Rachel Ray and Jamie Oliver, have made considerable efforts to encourage changes in the way that individuals and organisations interact with food (Lowe et al., 2015).

This chapter sketches the research problem and provides the theoretical anchor that directed the research. The purpose of the study, the research questions, the scope of the research, as well as the associated delimitations of the study are presented. The need for the research is articulated for business, as well as how the outcomes of the research will expand academic literature. Key terms and definitions are highlighted. The layout of the thesis is indicated, outlining each chapter and its intended purpose. **Figure 1.1** provides the structure of this chapter visually.

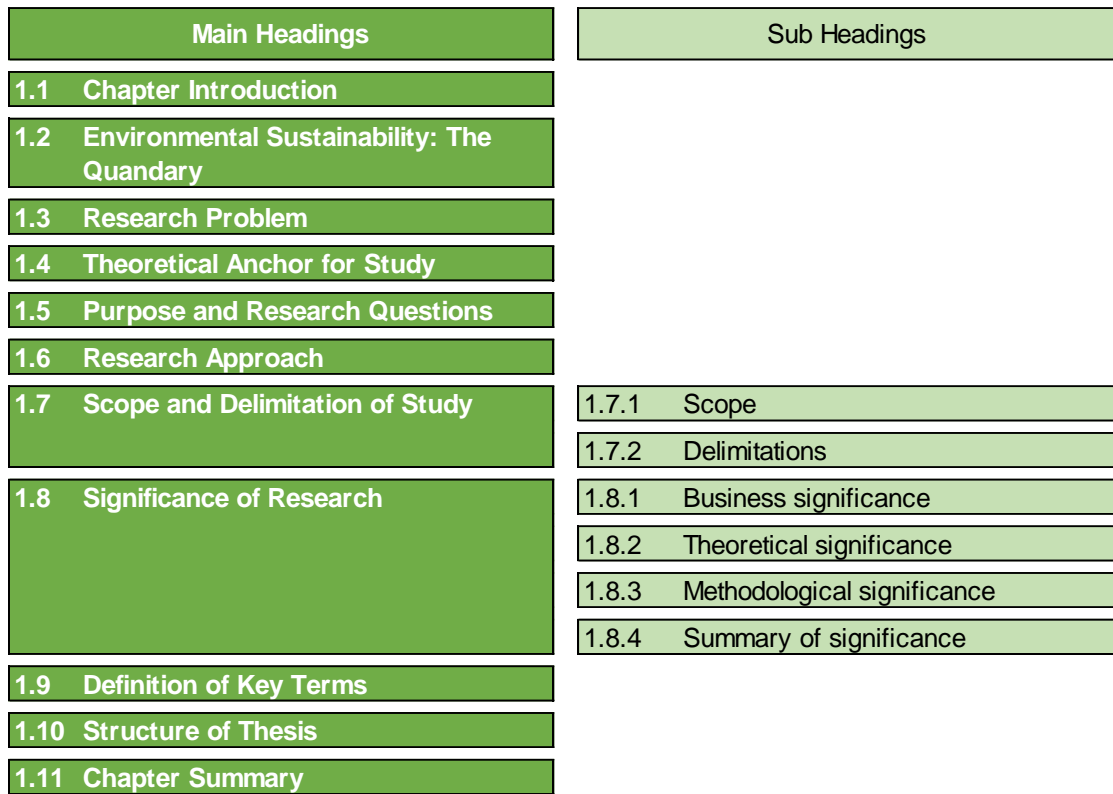


Figure 1.1 – Structure of Chapter 1

Note. An overview of the structure and layout of the chapter. Own work.

1.2 ENVIRONMENTAL SUSTAINABILITY: THE QUANDARY

Facing “an unprecedented, multidimensional crisis” (Organisation for Economic Co-operation and Development (OECD), 2020), the world as we know it is at a critical juncture where it is grappling with the issue of food security and an awareness that in the future, hunger and starvation are inevitable in many parts of the world. Unless more attention is devoted to sustainable food production, as well as optimisation rather than the abuse of scarce natural resources, a depressing scenario is facing us (Food and Agriculture Organisation (FAO) et al., 2021). The COVID-19 pandemic has emphasized that business as usual is not an option anymore (Pinner et al., 2020), and that “sustainable recovery, aligned with the Sustainable Development Goals (SDGs) requires cross-sectional action and mechanisms to manage short-term and long-term priorities, and between economic, social, and environmental goals” (OECD, 2020). Increasing people’s awareness about the fragile state of our planet, specifically about the basic systems including “healthcare, social protection, education, value chains, production networks, financial markets, mass transit systems and ecosystems” (OECD, 2020) are also drawing attention to the harm that mankind has already done to the environment.

During any crisis period, such as during the COVID-19 pandemic, businesses, and markets alike, are confronted with substantial challenges, although at the same time, multiple opportunities emerge as all are trying to cope with rapid changes and growing uncertainty. Preceding crises have highlighted that to advance post a global crisis and to pursue a stronger, more inclusive, and sustainable growth path, new sources of growth are required (OECD, 2015). For example, the post-2015 financial crisis era has shown that for economic growth to be sustainable, the environment should be elevated as a significant consideration, acknowledging environmental sustainability in terms of three aspects namely 1) natural capital – specifically renewable or infinite resources; 2) pollution; and 3) non-renewable or finite resources (United Nations Development Programme (UNDP), 2017). Being one of the dimensions of sustainability (Watling & Zhou, 2011), and developed by Goodland (1995), environmental sustainability entails the investigation of issues about natural capital at a sustainable level (Spangenberg, 2002). That implies the aggregation of all biological and geological processes and associated elements to achieve ecological well-being, as the highly desired outcome in the lives of humans and other forms of life (Watling & Zhou, 2011). It conceptualises the environmental economic framework of limits to growth and is defined as pursuing the upgrading of the welfare of humanity by safeguarding raw material sourced consumed by mankind, preventing waste dumps from overrunning and harming humanity (Moldan et al., 2012). Unavoidably, therefore, Goal 8 of the SDGs considers inclusive and sustainable growth as essential for wealth (UNDP, 2017). This has become even more critical in light of the COVID-19 pandemic that negatively impacted the global economy (Eggers, 2020). The pandemic triggered an unprecedented recession, that exceeded all negative scenarios since World War II, indicating that the food security and nutrition status of millions of people would worsen unless swift action is taken (FAO et al., 2021).

Businesses are propelled to embrace a more strategic stance to include environmental issues as part of their operations and vision for the future (Shafique et al., 2020), having witnessed the mounting detrimental effects on the biophysical environment (L. C. Leonidou et al., 2017); increasing consumer attentiveness and anxieties over environmental decline (Jiang et al., 2020); growing pressure in the form of government regulations (Guo et al., 2020); and changing expectations about business (World Economic Forum (WEF), 2021). Despite all the negative consequences, a crisis often gives birth to new opportunities. To date, much of the focus of the business world has revolved around large business organisations with sporadic recognition of small, micro, and medium-sized enterprises (SMMEs) as major economic, social, and environmental drivers worldwide (WEF, 2021). In light of a move towards more sustainable business practices, the World Economic Forum (WEF) (WEF, 2021) has proposed ways in which

SMMEs could leverage their size, networks, people and technological strengths to support goals for their sustainable growth to have a positive impact on society, and develop an adaptive capability. Despite making up more than 90% of businesses, and seven out of ten contributing more than 70% to the Gross Domestic Product (GDP) of a country, SMMEs also face pertinent challenges in terms of their survival (Le Fleur et al., 2014; L. C. Leonidou et al., 2017; WEF, 2021) particularly in developing or emerging markets (WEF, 2021). It is, therefore, vital for SMMEs to optimise every opportunity to generate a positive impact to be future-ready.

Future readiness is defined as “a set of organisational capabilities and orientations that enable companies to successfully respond to shocks and seize opportunities that emerge from constant disruption” (WEF, 2021). **Three central characteristics of future-ready SMMEs** have been identified as *sustainable growth, societal impact; and adaptive capacity*, while **the three core drives of future readiness** are *orientation, business model flexibility, and networks* (societal impact) (WEF, 2021). **The three core drivers and eleven sub-drivers** that will establish SMMEs as future-ready according to the WEF are depicted in **Figure 1.2**.

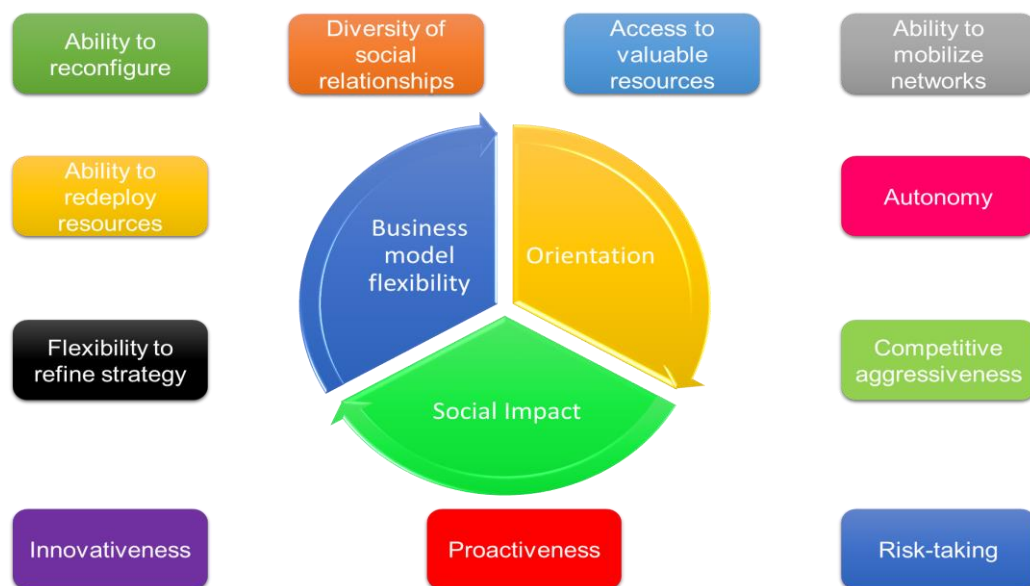


Figure 1.2 – Drivers of Future Readiness

Note. An overview of the drivers for future-readiness of small businesses. From “Future readiness of SMEs: Mobilizing the SME sector to drive widespread sustainability and prosperity”, by World Economic Forum (WEF), 2021 (<https://www.weforum.org/whitepapers/future-readiness-of-smes-mobilizing-the-sme-sector-to-drive-widespread-sustainability-and-prosperity#:~:text=30%20November%202021-.Future%20Readiness%20of%20SMEs%3A%20Mobilizing%20the%20SME%20Sector,Drive%20Widespread%20Sustainability%20and%20Prosperity&text=At%20an%20aggregate%20level%2C%20these.global%2C%20regional%20and%20local%20economies>). Copyright 2021 WEF. Reprinted with permission.

To explain: *Orientation* is defined as “the pervading culture or style of an organisation that defines how it approaches and deals with numerous important decisions in its dealings” (WEF, 2021), hence the business orientation of the SME, for example,

adopting a green market orientation. *Business model flexibility* refers to the ability of a business to be malleable or elastic in how it tactically plans to function to achieve value (financial and non-financial). This can be achieved through *networks or relationships* that enhance the effectiveness of the business and impact society at large.

The COVID-19 pandemic has made us all aware of insufficiencies in our food systems, that are threatening the lives and means of support of people around the globe, especially the most vulnerable and those living in fragile contexts (FAO et al., 2021). The fragility of our food systems indicates a need to seriously contemplate mankind's existing food consumption behaviour to optimise every opportunity to build a better future for all. Recently, issues of household food and nutrition security have received increased attention worldwide due to the impact of climate change and tough economic conditions, which have exerted additional strain on food systems (StatsSA, 2019). As envisioned in the SDGs, the elimination of hunger is unfortunately not yet on track and the Global Hunger Index (GHI) revealed that 52 out of 119 countries globally are experiencing serious, alarming, and severely distressing conditions of hunger (FAO et al., 2021). With health, food quality, and food security being of crucial importance in the F&B sector, Deloitte (2015) has underlined customer concerns regarding the sustainability of food production and its impact on the environment contrary to KPMG (2017) that has declined the sustainability development goals within the F&B sector.

Several scholars have examined the application of responsible business practices on businesses' performance (Bresciani et al., 2016; Cairns et al., 2016; Souza-Monteiro & Hooker, 2017), concluding that the right to use nutritious foods and healthy diets not only concerns prices and affordability, but that other dimensions of the food environment, such as culture, language, cooking practices, knowledge and consumption patterns, food preferences, beliefs and values, may also impact dietary trends, influencing how food is sourced, generated, produced, and consumed. Furthermore, increasingly consumers are actively taking an interest in where their food comes from (Eat Out, 2017). Accordingly, and based on the specific country context and prevailing food consumption patterns, it is essential that policies, laws, and investments promote the generation of healthier food environments and try to encourage consumers to follow dietary patterns that are healthy and safe and exert less strain on the environment (FAO et al., 2021). Recognising this move, Woolworths South Africa in 2016 established the "Eat Out Woolworths Sustainability Award", which acknowledges eating establishments that offer their diners seasonal, local and responsibly produced food (Eat Out, 2017). Furthermore, showing the progression of sustainable eating establishments in South Africa, FYN Restaurant in Cape Town was

acclaimed as the world's most sustainable restaurant being awarded the Flor de Caña Sustainable Restaurant Award in 2023 (Eat Out, 2023).

In conclusion, it is envisaged that businesses' growth should be inclusive and sustainable (UNDP, 2017), especially for SMMEs that have an important part to play in the sustainability space (Higgs & Hill, 2019; Struwig & Lillah, 2017; WEF, 2021). To achieve this, businesses will have to implement a market-oriented approach, to gain a competitive advantage (Crittenden et al., 2011) that may, through green market orientation, provide a superior competitive advantage and increased green performance (C. H. Wang, 2020; WEF, 2021).

1.3 RESEARCH PROBLEM

Today, humanity and global sustainable development are being challenged by climate change, which is a key risk to people's safety, wealth, and existence – particularly in terms of food security (Nathaniel et al., 2021; StatsSA, 2019). Environmentally, humanity has pushed the boundaries beyond the nine safety limits of our planet, breaching climate change, the integrity of our biosphere, altering the land, and changing biogeochemical cycles (Business Sustainable Development Commission (BSDC), 2017). Over the last half-century, our life support system, which humanity is dependent on, has been changed irrevocably (UNDP, 2021). This has led to a new geological age called “the Anthropocene” or “age of the human” as stated in the United Nations Development Programme Human Development Report of 2020 (UNDP, 2020). This geological age is characterised by the unwanted environmental imprint that is made by humans on our planet (UNDP, 2021) including loss of biodiversity, pollution of the oceans, and warming of the atmosphere (Nathaniel et al., 2021). With increased knowledge about the predicament, topics concerning ecological matters, sustainability, and environmental concerns have progressively emerged as topical issues of discussion (Sarkis & Zhu, 2018). Accordingly, communication with societies has also improved significantly (Sarkis & Zhu, 2018) distributing more information to consumers, and increasing their involvement by questioning issues such as environmental responsibility and the need to take action.

From an industry perspective, global efforts to overcome climate change issues require the commitment and participation of businesses from all sectors (Balasubramanian et al., 2021). In reply to numerous economic and social forces concerned with inclusive and sustainable growth, and environmental sustainability, there has been an increase in the level of environmental awareness of organisations (Sarkis & Zhu, 2018). Research has to a large extent prioritised large businesses, which have incorporated

environmental projects in their corporate social responsibility (CSR) programmes (L. C. Leonidou et al., 2017). Former studies have also mainly concentrated on large manufacturing organisations (Green et al., 2015; Jiang et al., 2020) and hi-tech organisations (C. H. Wang, 2020), unfortunately overlooking SMMEs that are very important for economies to prosper as well as for job creation (Jansson et al., 2017; L. C. Leonidou et al., 2017). Because SMMEs have an undeniable impact on the environment as a collective, they should also consider environmental sustainability as part of their operations and business strategies through the active and competent execution of green environmental practices or initiatives that would reduce the negative impacts of their activities on the environment (Balasubramanian et al., 2021).

From a consumer's perspective, an increase in environmental regulations has forced people to accept more responsibility for the environment. Being eager to reduce their environmental footprint, many consumers are subsequently seeking green products during routine purchases (Tjahjadi et al., 2020), even supporting endeavours concerning environmental protection, wanting to learn more about green products, and obtaining information about the environment (P. Kumar & Ghodeswar, 2015). Practically speaking, consumers' green purchasing decisions hinge on supporting environmental production, the drive for environmental responsibility, the green product experience, the environmental friendliness of organisations, as well as social appeal (P. Kumar & Ghodeswar, 2015). Subsequently, the so-called green market refers to a market in which consumers and the competition are conscious of environmentally friendly products and processing and play a vital part in organisations' sustainable development (Tjahjadi et al., 2020). Indications are that developing countries are now adopting their developed counterpart's practices in their requirements for green products (MasterCard, 2021). Accordingly, Fatoki (2019b) reviewed green market orientation in a South African setting – although only from the context of the hospitality industry sector - and only concerning sustainable performance of environmental and social performance. The research did not consider green internal practices or any other mediators or moderators in the study that could possibly have affected performance, concluding that a significant positive relationship exists between green market orientation and environmental and social performance in hospitality businesses (Fatoki, 2019b).

Being the first study in South Africa to link green market orientation to environmental and social performance, the question arises whether similar significant relationships are true within other industry sectors. While Fatoki (2019b) only reviewed non-financial performance, an investigation of both financial and non-financial performance in the domain of green performance is due, specifically to explore economic, social, as well

as environmental performance. With a scarcity of related studies in developing countries (Fatoki, 2019b; Tjahjadi et al., 2020), this research gap deserves scholars' attention, particularly to focus on other industry sectors (Abdulsamad et al., 2021; Tjahjadi et al., 2020; C. H. Wang, 2020). Previous studies (Jiang et al., 2020; C. H. Wang, 2020) have also recommended that future studies be conducted in other developing market settings including newly industrialised countries that are concerned about the natural environment. This proposed study, therefore, identified six issues that require scholarly attention.

Firstly, businesses can no longer proceed as before. Sarkis and Zhu (2018), as well as the United Nations (2017), cautions that the current economic model that proposes growth at all costs can no longer be supported. Undeniably, the overuse of renewable resources and the strong reliance on fossil fuels is seriously threatening the future existence of humans and our planet. Mark Malloch-Brown and Paul Polman, the co-founders of the Business and Sustainable Development Commission (BSDC) (BSDC, 2017), strongly advocated that business leaders need to be courageous and venture into new directions to embrace more sustainable and inclusive economic models.

Secondly, businesses need to become more aware of a *market orientation*. Businesses' inability to sense and respond to the changes in the marketplace has caused many businesses' downfall (V. Kumar et al., 2011). Therefore, managers need to identify and understand strategic orientations that will enable their businesses to achieve levels of sustainable performance in an ever-changing environment. In doing so, it is equally important to monitor their activities to accomplish enhanced business performance. Eventually, the strategic orientation of an organisation underpins its tactical course (Masa'deh et al., 2018). One of the strategic orientations that are mostly reviewed in the literature, is *market orientation* (Baker & Sinkula, 2009; Schweiger et al., 2019).

Thirdly, a market orientation that was previously driven by profits is no longer sustainable. For more than three decades, both marketing managers and scholars have taken the stance that "a business that increases its market orientation will improve its market performance" (Narver & Slater, 1990). They understood that a market orientation is at the heart of the marketing concept (Na et al., 2019; Narver & Slater, 1990) creating a business culture that most efficiently and effectively establishes superior value for customers (Liao, 2018; Narver & Slater, 1990). A market orientation encourages intensive exertion efforts to gratify and discover customer value to boost profits (Na et al., 2019; Narver & Slater, 1990), relying on market information. Consisting of three behavioural components, (namely *customer orientation*, *competitor*

orientation, and *inter-functional coordination*, as well as two decision criteria, namely long-term focus, and profitability) (Narver & Slater, 1990), a market orientation, therefore, has the overriding objective of economic wealth (profitability). Profits are thus viewed as an integral part of market orientation (Kohli & Jaworski, 1990; Narver & Slater, 1990). Kohli and Jaworski (1990), unlike Narver and Slater (1990) specified profitability as a consequence of market orientation rather than a component of the phenomenon. V. Kumar et al. (2011) added that a market orientation has a more prominent outcome on the profit of a business than its sales because the focus is on the retention of the customer rather than on acquisition. Subsequently, this proposed study argues that a market orientation should be more flexible to accommodate market needs, as well as changes within the market.

Fourthly, due to SMME's influence in the marketplace, they interact with consumers who are increasingly preferring green products (P. Kumar & Ghodeswar, 2015). The desire to implement a *green market orientation* is, therefore, becoming a comparative advantage for businesses. Noteworthy, is that a market orientation, and therefore green market orientation, is a multidimensional construct (Crick, 2018, 2019, 2021; Mohiuddin Babu, 2018), which means that a unidimensional approach would reduce the essence of the construct (Abdulsamad et al., 2021; Crick, 2018, 2021). Various scholars (Abdulsamad et al., 2021; Crick, 2018, 2021; Mohiuddin Babu, 2018), therefore, expressed the need for a component-wise approach to the study of green market orientation to gain related nuances and additional insights. A component-wise approach would, subsequently test the relationships between each of the components of green market orientation and how they affect green performance respectively. This proposed study argues that a multidimensional green market orientation will allow small businesses to more successfully adopt green performance as a way of conduct.

Fifthly, small businesses are now obliged to consider a green market orientation as a way of conduct. The natural environment and organisational academics, however, caution that the fruitful quest for an environmentally friendly strategy should not only focus on compliance with environmental regulations, it also needs the related resource allocation to develop and deploy organisational capabilities (Sharma & Sharma, 2011), as well as positive green management values to protect the environment (Aragón-Correa & Sharma, 2003; Sharma & Sharma, 2011). An extension to the market orientation concept and viewing it from an environmental perspective has resulted in scholars' creation of the novel concept *green market orientation* (Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020) that refers to an organisation's focus on sustainable development (Tjahjadi et al., 2020) and "an organisation's ability to explore and develop environmental competencies, products, and services to achieve superior

performance” (Banerjee et al., 2003). Hereby, it is also an organisation’s philosophy to determine and address the requirements and wants of its customers through its products and services (Li et al., 2018). Tjahjadi et al. (2020) argue that a market orientation, specifically a green market orientation, influences business performance due to a rising public quest to protect the environment. It is, therefore, crucial for organisations to adopt environmentally friendly business practices, because previous results on “the effect of market orientation on business performance are still inconsistent” (Tjahjadi et al., 2020). This view is supported by Abdulsamad et al. (2021) who found inconsistencies in the strategic orientation-organisational performance nexus. This proposed study, hence, argues that the implementation of a multidimensional green market orientation by SMMEs is likely to create a push and pull motivation from the consumers, thereby, driving the market environment.

Sixthly, many motivations push businesses to embrace voluntary environmental management on the corporate level (Dangelico, 2015) explaining businesses’ increased efforts to include environmental sustainability in their activities and strategies (Bonini & Görner, 2011). Market orientation collects information from the market on both current and potential customers, and distributes the collective to various departments, accordingly, encouraging appropriate business conduct (Kohli & Jaworski, 1990; Na et al., 2019). The customer orientation part of market orientation focuses on the needs and desires of the customers (Pekovic et al., 2016) and is mainly short-term focussed, concentrating on understanding the articulated needs of consumers in their respective marketplaces and on creating goods and facilities that would satisfy their wishes (Slater & Narver, 1998). This, however, is a reactive philosophy that leads to adaptive learning rather than generative learning, which focuses on current consumer needs only, neglecting future needs (Slater & Narver, 1998). The alternative is market-oriented businesses which embed permanent elements of behaviours in their businesses that are committed to understanding both the articulated and concealed wants of their customers (Slater & Narver, 1998), also wanting to understand the capabilities and plans of their competitors by obtaining relevant market information. A market orientation allows businesses to scan the wider market to distinguish served and unserved areas in the market. More specifically, a business is market-oriented when the entire business adopts the imbedded values, and when all its processes are aligned to generate superior consumer value.

Uncertainty, however, exists concerning how businesses should realign themselves for the consumers of the future. Considering that strategic orientations are indispensable to the long-term ambitions and tactics of a business, it is argued that the strategic orientation of a business will also express the sustainability and ecological features the

business establishes (Jansson et al., 2017). Admittedly, consumers increasingly require the business fraternity to accept responsibility for environmental sustainability. Therefore, businesses are expected to realign themselves for consumers of the future. Eventually, the mandate for sustainable products and services originates from the final or eventual consumers of those products and services (Green et al., 2015). Businesses that follow a market orientation are in a distinctive position to tactically support themselves by adhering to the requirements and desires of consumers who are concerned about businesses' responsibilities towards society (Lafferty & Hult, 2001). Furthermore, the availability of resources to businesses is vast and clearly identifying which resources are acceptable and the value they possess is important for an SMME to understand. Understanding how resources differ in their effects on performance and identifying their value impact would be of value to competition theory and strategy by providing scholars with a more robust foundation to discuss environmental issues like sustainability (Hunt & Morgan, 2005). Ultimately, the coordination of resources allows a market-oriented business to provide a superior value (Green et al., 2015; Na et al., 2019). These types of businesses make an effort to assist their customers with relevant market information better (Green et al., 2015).

In summary, when considering environmental issues, it is not clear what F&B SMMEs in South Africa consider doing to improve their performance. Furthermore, it is also uncertain what resources they will use and if these resources will have direct, indirect, mediating, moderating, or a combination of all four kinds of effects on the performance of F&B SMMEs in South Africa. Many benefits can be obtained from understanding how the resources differ in their effects on performance and what value they might bring to the SMME based on these effects. The theoretical anchor that will bring all this together for this study is discussed next.

1.4 THEORETICAL ANCHOR FOR THE STUDY

The theoretical anchor that underpinned this study was the Resource Advantage (R-A) Theory, which was first conceptualised in Hunt and Morgan (Bicen, 2021; S. D. Hunt & Morgan, 1995), and providing a theoretical grounding for business and marketing strategy (S. D. Hunt, 2002; S. D. Hunt & Derozier, 2004). It has been used in environmental studies to determine a market-oriented sustainability framework (Crittenden et al., 2011); and to determine the impact of market orientation on environmental sustainability strategy (Green et al., 2015); in hotel and tourism studies to determine green market orientation to determine social and environmental performance (Fatoki, 2019); in agri-food studies to determine intellectual property rights for agri-food products (geographical indications) (Bicen, 2021); in interactive digital

marketing to determine market-based resources (customer information assets, customer information analysis capabilities, and customer knowledge assets) marketing performance and financial performance (Varadarajan, 2023); and to determine customer information advantage, marketing strategy and business performance (Varadarajan, 2020); and to determine financial performance response of manufacturers to servitization (Liu et al., 2024).

Being an evolutionary, process theory of competition (Bicen, 2021; S. D. Hunt & Madhavaram, 2012; S. D. Hunt & Morgan, 2005), R-A theory is interdisciplinary (Bicen, 2021; S. D. Hunt & Madhavaram, 2012) having been developed in several different literary disciplines including marketing (Bicen, 2021; S. D. Hunt, 2000a; S. D. Hunt & Derozier, 2004; S. D. Hunt & Morgan, 1995), management (Bicen, 2021; S. D. Hunt, 1995, 2000a; S. D. Hunt & Arnett, 2004; S. D. Hunt & Lambe, 2000), economics (S. D. Hunt, 1997b, 1997c), general business (S. D. Hunt & Arnett, 2001; S. D. Hunt & Duhan, 2002), and ethics (Arnett & Hunt, 2002a; S. D. Hunt, 2012). It shares similarities with diverse other theories and research traditions including evolutionary economics, “Austrian” economics, heterogeneous demand theory, differential advantage theory, the historical tradition, industrial-organization economics, the resource-based tradition, the competence-based tradition, and socioeconomics and institutional theory (Bicen, 2021; S. D. Hunt & Morgan, 2005). However, it is not merely an assembly of theories but draws only on traditional aspects that are linked (Bicen, 2021).

At its core, the R-A theory pools heterogeneous demand theory with the resource-based view (RBV) (Barney, 1991; Wernerfelt, 1984) of the business. In contrast with perfect competition, the heterogeneous demand theory views intra-industry needs as considerably varied with regard to the taste and inclinations of the consumer (S. D. Hunt, 1997a). Moreover, instead of a manufacturing function that combines similar, faultlessly moveable aspects of production, the RBV regards the business as combining various imperfectly moveable aspects, which are termed resources. Whilst the RBV of the firm (Barney, 1991; Wernerfelt, 1984) and dynamic capabilities based view of the firm (Teece et al., 1997) promote the resource advantage of the firm with regards to specific resources as explanations for superior firm performance, R-A theory (S. D. Hunt & Morgan, 1995) highlights the resource competitive strategies of firms, their competitive advantages in the marketplace, and their financial performance (Varadarajan, 2024). R-A theory acknowledges the prominence of market segments, the varied business resources (including those resources that may question the sentiment of a business towards the environment), a comparative advantage/disadvantage in resources (for example financial capabilities and human resources), and marketplace positions of competitive advantage/disadvantage (Bicen,

2021; S. D. Hunt, 1997c). Similar to RBV ((Barney et al., 2001; Wernerfelt, 1984), R-A theory accepts that firms accumulatively add, transform, and grow their specific resources by the process of learning, selection, and competition, as well as highlighting how each firm combines their resources, which are valuable, rare, imitable, and non-substitutable (VRIN) (Baraldi et al., 2024; Barney, 1991). In practice, therefore, the firm would have a selection of unique resources and capabilities that cannot be replicated by competitors (Barney, 1991).

Describing the process of competition, R-A theory is a general theory of competition, which according to Hunt and Morgan (1995), is defined as “the constant struggle among businesses for comparative advantage in resources that will yield marketplace positions of competitive advantage for some market segment(s) and, thereby, superior financial performance” (S. D. Hunt & Morgan, 1995, p. 8). Competition is, thus, seen as a progression that concentrates on marketplace loci of competitive advantage (S. D. Hunt, 1997c). R-A theory views competition as an imbalance-inciting, evolutionary and continuous process (Bicen, 2021). It sees both innovation and learning as natural outcomes of the competition process; organisations and consumers as having imperfect information which is costly; and institutions and policies as impacting financial performance (Bicen, 2021; S. D. Hunt, 1997c). In practice, therefore, each business would have an array of competencies comprised of unique resources that cannot be replicated by competitors (Barney, 1991; Prahalad & Hamel, 1990).

Firms and their resources are the innate units of evolutionary selection in R-A theory, and through the process of competition these innate unites are selected (Bicen, 2021). As depicted, **Figure 1.3** presented in Hunt and Morgan (1997, p. 78, Figure 1) and **Figure 1.4** presented in Hunt and Morgan (1997, p. 78, Figure 1) schematically depict the key constructs of the R-A theory. From **Figure 1.3** it is seen that R-A theory emphasizes the importance of comparative advantages/disadvantages in resources, and competitive advantages/disadvantages in market positions leading to superior/inferior financial performance (Bicen, 2021; S. D. Hunt & Morgan, 2005)). R-A theory's perspective on resources is one of the foundational arguments that is made in this study to identify green market orientation, green management values, and green internal practices as resources for the firm. Specifically, as displayed in **Figure 1.3** and elaborated upon in **Figure 1.4**, looking at resources, when firms have comparative advantage/disadvantage, they will occupy market position of competitive advantage/disadvantage for some market segment(s), which results in superior/inferior financial performance (Bicen, 2021; S. D. Hunt & Morgan, 2005). **Figure 1.4**, therefore, depicts the importance of market segments due to the differences in the tastes and preferences of consumers. This is another key argument made for green

market orientation, green management vales, and green internal practices being resources for the firm.

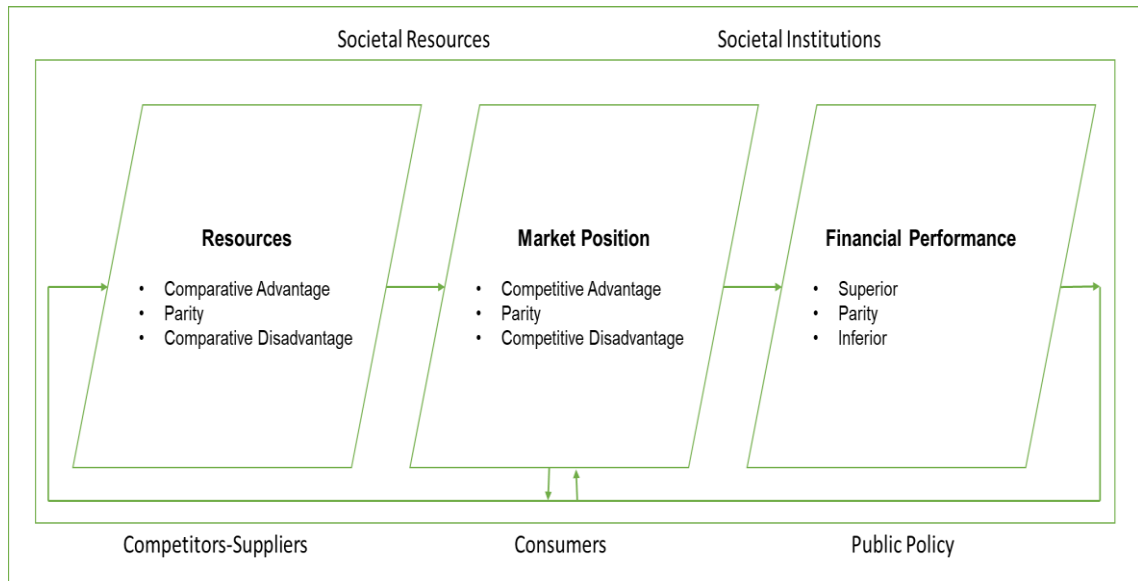


Figure 1.3 - Schematic of the R-A theory

Note: Competition is the disequilibrating, ongoing process that consists of the constant struggle among firms for a comparative advantage in resources that will yield a marketplace position of competitive advantage and, thereby, superior financial performance. Firms learn through competition as a result of feedback from relative financial performance “signalling” relative market position, which in turn signals relative resources. From “Resource=advantage theory: A snake swallowing its tail or a general theory of competition?” by S. Hunt and R. Morgan, *Journal of Marketing*, 61(October). Copyright (1997). Reprinted with permission.

Figure 1.4 taken from Hunt and Morgan (1997) indicates nine (9) potential competitive positions for a firm’s relative resource-produced value and relative resource costs compared to competitors. Ideally, a firm would want to have the competitive position of cell 3, where the comparative advantage in resources produces superior value at the lowest cost (S. D. Hunt & Morgan, 1995). Cells 2 and 6 also bring competitive advance and superior financial returns, whilst cell 5 produces average returns due to its parity position. Firms occupying cells 1 and 9 may have a comparative advantage in costs and value respectively but may not have superior returns (S. D. Hunt & Morgan, 1995).

		Relative resource-produced value		
		Lower	Parity	Superior
Relative resource costs	Lower	1 Indeterminate Position	2 Competitive Advantage	3 Competitive Advantage
	Parity	4 Competitive Disadvantage	5 Parity Position	6 Competitive Advantage
	Higher	7 Competitive Disadvantage	8 Competitive Disadvantage	9 Indeterminate Position

Figure 1.4 – Competitive position matrix

Note: The marketplace position of competitive advantage identified as cell 3 results from the firm, relative to its competitors, having a resource assortment that enables it to produce an offering for some market segment(s) that a) is perceived to be of superior values and b) is produced at lower costs. From "Resource=advantage theory: A snake swallowing its tail or a general theory of competition?" by S. Hunt and R. Morgan, *Journal of Marketing*, 61(October). Copyright (1997). Reprinted with permission.

Looking at the various positions: position 1 – relative lower resource costs come at the cost of lower resource produced value; position 9 – relative higher resource-produced values come at the cost of higher resource costs; position 5 – the parity position addresses perfect competition and produces average returns; position 4, 7, and 8 – have competitive disadvantage in that they have relative lower resource-produced value which comes at a higher resource costs; and positions 2, 3, and 6 are firms that have competitive advantage because they produce resources of value at lower costs (S. D. Hunt & Morgan, 1995). This study argues that firms having a green market orientation, green management values, and implementing green internal practices will achieve competitive advantage (i.e. cells 2, 3, and 6) resulting in superior green performance.

From **Figure 1.3** and **Figure 1.4**, the following is identified:

1. By leveraging its comparative advantage in resources to effectively and/or efficiently execute a tactic that affords products of superior value to customers in some market segment(s), a company attains and maintains a marketplace position of competitive advantage in the market segment(s) (S. D. Hunt & Morgan, 2005; Varadarajan, 2023).
2. This position of competitive advantage in the marketplace leads to superior financial performance.
3. Companies strive for comparative advantage in resources that can be organised to execute a tactic for affording products of superior value to customers in some

market segment(s), and in so doing attaining marketplace position(s) of competitive advantage in the market segment(s), to achieve superior financial performance (S. D. Hunt & Morgan, 2005; Varadarajan, 2023).

Table 1.1 – The foundational premise of R-A theory

No.	Item	Neoclassical theory	Resource-Advantage theory
P_1	Demand is	Heterogeneous across industries, homogeneous within industries, and static	Heterogeneous across industries, within industries, and dynamic
P_2	Consumer information is	Perfect and costless	Imperfect and costly
P_3	Human motivation is	Self-interest maximization	Constrained self-interest seeking
P_4	The firm's objective is	Profit maximization	Superior financial performance
P_5	The firm's information is	Perfect and costless	Imperfect and costly
P_6	The firm's resources are	Capital, labour, and land	Financial, physical, legal, human, organizational, informational, and relational
P_7	Resource characteristics are	Homogeneous and perfectly mobile	Heterogeneous and imperfectly mobile
P_8	The role of management is	To determine quantity and implement production function	To recognize, understand, create, select, implement, and modify strategies
P_9	Competitive dynamics are	Equilibrium seeking, with innovation exogenous	Disequilibrium provoking with innovation endogenous

Note: The foundational premises of the resource-advantage theory. From "Resource-advantage theory: A snake swallowing its tail or a general theory of competition?" by S. Hunt and R. Morgan, *Journal of Marketing*, 61(October). Copyright (1997). Reprinted with permission.

All theories are obtained from their foundational aspects, and these are displayed in **Table 1.1** for R-A theory (S. D. Hunt & Morgan, 2005), which is presented in Hunt and Morgan (1997, p. 76 Table 1).

Foundation referring to those premises that help understand the theory. Contrasting with perfect competition, R-A theory can be empirically tested, where any false findings can be replaced with descriptively accurate ones (S. D. Hunt & Morgan, 2005). The foundational premises of R-A theory displayed in **Table 1.1** will also provide insights on the study's arguments later expanded upon in Section 4.2.

Ultimately, R-A theory sees firms as combining heterogenous, imperfectly mobile resources, under conditions of costly and imperfect information with the goal of achieving superior financial performance. It focuses, thus, on comparative advantages in these resources that are available to the firms, which allows them to provide specific market offering(s) that have value for a particular market segment(s). This study argues that green market orientation, green management values, and green internal practices, which are deemed as resources, will combine to achieve the goal of not only

superior financial performance, but superior green performance. The theoretical anchor and how it impacts this study is discussed further in Chapter 3. Based on the uncertainties and the theoretical anchor, the purpose and research questions for this study are discussed next.

1.5 PURPOSE AND RESEARCH QUESTIONS

The purpose of the study was to expand existing literature by providing an in-depth analysis of the multidimensional construct of *market orientation* from an environmental perspective, which is referred to as *green market orientation*. This study explored the impact of a green market orientation on the *green performance of SMMEs* in a specific context (South Africa, in the F&B industry). *Green market orientation* was deconstructed into *green customer orientation*, *green competitor orientation*, and *green inter-functional coordination*. Reviewing the three components of *green market orientation* provides a more nuanced view of the construct and provides detailed information, as well as relational aspects, which align with the core aspects of the R-A theory. Green performance considers the environmental-, social- as well as economic performance of a business. Using the triple bottom line approach for sustainability (Elkington, 1994), was important for this study to use as it provided a rounded view of the construct, which previous studies did not consider. The research also considered the mediating effects of the implementation of green internal practices on the relationship between green market orientation and green performance. Furthermore, the research examined the moderating role of green management values on the relationship between green market orientation and the implementation of green internal practices and the ultimate impact on green performance. These mediating and moderating constructs are enhancers to superior performance leading to competitive advantage.

The objectives of this study are to define and conceptualise the relationships and test the interactions between the constructs of green market orientation, green management values, green internal practices, and green performance. Under the R-A theory perspective, the following overarching research question was developed to guide these research objectives:

Primary Research Question – How do South African F&B SMMEs' environmental values, in accord with their environmentally focussed market orientation, support the implementation of their sustainability practices, and improve their sustainable performance?

Accordingly, the following supplementary research questions were formulated to guide this research undertaking.

Supplementary Research Question 1 (RQ1) – What is the relationship between green market orientation and green performance in F&B SMMEs in South Africa?

It is of interest to understand what factors influence an SMMEs' performance and if the factors are external or internal. Several prior studies (Banerjee et al., 2003; Zhu & Geng, 2013) have identified external triggers which promote businesses from an environmental perspective, but not many have looked at internal triggers (C. H. Wang, 2020). The potential value of a green market orientation assumes how it affects the green actions of an organisation (Chan et al., 2012) and by studying market orientation from an environmental perspective, this study builds upon the work by Wang (2020); Borazon et al., (2022); Ngo (2022b) and uses the green market orientation construct to conceptualise and operationalise the outcome in performance of South African F&B SMMEs in a way that they (among other authors) have overlooked. As such, green market orientation is a novel construct (Wang, 2020) which has only been studied in Asian contexts, when referring to emerging markets, and only from a manufacturing (Li et al., 2018; Tjahjadi et al., 2020), supply chain (Ngo, 2022a, 2022b), and electronics (Borazon et al., 2022; C. H. Wang, 2020) perspective. Having a green market orientation, is proposed to ensure that firms adjust their objectives to adapt stricter environmental regulations and when responding to environmental information, the firms can improve green performance (C. H. Wang, 2020). Thus, it is of interest to investigate whether and how a company's green market orientation can enhance green performance. This study argues that such an orientation can impact business' sustainability performance.

Environmentally conscious businesses may be inclined to ensure that the outcomes of their business activities do not cause harm to the environment or the surrounding communities and bring economic value to them. As evident from the literature and having been identified, green market orientation has a positive effect on a firm's performance. Previous studies (Borazon et al., 2022; Fatoki, 2019b; Li et al., 2018; Ngo, 2022b; C. H. Wang, 2020) have identified a link between green market orientation and performance. Green performance (see Section 3.7) has been identified by the South African government to be part of the green economy initiative (PAGE & DEA, 2017) and, therefore, understanding both green market orientation (see Section 3.4.2.2) and green performance (see Section 3.7) independently and in conjunction with each

other, is expected to provide insights to both academic scholars and F&B SMMEs on how to optimise the business strategy to gain superior competitive advantage.

Supplementary Research Question 2 (RQ2) – What is the relationship between F&B SMMEs' green market orientation and their implementation of green internal practices?

Drawing from the study of Li et al. (2018), it is evident that green market orientation and green internal practices are linked although it is not clear how they are related and whether they are influenced by other factors.

Supplementary Research Question 3 (RQ3) – What is the relationship between the implementation of green internal practices and green performance in F&B SMMEs in South Africa?

Afum et al. (2021) advocate that investing in green internal practices has the potential to improve environmental performance, which can influence financial and social aspects of a firm, i.e. improve sustainable / green performance. Furthermore, supporting this, Sajan et al., (2017) confirmed that environmental performance is positively associated with economic performance and social performance. Other studies (Famiyeh et al., 2018; Zaid et al., 2018) in the environmental literature space have suggested that the implementation of green internal practices influence the sustainable/green performance of a firm (Afum et al., 2021). This study, therefore, argues that such an orientation can impact businesses' sustainability practices facilitating superior performance.

Supplementary Research Question 4 (RQ4) – What is the possible moderating influence of green management values in the relationship between green market orientation and the implementation of green practices in F&B SMMEs in South Africa?

In line with previous research, this study also considered the role of green management values, which is important in terms of SMMEs' commitment to sustainability (Jansson et al., 2017). C.H. Wang (2020) highlights that a gap remains in existing knowledge with regards to the impact of environmental attitudes on green market orientation and green performance. Moreover, Afum et al (2021) calls for future studies to investigate the effect of moderating variables on internal green practices and sustainable/green performance. This study, therefore, argues that F&B SMMEs that have green management values respond better to implementing green internal practices ultimately resulting in superior green performance.

Supplementary Research Question 5 (RQ5) – What is the mediating influence of the implementation of green internal practices in the relationship between green market orientation and green performance in F&B SMMEs in South Africa?

This study proposed that the implementation of green internal practices is a vital mediating factor of the relationship between green market orientation and green performance, which explain why certain SMMEs' green performance exceeds that of others. Furthermore, Gotteland and Boulè (2006) and Abdulsamad et al. (2021) encourage future research to view mediating relationships between market orientation and performance, and as such green internal practices plays the role of a mediator between this relationship. The study will provide new insights by combining these factors with green market orientation in a three-way interaction model. The specific hypotheses (summarized in Figure 4.2) detail the specific relationships examined in the thesis.

1.6 RESEARCH APPROACH

This study specifically focused on F&B SMMEs in South Africa. A green market orientation directs SMMEs in the marketplace to achieve a competitive advantage and achieve superior green performance (Fatoki, 2019b; Tjahjadi et al., 2020; C. H. Wang, 2020).

Previous studies indicated that market orientation (Green et al., 2015) and green market orientation (Fatoki, 2019b) are anchored within the R-A theory. Subsequently, gaps exist in the literature concerning what factors influence an SMME's performance and how attitude or green management values influence the implementation of green internal practices and subsequently influence SMME's green performance. Existing evidence from developed countries and developing countries within Asia had focused on manufacturing facilities, calling for related studies within developing markets and within other industries (Abdulsamad et al., 2021; Fatoki, 2019b; Green et al., 2015; Ngo, 2022b; Tjahjadi et al., 2020).

A detailed literature review was conducted to set the background for this study, highlight and define relevant constructs for investigation, and derive replications and hypotheses that could be tested in the context of this study. The literature review is presented in Chapter 3 and **Figure 1.5** represents a visual overview of the content of the chapter.

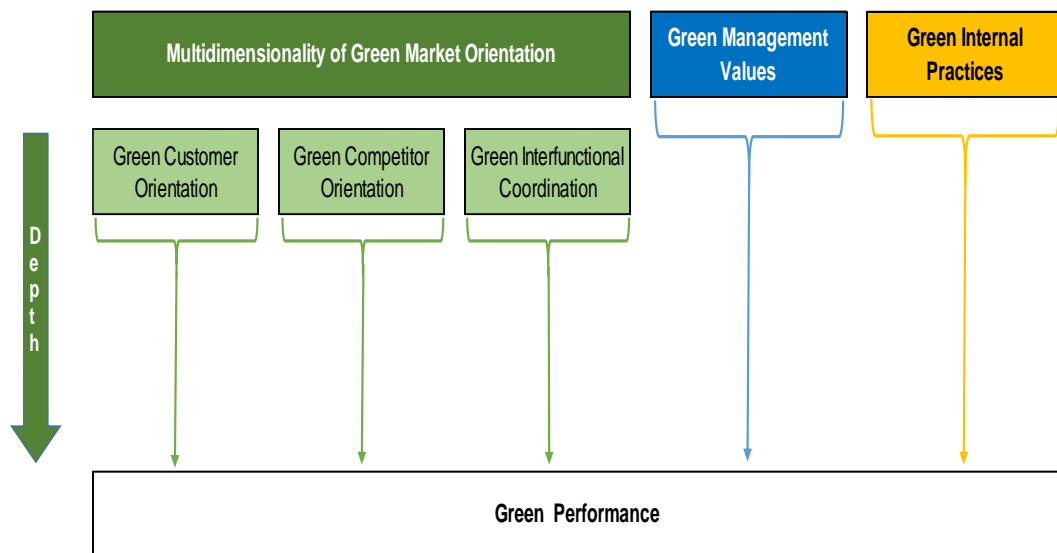


Figure 1.5 – Literature review investigation.

Note. The author's compilation shows how the literature was investigated. Own work.

Replications refer to hypotheses that were **derived from previous studies** and have already been tested in other contexts (Green et al., 2015; Li et al., 2018; C. H. Wang, 2020) and which this study intended to confirm in the South African context. The developed hypotheses are based on supporting literature to be tested statistically.

A positivist philosophy with a quantitative methodology was followed to confirm the replications and test the hypotheses. The study is cross-sectional in nature and the measurement instrument that the study used was a structured survey questionnaire that was based on the conceptual model that was uniquely developed for this proposed study. This was selected to secure quantifiable data that aptly reflects the situation of the market at a specific point in time and which could be analysed statistically (Hair et al., 2016). A non-probability purposive sampling method was used. Databases were obtained from the *Companies Intellectual Property Commission (CIPC)* and *Interactive Direct* initially. The databases were screened to select the F&B sector SMMEs, deciding that 60% of the samples would be selected from three provinces, namely Gauteng, Western Cape, and Kwa-Zulu Natal, which are the most environmentally active in the country (PAGE & DEA, 2017). The remaining 40% of the samples were taken from the other provinces in South Africa. To obtain a more robust sample size additional sourcing of data was done using university acquaintances and trained fieldworkers from *Merlinee Consulting* in Kwa-Zulu Natal.

The survey for this study was developed using the questionnaire by C.H. Wang (2020) as a basis. Additional elements from the study by Li et al., (2018) for green internal practices were incorporated into the survey. Elements for green management values

were taken from the *New Ecological Paradigm* (NEP) (Dunlap et al., 2000), whilst elements for green performance were taken from Fatoki (2019b); Montabon (2007); and C. H. Wang (2020).

Data collection was done electronically using Google Forms, captured in Excel, and was checked before statistical analysis. A total of 491 survey questionnaires were received. The data was screened to conduct descriptive analysis and for validation, which included assessments for normality, reliability, and validity. The data was used to test the hypotheses presented in the conceptual model, by conducting multivariate multiple regression analysis and performing moderation- and mediation analyses using the regression analysis and PROCESS macro plug-in respectively.

1.7 SCOPE AND DELIMITATIONS OF THIS STUDY

1.7.1 SCOPE

The study is linked to several domains including business strategy, marketing, environmental affairs, and sustainability. Several factors were considered. **Firstly**, this research study was conducted from the perspective of an emerging- or developing market perspective, specifically South Africa, as explicated in section 2.2.2. **Secondly**, from a sustainability aspect, many definitions exist, ranging from a purely environmental perspective to a focus on business sustainability. Because of this study's interest in environmental sustainability, it relied on the definition provided under section 1.9, also providing definitions for social sustainability and economic sustainability facilitating an understanding of the three dimensions of green performance. **Thirdly**, this study looked at SMMEs in South Africa from an environmental sustainability viewpoint, as discussed in section 2.3.3. **Fourthly**, evidence indicates that a global increase in the consumption of so-called green products is also evident locally due to factors such as globalisation. Consumers' changing, consumption patterns are subsequently influencing businesses and SMMEs' marketing strategies. Being part of the research setting, it was, therefore, important to understand South Africa's green consumption trends as detailed in section 2.4.2. **Lastly**, studies by Green et al. (2015), C. H. Wang (2020), and Jiang et al. (2020) were limited to the manufacturing and IT sectors proposing that future studies should be expanded to other industry sectors. Subsequently, this study elected to focus on the F&B sector, specifically South African SMMEs that have suffered dearly in recent times during the COVID-19 pandemic, hence deserving any possible support to gain momentum and flourish again.

1.7.2 DELIMITATIONS

The delimitations of the study include the fact that the study was conducted in South Africa as a geographical location where SMMEs are located countrywide. The focus of this study, however, was largely directed at three of the nine provinces (namely Gauteng, Kwa-Zulu Natal, and Western Cape) that are considered the most environmentally active provinces in the country facilitating data collection among suitable businesses (refer to the methodology section for further details). Concerning the sample size, quantitative studies indicate that a large sample size is required for data accuracy. Reviewing the sample size used in previous studies, this study obtained a sample size of 491, which was deemed sufficient to conduct the statistical procedures and deduce noteworthy findings. Despite previous studies (Green et al., 2015; Jiang et al., 2020; Tjahjadi et al., 2020; C. H. Wang, 2020) recommending that future studies should consider longitudinal approaches, this study opted for a cross-sectional study arguing that the envisaged contributions in an emerging context would be very insightful while time constraints posed on the study complicated the execution of a longitudinal endeavour.

The market orientation concept was originally established by Kohli and Jaworski (1990) and Narver and Slater (1990), who defined the construct from different perspectives namely a behavioural- and cultural perspective respectively (Jiang et al., 2020). Over the past two decades, scholars have often used these definitions or have combined them taking into consideration their strengths and weaknesses (Oakley, 2012). **Appendix A** details the different definitions, components, scales, and perspectives of these scholars. A better understanding of the environment is given through market orientation that enables a business to achieve a competitive advantage if this type of strategy is adopted (C. H. Wang, 2020). The definition used by C. H. Wang (2020, p. 3124) states that “a business with superior inter-functional collaboration and customer-linking abilities and related capabilities are presumed to assure them higher profits than competitors”. This definition looks at market orientation from a cultural viewpoint and permits businesses to establish long-term value for the consumer. Through inter-functional collaboration, businesses can obtain key market information, enabling them to recognise customers’ requirements and desires (Nasution et al., 2011). Market-oriented businesses connect better with consumers and their requirements, which will increase the performance of the organisation (C. H. Wang, 2020). Therefore, this study considered market orientation from a cultural perspective.

The implementation of market orientation is critical for a business, from a natural environmental perspective, as environmental pressures are growing, urging businesses

to integrate green resources and competencies into their market orientation (Crittenden et al., 2011; Hart & Dowell, 2011). An extension of the market orientation concept considers market orientation from a sustainability and environmental perspective and is part of sustainable development to create superior value for consumers. Scholars, in their discussion of the significance of market orientation, have classified the concept into various categories namely organisational performance, customer-, innovation-, and employee consequences (Jiang et al., 2020). This more recent construct related to green market orientation falls within the category of environmental consequences (Chen et al., 2015; Green et al., 2015) and is considered an extension of the market orientation concept (Li et al., 2018; C. H. Wang, 2020). This approach reflects businesses' orientation and commitment to the environment, acknowledging issues related to environmental concerns (Li et al., 2018).

Green market orientation is not to be confused with the concept of **green marketing orientation** where the latter captures organisational matters that operationalise a green marketing-oriented organisation (Papadas et al., 2017). It has been stated that green marketing orientation has underachieved (Peattie & Crane, 2005) and related literature remains emergent concerning its value in practice (Papadas et al., 2017). Green marketing orientation entails three central tenets of green marketing research namely *strategic green marketing* (Hong et al., 2009; Papadas et al., 2017), *tactical green marketing*, and *internal green marketing* (Papadas et al., 2017, 2019). The concept, therefore, presents an integrated perspective of green marketing strategy (Fraj et al., 2013) forming a holistic view of the business in addressing the natural environment (Papadas et al., 2017). It focuses more on marketing-oriented activities unlike green market orientation, that, according to previous research (Green et al., 2015; C. H. Wang, 2020; Weng et al., 2015) suggests that a business with this orientation can develop valuable competencies that will facilitate achievement of their environmental management goals. A green market orientation influences customer satisfaction by amending the objectives of the organisation and environment (Fraj et al., 2013; Papadas et al., 2017). Fairly recently Li et al. (2018, p. 926) posited that "green market orientation indicates that a business robustly explores and develops environmental competencies, products, and services to achieve superior performance". Furthermore, a green market orientation affects the procurement and distribution of the resources of the organisation, which can result in inimitable competencies ensuring the success of environmental management (Li et al., 2018). As a strategic orientation, and in responding to the environmental pressures that are exerted on a business whilst trying to create profit and conserve value for the consumer, green market orientation plays a tactical role in obtaining a competitive advantage following green practices (Green et al., 2015; Ketchen et al., 2007; Slater & Narver, 1995). C. H. Wang (2020)

associates with the definition of Cheng and Krumwiede (2012) and defines green market orientation as “an inter-functional organisation that responds to social and environmental needs of its customers, facing competitors engaging in environmental management” (2020, p. 3124). This study subsequently refers to green market orientation as the ability of the business to acknowledge the environmental issues faced by the business. It includes, furthermore, the discovery and development of the necessary environmental skills, products, processes, and services to address these environmental issues aptly; the response to the social and environmental needs of their consumers, and the engagement with competitors in environmental management to achieve superior performance (Cheng & Krumwiede, 2012; Li et al., 2018; C. H. Wang, 2020).

1.8 SIGNIFICANCE OF THIS RESEARCH

For any business, it is increasingly important to establish an environmental sustainability strategy. As market orientation has been widely studied, looking at it from an environmental perspective provides an additional advantage. The multidimensionality of market orientation enhances an understanding of the marketing concept and linking it with environmental sustainability provides business access to more customers, providing a competitive advantage. Moreover, as this empirical study is conducted in an under-researched context of SMMEs, it will not only influence the business performance of SMMEs if better understood but will also improve the environment through the implementation of green practices to improve the context that they operate in also uplifting the socio-economic conditions of the surrounding environments. Thus, the response of SMMEs to environmental challenges is important from a practical, as well as a theoretical perspective. In addition, it builds on sustainability and marketing consumption literature by providing additional information for marketing theories to analyse and describe businesses’ sustainable consumption practices that are still under-researched. Furthermore, as this study is set within a developing market setting, the nuances of an emerging market can provide additional insight into businesses’ green market orientation and its impact on green performance. The outcome of this study, therefore, has business and theoretical relevance.

1.8.1 BUSINESS RELEVANCE FOR THIS STUDY

In the past, a large proportion of businesses have demonstrated no to little concern about the negative impacts of their businesses on the environment, being mostly concerned about their economic gains. Many large businesses have been responsible for significant adverse effects on the environment, such as pollution, environmental degradation, and contamination (Failte Ireland, n.d.). However, with the increased

focus on climate change, many of the culprits have made a turnaround and are now actively trying to address the errors of the past by having a positive impact on environmental sustainability, propelling businesses to look at the long-term effects of their operations instead of short-term gains.

Previous studies (Higgs & Hill, 2019; Struwig & Lillah, 2017) indicate that SMMEs are showing increased awareness and acceptance of environmental changes, whilst driving green economy initiatives. Therefore, it would guide owner-managers of SMMEs into determining their business strategies to ultimately increase their companies' environmental performance. By identifying related business strategies, SMMEs can also identify the environmental sustainability practices that would enhance their green performance enabling them to assess their environmental investment performance or needs.

Understanding the relationships between the components of the multidimensional construct of green market orientation and green performance will aid owner-managers of SMMEs in managing their businesses' environmental expectations as well as those of other stakeholders that are involved. It will also enable them to contemplate their businesses' objectives and targets to improve the environmental performance of their business, enabling managers to redirect their business strategy to excel in inclusive and sustainable growth.

Having improved knowledge of green practices and how this impacts business strategy and increases performance, will assist owner-managers of SMMEs to implement value-adding practices, boosting green performance. How green practices are implemented, is determined by the management values of the owner-managers of these SMMEs. Moreover, implementing these green practices will have a spillover effect on the communities that they operate in through their purchasing practices, bringing about social change, which in turn impacts and improves green performance. These green management values are vital in enhancing the green practices that are displayed in the organisation.

Through an understanding of the process of value creation, as determined by the R-A theory through the process of competition (S. D. Hunt & Morgan, 2005), managers can understand what their customers value and how that value is created meaning they can better plan and manage the activities of their organization, which in turn will lead to improved performance. The relative value of a resource to the business is ultimately decided by the value it establishes for the customers of the business. Competitively

superior businesses are those that establish unique value for their customers, more efficiently and/or effectively than other businesses (S. D. Hunt & Morgan, 2005).

1.8.2 THEORETICAL RELEVANCE OF THIS STUDY

With the growing importance of environmental sustainability, previous research has explored organisations' responses to environmental concerns, devoting attention to large, listed businesses, which have a greater environmental impact across sectors. Whilst large organisations promote sustainability, research indicates that SMMEs have lingered behind considerably (Brammer et al., 2012; Cassells & Lewis, 2011; Jansson et al., 2017; L. C. Leonidou et al., 2017; Revell et al., 2010) and because they are under increased pressure, SMMEs need to advance their environmental performance (Hofmann et al., 2012). Despite their individual impact being small, collectively, SMMEs can exert a significant impact (Brammer et al., 2012; European Commission, 2015).

Thus, given the importance of SMMEs in the conversation concerning environmentally sustainable practices (Afshar Jahanshahi et al., 2020; L. C. Leonidou et al., 2017), as well as their more recent success in adopting green initiatives (Eat Out, 2023; Masocha, 2018), an understanding of green market orientation will improve SMME's green environmental performance in South Africa which is a sought-after situation. Moreover, implementing internal green practices within SMMEs will facilitate green performance – not only for the business itself but also aiding the surrounding environment for the better, thereby improving the socio-economic conditions of the community.

As there is a paucity of studies that have been conducted within the service sector, this research study will provide insights into green market orientation, green practices, and green performance in the service sector, which is very important in terms of the growth of the South African economy given the destruction caused by COVID-19 pandemic. Furthermore, insights into the environmentally friendly attitudes and values of management within the service sector can be greatly enhanced.

The research makes a theoretical contribution to the body of knowledge by expanding previous quantitative work conducted on “market orientation” and “environmental sustainability strategy” (Green et al., 2015) in “small and medium-sized enterprises”. This research furthermore expands the geographical scope of the understanding of environmental sustainability strategy by focusing on SMMEs in South Africa and verifying the results internationally. Moreover, as green market orientation is a novel concept, the study furthers previous quantitative work conducted on the “environmental

perspective of market orientation” (C. H. Wang, 2020), previous quantitative work conducted on “green market orientation” (Borazon et al., 2022), previous quantitative work conducted on “linking green market orientation and performance: (Li et al., 2018), and previous quantitative work conducted on “the adoption of green market orientation” (Ngo, 2022b) within other industry sectors by involving SMMEs in South Africa from the F&B sector. The research not only expands the geographical scope of existing literature but also enhances an understanding of the multidimensionality of the green market orientation concept expanding an understanding of green market orientation from the F&B sector perspective.

This study also makes a theoretical contribution to the R-A theory by gaining an understanding of how resources differ in their effects on performance in different situation and express their relative value to firms based on these differences in effects that the resources have (S. D. Hunt & Morgan, 2005). Furthermore, this research expands the understanding of the R-A theory in terms of how resources develop over time, advantage building, and identifying their relative performance contribution (S. D. Hunt & Morgan, 2005). This will assist scholars and managers to process strategies that are creative and that will enable them to pick resource combinations that will enhance performance.

1.8.3 SUMMARY OF THE SIGNIFICANCE OF THE RESEARCH

The summary of the significance of the research i.e., the practical research contributions is shown below in **Table 1.2**.

Table 1.2 – Summary of the practical research contributions

	Identified Research Gap	Research Contributions
Business relevance	SMMEs do not incorporate environmental issues or aspects into their business strategy	Aid owner-managers of SMMEs in determining their business strategies to improve green performance. In addition, they would be able to identify their environmental sustainability practices and be able to assess SMMEs environmental investment performance or needs
	SMMEs do not consider their customers' expectations or concerns on the environment (Brammer et al., 2012)	Aid owner-managers of SMMEs to manage the environmental expectations of their business and those of other stakeholders involved
	SMMEs do not necessary assess their objectives or targets effectively (Fatoki, 2019a; Le Fleur et al., 2014)	Aid owner-managers of SMMEs in redirecting their business strategy to better perform by aptly assessing their objectives and targets
	SMME owner-managers lack or have limited knowledge on green practices	Improve owner-managers of SMMEs' knowledge of green practices and how they impact their business strategy and increase green performance
	SMME owner-managers personal values only business focused and not environmentally focused	Aid owner-managers of SMMEs to establish green management values, which play a vital role in enhancing green practices leading to increased green performance
	SMME owner-managers not prepared for future readiness and in South Africa SMMEs are prone to failure (Fatoki, 2019a; Le Fleur et al., 2014)	Aid owner-managers of SMMEs to prepare for the customers of the future
	SMME owner-managers lack understanding of the value creation process	Understanding competition will aid owner-managers to identify value for their customers and enable their firms to identify resources that their customers will value leading to superior performance

Note. A summary of the potential practical research contributions. Own work.

The summary of the significance of the research i.e., the theoretical research contributions is shown in **Table 1.3**.

Table 1.3 – Summary of the theoretical research contributions

	Identified Research Gap	Research Contributions
Theoretical relevance	There is a paucity of research on SMMEs' (Brammer et al., 2012; L. C. Leonidou et al., 2016) concern about the environment and the need to advance their environmental performance	Study on SMMEs in terms of the environment and environmental performance increases literature
	Limited knowledge and understanding on green market orientation (Borazon et al., 2022; C. H. Wang, 2020) and green performance (C. H. Wang, 2020)	Understanding of green market orientation and how it improves green performance in SMMEs in South Africa as a developing market
	Limited understanding of green practices (Li et al., 2018; Suganthi, 2019) and how their implementation affects green performance	Implementing green practices within SMMEs facilitates green performance thereby improving the socio-economic conditions within the country
	Paucity of research on green market orientation, green management values, green practices, and green performance in the services sector (Tsotsou, 2010)	This study will expand a lack of knowledge concerning a green market orientation, green management values, green practices, and green performance in the services sector
	Paucity of research on green management values and how they influence performance (C. H. Wang, 2020)	This study will expand a lack of knowledge concerning green management values and how they impact green performance
	Paucity of research on green market orientation (Borazon et al., 2022; Ngo, 2022b; C. H. Wang, 2020)	The study will expand knowledge on green market orientation – a novel concept – and develop on previous quantitative work (Green et al., 2015; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020) conducted on green market orientation and environmental sustainability.
	Paucity of research on the multidimensionality of green market orientation and how it influences performance (Crick, 2018, 2021; C. H. Wang, 2020)	Expanding existing knowledge on the multidimensional construct namely green market orientation
	Lack of understanding how resources differ in their effects on performance in different situation and express their relative value to firms based on these differences in effects that the resources have	Expanding existing knowledge to the R-A theory and to strategy literature to assist scholars and managers to process strategies that are creative and that will enable them to pick resources and combination of resources that will enhance performance.

Note. A summary of the potential theoretical contributions. Own work.

1.9 DEFINITION OF KEY TERMS

No. Definition of term

1	Business model flexibility – the ability of a business to be malleable or elastic in how it tactically plans to function to achieve value (financial and non-financial value), and this can be achieved through networks or relationships that enhance the effectiveness of the business and impacts the society at large (WEF, 2021, p. 10)
2	Competition – “the constant struggle among businesses for comparative advantage in resources that will yield marketplace positions of competitive advantage for some market segment(s) and, thereby, superior financial performance” (S. D. Hunt, 2000a, p. 135)

No.	Definition of term
3	Competitive advantage – “the strength of preference by customers in one or more market segments for the product offering of a firm over its competitors’ offering due to the superiority of the firm’s product on attributes that are key buying criteria, and the superiority being due to the firm’s advantage in strategic resource inputs over its competitors” (Varadarajan, 2023, p. 5)
4	Economic sustainability – concerns issues about man-made capital at a level that is manageable or sustainable (Moldan et al., 2012), including the anxieties of individual debt accrual, earning burdens, and work-life stability (Watling & Zhou, 2011), and is measured by gross domestic product (GDP) growth per capita, economic structure and development, consumption, and production patterns, trade, and so forth.
5	Environmental performance – is the “output of environmental management that is the effects the firms’ activities and products have on the natural environment” (Albertini, 2017, p. 277).
6	Environmental sustainability –the investigation of issues about natural capital at a sustainable level (Spangenberg, 2002) that implies the aggregation of all biological and geological processes and associated elements to achieve ecological well-being as the highly desired outcome in the lives of humans and other forms of life (Watling & Zhou, 2011).
7	Food security – encompasses four dimensions namely food availability, food accessibility, food utilisation, and food stability (StatsSA, 2019)
8	Green competitor orientation – a firm’s consideration of a current and potential competitor’s short-term strengths and weaknesses, and long-term capabilities and strategies (Narver & Slater, 1990).
9	Green consumption behaviour – “the behaviour having compatibility with sustainable environmental developments, for the purpose of safeguarding the environment from existing and future challenges” (Jalbani & Soomro, 2017, p. 71)
10	Green customer orientation – “the sufficient understanding of one’s target buyers to be able to create superior value for them continuously (Narver & Slater, 1990, p. 21)
11	Green inter-functional coordination – the aptitude for synchronised application of resources across business functions in generating value for the customer (Jiang et al., 2020; G. P. Wang & Miao, 2015)
12	Green internal practices – are implemented by companies to comply with the increasing requirements from consumers and to lessen the negative impacts of their manufacturing processes on the environment (Tjahjadi et al., 2020). Manaktola and Jauhari (2007) expound on the definition stating that green practices denote the assurance of several thorough practices that diminish negative ecological effects such as energy conservation, water conservation and minimising solid waste.
13	Green market – a market in which consumers and the competition are conscious of environmentally-friendly products and processing, and play a vital part in organisations’ sustainable development (Tjahjadi et al., 2020)
14	Green market orientation – “the recognition of the importance of environmental issues facing their businesses” (Banerjee et al., 2003, p. 106); “an inter-functional organisation that responds to social and environmental needs of its customers, facing competitors’ engagement in environmental management” (C. H. Wang, 2020, p. 3124)
15	Green management values (Environmental values) – “refer to “those management values that are specifically related to nature or that have been found to correlate with specific environmental attitudes or concerns” (Schultz et al., 2004, p. 32)
16	Green performance – the intention of the business to reach its financial objectives, surpass its social outlooks for environmental accountabilities, and alleviate ecological challenges caused by its production activities (Jacobs et al., 2010; C. H. Wang, 2020, p. 3125)

No.	Definition of term
17	Market orientation – “a business philosophy for discovering and meeting customer needs or wants” (Lin et al., 2020, p. 3).
18	Mediation – “a statistical method used to evaluate evidence from studies designed to test hypotheses about how some causal antecedent variable X transmits its effect on a consequent variable Y” (Hayes, 2018, p. 78)
19	Moderated mediation – “occurs when the strength of an indirect effect depends on the level of some variable, or in other words, when mediation relations are contingent on the level of a moderator” (Preacher et al., 2007, p. 193).
20	Moderation or interaction (Hayes & Rockwood, 2017) – “a qualitative (e.g., sex, race, class) or quantitative (e.g., level of reward) variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable” (Baron & Kenny, 1986, p. 1174)
21	Orientation – “the pervading culture or style of an organisation that defines how it approaches and deals with numerous important decisions in its dealings” (WEF, 2021, p. 10)
22	Pro-environmental attitudes – “people’s predispositions, relatively durable and relatively organized, to pay attention to, be concerned about, and, ultimately, to act in the name of environmental protection” (Corraliza & Berenguer, 2000, p. 833)
23	Resources – “The tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a product that offers value for some market segment(s)” (S. D. Hunt & Derozier, 2004, p. 7)
24	Social performance – the responsibility of a firm for its multiple stakeholders including employees and the society in which it operates and at large (Fatoki, 2019b).
25	Social sustainability – the investigation of issues about human capital at a sustainable level (Spangenberg, 2002), and is viewed as the level to which social values, identities, relationships, and institutions can proceed into the future.
26	Strategic orientation – the strategic directions implemented by a business to create the appropriate behaviours for the continuous superior performance of the business (Deutscher et al., 2016; Gagnon & Xuereb, 1997; Hakala, 2011) and mirrors the beliefs and mental models of the senior executives (Hitt et al., 1997).
27	Values – important life goals (Schultz & Zelezny, 2003); standards which serve as guiding principles in the life of a person (Schwartz, 1992); necessary trans-situational objectives which differ in importance (Bilsky & Schwartz, 1994); qualities that enhance an individual’s enduring and distinctive forms of feeling, thinking and behaviour (Asah et al., 2015)

Note. A list of all the definitions used in this study. Own work.

1.10 STRUCTURE OF THIS THESIS

The structure of the rest of the thesis is displayed in **Figure 1.6**.

Chapter Title	
1	Introduction to the Study
2	Research Setting
3	Literature Review
4	Theoretical Framework and Conceptual Model
5	Research Methodology and Design
6	Research Results
7	Discussion of Results
8	Conclusions

Figure 1.6 – Layout of the Thesis

Note. A summary of the layout of the thesis. Own work

The composition of the thesis is set out as follows:

- **Chapter 2: Research Setting** – explaining where the study will be situated i.e., the study context; the industry that the study will focus on i.e., the industry context; the background of green consumption; and lastly the choice of small, medium, micro enterprises (SMMEs) and why these types of businesses were chosen.
- **Chapter 3: Theory and Literature Review** – looking at recent and seminal literature to provide an understanding of the concepts as well as the theoretical anchor for the study.
- **Chapter 4: Theoretical Framework and Conceptual Model**– build a theoretical framework from the literature reviewed in Chapter 3 in order to develop the hypotheses for the study, and to establish the conceptual model for the study.
- **Chapter 5: Research Methodology and Design** – detailing and explaining the research design and methodology that will be used to test the hypotheses; detailing the measurement instrument that was used; establishing the sampling strategy to collect the data, and how the data would be analysed including the quality controls that will be employed during the study.
- **Chapter 6: Research Results** – detailing the findings obtained from the implemented research methodology, data collection, and data analysis described in Chapter 5; and presenting the analysed data in order to answer the research hypotheses that were developed in Chapter 4.
- **Chapter 7: Interpretation of Results** – discussing and interpreting the impact of the findings in relation to prior studies, the impact of the findings on other scholars and literature, and the final conceptual model for the study.

- **Chapter 8: Conclusion** – detailing the outcomes of the research findings, the implications, and contributions the study makes from a theoretical and practical perspective, and areas for future research.

1.11 CHAPTER SUMMARY

This chapter introduced the research study about the multidimensionality of market orientation from an environmental viewpoint (green market orientation) and its influence on F&B SMME's green performance. It discussed the background theory to this study leading to the research gaps in the literature and research problem. These research gaps were formulated into five research questions to guide the research objectives and explain why filling these gaps is significant to scholars and practitioners. The key terms in the study were defined and lastly, the thesis layout was presented.

CHAPTER 2: RESEARCH SETTING

“Food brings people together on many different levels. Its nourishment of the soul and body; it’s truly love.”

- (Giada De Laurentiis, n.d.)

2.1 CHAPTER INTRODUCTION

Food is a social element that brings people together on different levels (Giada De Laurentiis, n.d.). Wherever you go, food sets the mood and scene for interaction between customers and businesses.

The previous chapter posed the research problem explaining that it is not clear when considering environmental issues what F&B SMMEs in South Africa consider doing to improve their performance, and to what extent green management values held by SMMEs, as well as green market orientation impact the implementation of green internal practices and green performance within businesses. The purpose of this research is to expand existing literature by providing an in-depth analysis of the multidimensional construct of market orientation from an environmental perspective and to examine its impact on the green performance of SMMEs in a specific context. Chapter 1 presented the research questions, the research approach, the scope of the research and delimitations, and formulated the significance of this research project.

This chapter, therefore, provides the research context and setting for this study. It sets the scene for the research that is conducted in the context of an emerging market, focusing on the F&B SMMEs that operate in South Africa. Other studies that were consulted in terms of the theoretical background and methodology, have been undertaken in developed markets such as the USA (Green et al., 2015), and Europe (Jansson et al., 2017; Kassinis et al., 2016), in different industries, and have proposed further research in emerging or developing markets. Although some studies that have focused on developing markets were consulted, they have all referred to circumstances in an Asian context, and within different industries (Jiang et al., 2020; Tjahjadi et al., 2020; C. H. Wang, 2020). This chapter provides insight into South Africa as a setting, the F&B sector within South Africa, and describes small businesses within South Africa. **Figure 2.1** provides the structure of the content of this chapter.

Main Headings	Sub Headings
2.1 Chapter Introduction	
2.2 A Developing Market as a Research Setting	2.2.1 Africa as a research context
	2.2.2 South Africa as a setting
2.3 The Food and Beverage Sector	2.3.1 Africa's F&B sector
	2.3.2 The South African F&B sector
2.4 Understanding Sustainability in SMMEs	2.4.1 The importance of SMMEs in developing markets
	2.4.2 South Africa small businesses
2.5 Chapter Summary	

Figure 2.1 – Structure of Chapter 2

Note. An overview of the structure and layout of the chapter. Own work.

2.2 A DEVELOPING MARKET AS A RESEARCH SETTING

Evidence indicates that certain developing or emerging market economies have in recent years been rapidly transforming per their developed market counterparts through an ambitious cycle of industrialisation, infrastructure transformation, and embracing economic institutions of progressive economies (Cavusgil, 2021). Being in the foreground of the growing economies, these developing market economies are likely to account for 85% of the global economic growth by 2025 (Coffie et al., 2020). Pursued by international organizations and individual investors, new growth opportunities within emerging markets (George et al., 2016), and related activities are drawing the keen interest of scholars (Cavusgil, 2021; George et al., 2016). More specifically, the African context is increasingly capturing the imagination of entrepreneurs, corporate executives, and scholars (Barnard et al., 2017; Coffie et al., 2020; George et al., 2016). The following section describes Africa as a research context and then focuses on South Africa as a research setting.

2.2.1 AFRICA AS A RESEARCH CONTEXT

As African economies are expanding, it is important to expand research accordingly to support business decision-making (Barnard et al., 2017; Coffie et al., 2020). Admittedly, institutional voids have persisted in the African context, which is being addressed through technological advancements such as improvements in information and communication networks (George et al., 2016).

Being the second-largest continent, Africa is considered a new source of sustained development (George et al., 2016). Over recent decades, the growth in African economies has been steady with inclusive growth evident in several African countries (AfDB, 2015). Natural resources, both renewable and non-renewable, which Africa is

endowed with, have generated wealth in many African countries (AfDB, 2015). Home to 30% of the mineral reserves of the world, Africa holds 65% of the cultivatable land of the world and 10% of the earth's internal renewable freshwater (UNEP, 2021). With its richness in mineral wealth, Africa accounts for 40% of the global gold-, 60% of cobalt-, and 90% of platinum reserves (UNEP, 2021).

In addition, the world's population is rapidly nearing the 10 billion mark, with most of the population growth in Sub-Saharan Africa (SSA) (Kimaru, 2021). This growth in employable adults potentially has the opportunity to increase productivity, improve innovation, and transform African economies (AfDB, 2015; Kimaru, 2021). At the same time, however, an increase in the population means that many more mouths need to be fed. Food, therefore, becomes a priority. Since it is universal to human life and health, the food and beverage (F&B) industry plays a distinctive part in growing economic opportunities in any country as it operates at multiple societal levels (Pfizer & Krishnaswamy, 2007). With the growing population across the world, opportunities exist for agricultural development. In this regard, Africa is likely to not only feed itself but to develop into the world's next breadbasket using its agricultural potential to guarantee food security, whilst increasing the economies of its countries (Kimaru, 2021). Much of the recent growth in Africa can be attributed to agriculture, but there are still issues concerning better processing of the food ingredients, the economic status of the workers (who remain poor), and the improvement in technology for harvesting methods that need to be addressed (AfDB, 2015). To gain the economic and social benefits, intrinsic to its natural wealth, Africa needs to urgently look at sustainable consumption issues, and how to manage, and contemplate the related economic and environmental impacts (AfDB, 2018, 2021). Africa needs to prioritise issues related to the sustainable use of its economic and environmental resources (UNEP, 2021). Despite challenges associated with economic upheavals and the global COVID-19 pandemic, Africa is forecasted to recoup from its worst recession in 50 years, to reach a 3.5% growth in 2021 (AfDB, 2021). Unfortunately, the COVID-19 pandemic has had an adverse effect on Africa, damaging tourism-dependent economies, economies of oil-exporting countries, as well as other resource-intensive economies severely, increasing inequality throughout the region (AfDB, 2021).

Due to the expansion of research related to Western and Eastern developed market economies, a more balanced view will be possible if Africa is incorporated into mainstream research and theories (Barnard et al., 2017; George et al., 2016). A paucity exists of studies conducted on typically African phenomena (Barnard et al., 2017; George et al., 2016), and therefore, scholars from Africa are encouraged to contribute by conducting quality research focusing on the African viewpoint. While

Barnard et al. (2017) ascribe this paucity to limited support and lack of incentives, George et al. (George et al., 2016) ascribe it to the challenges of navigating institutional voids, under-explored capabilities, and limited enabling opportunities. Both sets of authors concur about the lack of attention that Africa has attracted in management literature to date and that Africa is an interesting setting with richness and under-utilised opportunities.

2.2.2 SOUTH AFRICA AS A RESEARCH SETTING

Developing or emerging countries have been identified as important drivers of economic growth (Hofbauer et al., 2020). Having been identified as an emerging or developing country (Hofbauer et al., 2020), South Africa has been included in the BRICS (i.e., Brazil, Russia, India, China, and South Africa) group of countries (R. Daniel & Virk, 2014; Hofbauer et al., 2020). Situated at the southern tip of the African continent, the Republic of South Africa has made considerable strides since the establishment of a new socio-political dispensation in 1994 after years of segregation and apartheid rule, enabling economic and social progress in the country. Progress, however, has been stationary for the past decade with indications of an increase in poverty and unemployment (The World Bank, 2021) posing pertinent challenges. Exacerbated by the COVID-19 pandemic that has affected the world since 2020, unemployment has reached a staggering 32.5% in South Africa, which is the highest among youths between 15 and 24 years of age (63%) (The World Bank, 2021, 2023), which is mainly due to structural challenges and weak growth that have undermined progress in the reduction of poverty.

2.2.2.1 SOUTH AFRICAN ECONOMIC OUTLOOK

The South African economic outlook largely depends on political outcomes and on politicians who want to drive structural changes (Davies & Edinger, 2017). Issues concerning State-Owned Enterprises (SOE), such as Eskom and South African Airways (SAA), and prevailing corruption have jeopardised economic growth in the country. Without structural changes and improved governance (Davies & Edinger, 2017), continual downgrades by global international ratings agencies will unfortunately persist. Before the COVID-19 pandemic, the South African economy was off to a good start in 2018, when StatsSA reported a positive momentum of the economy (Hanusch, 2018). At the time, growth in the economy was spurred by the new political leadership of President Cyril Ramaphosa. Fuelled by the confidence boost, the growth of the South African economy was expected to accelerate, although it still depended on consumer spending (Hanusch, 2018).

To understand the South African economy, six primary economic indicators serve to measure the fundamental economic conditions of a country namely GDP, GDP per capita, Gini index, inflation rate, population size, and unemployment rate. **Table 2.1** presents a summary of the statistics for the fiscal years 2016 – 2022 applicable to the economic indicators for South Africa (Statistica, 2023a, 2023b, 2023c, 2023d, 2023e).

Table 2.1 - South Africa's economic indicators

<i>Economic indicators</i>	2016	2017	2018	2019	2020	2021	2022
<i>GDP (US\$ billions)</i>	323.49	381.32	403.99	388.45	337.52	418.91	405.70
<i>GDP per capita (nominal) (US\$)</i>	5,750.78	6,678.29	6,972.70	6,609.04	5,661.01	6,965.19	6,694.36
<i>Gini index</i>	0.65	0.65	0.65	0.63	0.63	0.63	-
<i>Inflation rate (%)</i>	6.33	5.28	4.61	4.12	3.28	4.56	6.87
<i>Population size (millions)</i>	55.62	56.52	57.46	58.78	59.62	60.14	60.61
<i>Unemployment rate (%)</i>	24.02	23.99	24.22	25.54	24.34	28.77	29.81

Note: Overview of the South African economic indicator's performance. Own work.

To put this into context, the GDP (nominal) of South Africa decreased by 16.5% from 2018 to 2020 and by another 3.15% from 2021 to 2022, which signifies that the unemployment rate increased during this period by 5.59%. The GDP per capita decreased by 4.00%, indicating that the productivity of South Africans decreased during this period as well. The Gini index remains a source of concern as South Africa is the most unequal country in the world and the score is not remotely close to the median of 0.50 in terms of equal wealth distribution (Bruwer et al., 2020). Concerning the inflation rate over the same period, the rate increased by 2.26% pushing the cost of living high.

Mired by the COVID-19 pandemic, the 2020-2021 period was exceptionally challenging for the South African economy (OECD, 2021a; The World Bank, 2021), with a decline in formal business turnover and expenditure. The Organisation for Economic Co-Operation and Development (OECD) has further projected that due to domestic demand and commodity exports, the economy will rebound from a low base (OECD, 2021a). Expected GDP growth is 1,1% for 2023 and expected to be 1,6% in 2024 (OECD, 2021a). Private consumption and investment remain the main drivers for growth, but natural disasters such as the flooding in Kwa Zulu Natal, and the extensive electricity outages contribute to the contracted economic growth (OECD, 2021a). Power outages continue to severely affect trading hours in services, mining, manufacturing, and agriculture, while the consumer price index has increased to 6,6% in 2022 (OECD, 2022), which is double that of pre-COVID-19 levels. These statistics

are very important considering that the growth of the economy impacts inequality levels within the country and the gap between rich and poor.

Considering all these statistics, South Africa has not been very conducive for business entities to operate, especially small businesses. The same inference has been established by other scholars (Bruwer et al., 2020; Bruwer & Coetzee, 2016; Masama, 2017; Masama & Bruwer, 2018), which is of concern as it indicates that the South African economic environment has remained stagnant for over a decade.

2.2.2.2 THE SOUTH AFRICAN SOCIAL OUTLOOK

Endemic to any society is the concept of social classes. Amid increased economic inequality, two distinct social classes arise namely the rich, who are fewer in number, and the remaining large majority (Bapuji, 2015; O'Brien, 2007).

Considered the world's most unequal society, with a Gini coefficient of 0.63 (World Population Review, 2021), South Africa's poverty rate is high (The World Bank, 2021, 2023). With an increase in people living in extreme poverty of 1,236,887 (6.86%), this dual reality of the rich and the poor cannot be overlooked from a business perspective, as the high-income inequality rate impacts organisational performance negatively (Bapuji, 2015). High levels of inequality in the country contribute to a rise of self-interest and corruption (Bapuji, 2015) as has occurred in South Africa, with its corruption index of 43 out of 100 (Trading Economics, 2023). The accumulation of wealth in the hands of the few rich citizens, jeopardises the competitive dynamics in the industry, as some can exploit opportunities that the poor have no access to (Bapuji, 2015).

From a South African perspective, SMMEs in the micro category are mostly survival-based and are often poorly established (Le Fleur et al., 2014). According to prior studies (Bruwer et al., 2018; Fatoki, 2019a; Fatoki & Garwe, 2010; Urban & Naidoo, 2012), 75% of SMMEs fail after only three years in operation, which is the worst sustainability rate in the world. As 60% of SMMEs provide employment for the population (Bruwer et al., 2018; Fatoki & Garwe, 2010), this high failure rate impacts and contributes to the unemployment rates in South Africa (Fatoki, 2019a).

2.2.2.3 THE SOUTH AFRICAN ENVIRONMENTAL OUTLOOK

The environmental outlook for South Africa seems to be shrouded in darkness. The pressures exerted upon the environment in South Africa as a result of prevailing consumption and production patterns are due to: 1) resource abuse or exploitation of

natural resources; 2) the excessive consumption and production rates of water, energy, minerals, commodities, transport, housing, and food; 3) reckless disposal of waste and effluents such as solids, liquid waste, and emissions derived from resource extraction, utilisation, production and consumption; and 4) careless biological invasions (DEA, 2018).

Being a fossil-fuel-driven economy, primarily through coal usage (DFFE, 2021; Mandela, 2018), South Africa has coal-based electricity generation, carbon-intensive transport systems, and energy-intensive industries, persistently driving unsustainable greenhouse gas (GHG) emissions, affecting the environment, and contributing to climate change (DFFE, 2021). For over a decade, South Africa has been consistently ranked among the top fifteen largest emitters of greenhouse gas (GHG) emissions per capita (Ntombela et al., 2019), and produces between 1.2 - 1.6% of global carbon emissions (Ritchie & Roser, 2023). GHG including methane has been highlighted in the media, with a large methane cloud being discovered near Johannesburg (Bloomberg, 2021; Faleti, 2021) raising public awareness of environmental hazards in South Africa. **Table 2.2** displays the CO₂ emissions and GHG emissions (Ritchie & Roser, 2023).

Table 2.2 – South Africa's emissions

Emissions	2016	2017	2018	2019	2020	2021
<i>Carbon (CO₂) in million tons</i>	456.97	439.38	435.24	466.92	435.83	435.93
<i>GHG in million tons of CO₂ equivalent</i>	530.87	544.36	548.10	555.41	501.41	

Note: Overview of the South African emissions generation. Own work.

To address the reduction of these emissions, the South African government has introduced the Carbon Tax Policy of 2019, the Renewable Energy Policy of 2003, and the Waste Policy of 2012 (DFFE, 2021; Leonard & Dlamini, 2014). Furthermore, the South African government has embarked on a green economy strategy (a sustainable development pathway) combining social equity, economic development, and environmental sustainability (DFFE, 2021). Termed “a just transition”, this is according to the Department of Forestry, Fisheries, and the Environment (DFFE) a good way to get small businesses involved in the green economy (DFFE, 2021).

SMMEs, which are seen as the future economic engines of growth in the South African economy (Ndlovu & Makgetla, 2017; The Presidency, 2019; Vuba, 2019) are considered particularly susceptible to an unstable environment and policy shift (van Staden, 2022; Von Ketelhodt & Wocke, 2008). Unlike their larger business

counterparts, SMMEs generally lack the resources to invest in alternative sources of energy. Thus, the current energy crisis is detrimental to SMMEs (Mbomvu et al., 2021; Nedbank, 2023; Seinker, 2019; Viljoen & Struweg, 2016). Strongly relying on coal-powered electricity generation, the rolling blackouts, which have even been declared a national disaster by President Ramaphosa (Ndenze, 2023), have adversely affected South Africa's economy (Ateba et al., 2019; Du Venage, 2020; Feinberg, 2023; Goldberg, 2015; Staff Writer, 2023). On average, the electricity crisis is costing South Africa R900 million a day through the implementation of high levels of load-shedding to protect the grid from collapse (Ateba et al., 2019; Staff Writer, 2023). Although supply constraints had been identified, underinvestment and lack of maintenance (Daisy Business Solutions, 2023; Schoeman & Saunders, 2018), poor planning and flawed historical accounting policies (Goldberg, 2015), environmental limitations including ageing infrastructure (Du Venage, 2020; Schoeman & Saunders, 2018) and cable theft (Schoeman & Saunders, 2018), scarcity of discounted key energy sources and expensive alternatives (Feinberg, 2023; Schoeman & Saunders, 2018), and elevated prices of construction of new power stations (Centre for Environmental Rights, 2021), were also identified as adding pressure to electricity prices (Von Ketelhodt & Wocke, 2008). It was noted that the electricity demand would outstrip supply in the future and the national power supplier, Eskom, would face issues with supply (Ting & Byrne, 2020; Von Ketelhodt & Wocke, 2008). Although alternative sources of energy, especially renewable energy such as solar power exist, Eskom is not necessarily optimising the resisted growth of the renewable energy market (Ting & Byrne, 2020). The government has declared the energy crisis a national state of disaster (Ndenze, 2023), and support for the business sector in the food and beverage sector especially will include the rollout of uninterrupted power supply and solar power (Ndenze, 2023). With the increasing risk of food spoilage (Insurance Chat, 2020; Masama, 2017) due to load-shedding, for a small business, this is a huge risk. To support businesses, among others, the government has appointed a Minister of Electricity in the Presidency to deal with the power challenges (Ndenze, 2023).

Apart from the energy crisis that is plaguing South Africa, drought is a reoccurring event in the country due to climate change. Water has not always been in abundant supply as demonstrated by the "Day Zero" water crisis experienced in Cape Town fairly recently (Rodina, 2019), which required the nation to rebuild resilience and manage the existing water resources better. With the variability in the hydrology cycle becoming a common problem (Otto et al., 2018), particularly the food and beverage industry which utilises a lot of water, has become more cautious of their consumption, prioritising issues related to water consumption (Rodina, 2019). Agricultural practices have also placed increased pressure on the natural environment affecting biodiversity (DEA,

2018). Besides water pollution through the application of pesticides and herbicides, improving yields through fertilizers has affected the water quality. Moreover, soil and water quality have been negatively impacted by the introduction of new technologies, which produce genetically modified organisms (GMOs), improvements in the automation of farming equipment, and the use of agrochemicals such as nitrates and phosphate fertilizers (DEA, 2018). Over time, the health of ecosystems and species has been affected adversely undermining food security (UNEP, 2014). Unfortunately, expansion and intensification of the agricultural sector to increase the productivity of the land and to remain competitive, has placed an additional burden on the land, soil, and water resources within South Africa (DEA, 2018).

2.3 THE FOOD AND BEVERAGE SECTOR

The F&B sector is one of the key providers to the progression of all economies as it is key to human life and health. The global F&B sector deals with the sale of liquid refreshments, foodstuffs, tobacco products, and animal food by various diverse organisations. The sector distinguishes inebriating liquid refreshments; non-inebriating liquid refreshments; cereal products; bakery and confectionery; frozen and fresh fruit and vegetables; dairy food; meat, poultry, and seafood; syrups, seasonings, oils, and general food; animal and pet food; tobacco products and other food products (The Business Research Company, 2020). With a compound annual growth rate (CAGR) of 7%, the global F&B sector is expected to grow to \$6,196.15 billion in 2021 (The Business Research Company, 2020), to \$18,1 trillion in 2023, and grow to \$27,2 trillion in 2030 (24 Market Report, 2023).

Asia-Pacific is the fastest-growing region in this industry accounting for 42% of the global market sales, followed by North America at 22%. Africa is the smallest region in this industry sector globally, at 11.6% (The Business Research Company, 2020). In the European Union (EU), the F&B sector forms the biggest production segment in terms of earnings, value-added and employment and is one of the most important sectors from a financial and social perspective in that it is continuously growing (Valta et al., 2013). Globally, consumers are moving increasingly towards adopting plant-based diets, and healthier food options, considering quality and health value as synonymous (Cushman & Wakefield, 2017; Eat Out, 2017, 2023). The COVID-19 pandemic has severely disrupted global supply chains because of lockdown measures, trade restrictions, and consumption decline. Manufacturing was halted during the pandemic due to the lack of raw materials. Going forward, manufacturers and entities, therefore, have to review existing practices due to a growing sensitivity among consumers concerning health, and food safety as well as increased concern about the state of the

environment. The F&B sector, specifically, will have to adopt new strategies that incorporate competitiveness, sustainability, and ethics (Raimo et al., 2021), because consumers nowadays demand more information about the food they are eating, safety standards, its origin, environmentally friendly properties, and packaging details (Raimo et al., 2021).

2.3.1 AFRICA'S FOOD AND BEVERAGE (F&B) SECTOR

Africa has influenced the food of many nations worldwide, such as through the slave trade in America, through the Moors in Spain, and many others. It is noteworthy how foods in Africa vary depending on which country one is the situation in. African food is indeed diverse, and this hugely rich fusion makes African cuisines distinctive from region to region (World Food and Wine, 2005).

The World Bank estimates that by 2030, the total value of the F&B industry in Africa could rise to one trillion US dollars (InterGest, 2021). The World Economic Forum (WEF) indicates that developing or emerging countries spend a larger percentage of their household income on food, e.g., Nigeria – 56,4%; Kenya – 46,7%; Cameroon – 45,6% (Gray, 2016). Furthermore, the population in Africa is increasing rapidly, specifically in Sub-Saharan Africa (SSA) where the expected population is expected to reach 2 billion by 2050 (PRB, 2015), which requires the F&B sector to continue expanding (InterGest, 2021; Kimaru, 2021). Its expansion is further spurred by the growing middle class, urbanisation, retail modernisation, infrastructure development, changing lifestyles, advancement of advertising and marketing, as well as the increasing demand for organic foods (InterGest, 2021). With this growth, comes the issue of food security, as one in four people in SSA lack adequate food for a healthy and active life (PRB, 2015), and because as many as 30 million children in Africa are apparently underweight, without prospects of adequate, available nutrition. This makes Africa the biggest battleground of the fight against hunger (Fontan Sers & Mughal, 2019).

2.3.2 THE SOUTH AFRICAN FOOD AND BEVERAGE (F&B) SECTOR

2.3.2.1 THE SCENARIO

South Africa (SA) is Africa's leading F&B market due to its strong manufacturing capacity and evolved agricultural and agro-processing expertise (Frost & Sullivan, 2018; InterGest, 2021). The SA Government, together with the Department of Trade and Industry (DTI) and the Department of Trade and Investments in South Africa (TISA), has identified the F&B sector as its focus for local manufacturing opportunities, import-

substitution, creation of employment as well as increased export and economic growth (Frost & Sullivan, 2018). Concerning food security, SA has made significant efforts by developing the inter-ministerial National Food Security and Nutrition Plan to address agricultural productivity and rural development for the creation of employment, economic growth, and poverty reduction (StatsSA, 2019).

Food security encompasses four dimensions namely food availability, food accessibility, food utilisation, and food stability (StatsSA, 2019). The right to food (access to food) is enshrined in the South African Constitution making the accessibility to food and water vital for all communities. The Constitution states in Section 27(1)(b) that every person deserves access to adequate food and water (SAHRC, 2016). Furthermore, Section 27 (b) emphasizes that “the Government must formulate reasonable legislative efforts and take other measures within its available resources, to achieve the progressive realisation of these rights” (SAHRC, 2016). The Food and Nutrition Security Policy is, therefore, vital in realising the purposes of the National Development Plan (NDP) and that of the SDGs, specifically goal 2, which commits to ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture by 2030 (Setó-Pamies & Papaoikonomou, 2020; StatsSA, 2019).

Before the COVID-19 pandemic, the hospitality industry in South Africa, which the F&B sector is part of, was experiencing rising numbers of travellers to the country both for business and leisure purposes. Being the leading foodservice market in SSA, South Africa has a large and highly competitive hospitality industry (Ntloedibe, 2016). It is also one of the top tourist destinations in Africa welcoming approximately 10,5 million visitors prior to the pandemic. With the subsequent rapid rise in the hospitality and tourism sectors, the South African economy was growing. Post-pandemic, with international travel growing again, rising accommodation rates have boosted the consumer foodservice market despite the weakened economy of the country. The South African government has hence made the re-ignition of the tourism sector for long-term sustainability its main objective. Noteworthy for this study, is that in addition to tourism recovery and growth, the government has also included food security and the green economy in the Economic Reconstruction and Recovery Plan (ERRP) (Department of Tourism, 2021; PMG, 2021). This study focused on the F&B sector, specifically on small businesses that are important to drive economic growth in South Africa.

2.3.2.2 FOOD CONSUMPTION IN SOUTH AFRICA

Whilst South Africans are used to relying on highly competitive and effective food systems, the COVID-19 pandemic has tested those limits. In 2015, South Africans spent around 12.8% of their income on food (StatsSA, 2015), which, according to StatsSA (2015), is the fourth-largest expenditure in South African households' budgets. The rest of the spending was for housing, water, electricity, fuel/gas – 32%; transportation – 17,1%; miscellaneous goods and services – 17,7% (StatsSA, 2015). **Figure 2.2** indicates the spread of household monthly spending of South Africans more recently in 2020, illustrating that the poorest consumers (groups 1-5), spend up to 40% of their income on food, whilst wealthier households (groups 6-10), spend around 5% on food (BFAP, 2020).

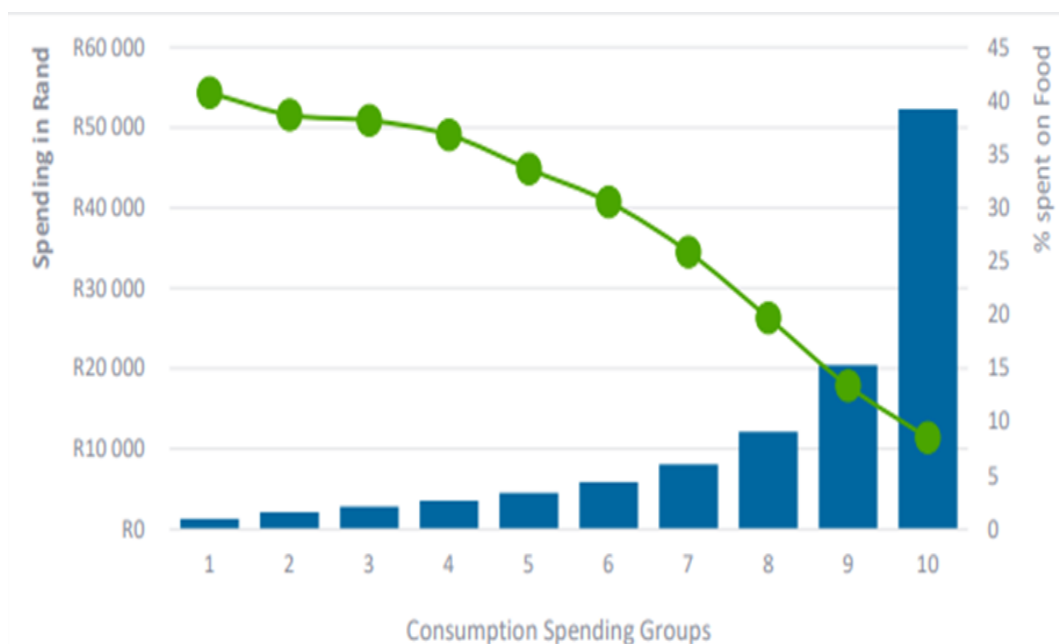


Figure 2.2 – Spread of household income expenditure

Note: Spread of income expenditure in South African households. Adapted from Bureau for Food and Agricultural Policy (BFAP) 2020, [https://www.grainsa.co.za/upload/files/2020.03.23 BFAP COVID-19 Brief 2 - How South Africans spend their food budgets.pdf](https://www.grainsa.co.za/upload/files/2020.03.23%20BFAP%20COVID-19%20Brief%20-%20How%20South%20Africans%20spend%20their%20food%20budgets.pdf). Copyright (2020) by BFAP. Adapted with permission.

Figure 2.3 visually provides a visual breakdown of different income groups' household spending.

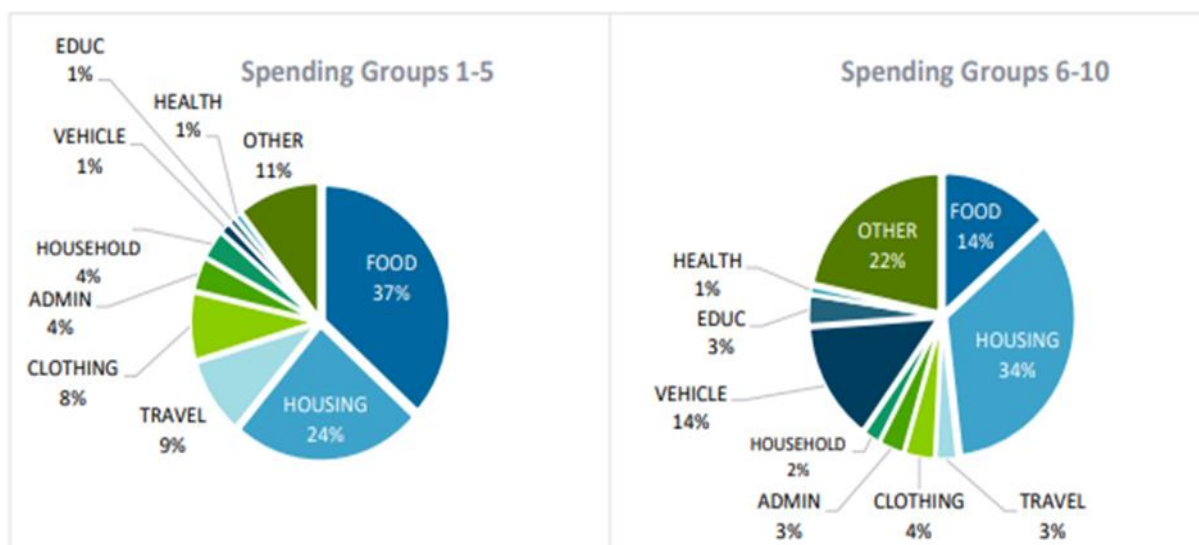


Figure 2.3 – Breakdown of consumption spending in South African households

Note: Breakdown of consumption spending per item in South African households. Adapted from Bureau for Food and Agricultural Policy (BFAP) 2020, [https://www.grainsa.co.za/upload/files/2020.03.23 BFAP COVID-19 Brief 2 - How South Africans spend their food budgets.pdf](https://www.grainsa.co.za/upload/files/2020.03.23%20BFAP%20COVID-19%20Brief%20-%20How%20South%20Africans%20spend%20their%20food%20budgets.pdf). Copyright (2020) by BFAP. Adapted with permission.

Figure 2.3 indicates that 37% of the spending of poorer households is on food, compared to wealthier households who spend approximately 14% on food (BFAP, 2020). Monthly spending also varies amongst the two groups in terms of types of foods. Wealthier consumers (group 8-10) spend a significant amount on eating out in restaurants, hotels, etc.) rather than buying and preparing their own food. Conversely, the poorer consumers spend most of their income on bread and cereals (32%), meat (21%), vegetables (13%), dairy (8%), and beverages (7%) (BFAP, 2020). In defining the socio-economic spread of the South African consumer, **Table 2.3** illustrates the different consumer sub-segments and their respective contribution to total food expenditure within South Africa.

Table 2.3 - South African socio-economic consumer sub-segments

	Low-income households	Lower middle-income households	Upper middle-income households	Affluent households
Share of SA households	30%	30%	20%	20%
Consumption spending groups	1 to 3	4 to 5	7 and 8	9 and 10
Contribution to total food expenditure	13%	25%	24%	39%

Note: Socio-economic consumer sub-segments in South African households. Adapted from Bureau for Food and Agricultural Policy (BFAP) 2020, [https://www.grainsa.co.za/upload/files/2020.03.23 BFAP COVID-19 Brief 2 - How South Africans spend their food budgets.pdf](https://www.grainsa.co.za/upload/files/2020.03.23%20BFAP%20COVID-19%20Brief%20-%20How%20South%20Africans%20spend%20their%20food%20budgets.pdf). Copyright (2020) by BFAP. Adapted with permission.

From a health perspective, considering foods that provide nutritionally balanced meals, poorer consumers spend between R800 to R1200 per month; lower-middle-income consumers spend between R1300 to R2500; upper middle-income consumers between R3000 to R3500; and affluent households between R4000 to R6500 monthly (BFAP, 2020).

With the COVID-19 pandemic, households' spending patterns were severely impacted within all income groups making poorer households even more vulnerable. Affordability is a major issue (BFAP, 2020) for poorer consumers, as many were affected negatively during the lockdown period, having lost their jobs, which negatively affected households' access to healthy food. A recent study by Discovery Bank and Visa (2023) reported South Africans spending on groceries, travel, and eating out. With almost double the national inflation rate, food prices have experienced a dramatic inflation rate of 12%, affecting lower-income households severely (Discovery Bank & Visa, 2023). Grocery spend has increased by 50% since 2019 causing consumers to tighten their budgets and look for value in their spending. Although the more affluent group of households can take advantage of lower price items through substitution and promotions or bulk savings, the lower-income households do not have this benefit and are subject to these high food prices (Discovery Bank & Visa, 2023). With restrictions being lifted after COVID-19, travel and eating out have also increased. The report highlights that the average spending on restaurants and take-outs has increased by 50% (Discovery Bank & Visa, 2023), which may be exacerbated by load shedding. With the unavailability of electricity to have home-cooked meals, take-out purchases and restaurant dining has increased by 60%, especially during stage 5 and 6 of load shedding (Discovery Bank & Visa, 2023). This makes it very important that the F&B sector prioritises the sustainable manufacture and distribution of healthy foods.

2.3.2.3 COMPOSITION OF THE F&B SECTOR

The F&B sector includes restaurants and coffee shops, takeaway and fast-food outlets, caterers, and other catering services (StatsSA, 2020). Globalisation has strongly influenced food systems worldwide, including in South Africa influencing the availability and diversity of food (Ronquest-Ross et al., 2018) as explained in Section 2.4.2. South Africa has the most developed F&B sector in Africa, with a generous provision in the major shopping centres and resort locations (Cushman & Wakefield, 2017; Thusini, 2021). With over 1,800 food manufacturing companies (Bonsu & Ntloedibe, 2019; Ronquest-Ross et al., 2018), the local F&B industry employs around 450,000 people in the subsectors of meat, fish, fruit, dairy products, grain mill products, and beverages (Bonsu & Ntloedibe, 2019). The industry is dominated by a few large diverse national

and multinational food producers, which are responsible for approximately 80% of the production revenue of the industry (Bonsu & Ntloedibe, 2019; Ronquest-Ross et al., 2018). This dominance has been due to controlled authorising procedures and technical barriers to entry, that restricted the number of producers under the apartheid government (Ronquest-Ross et al., 2018). Large food producers such as Lactalis/Parmalat group (France), Mondelez (United States of America) Nestlé (Switzerland), and Unilever (United Kingdom) have their own manufacturing facilities in South Africa (Ronquest-Ross et al., 2018). There are also local South African food manufacturers like Tiger Brand Ltd, Clover Ltd, Pioneer Foods Group, AVI Ltd, Rainbow Chicken Limited, and Premier Foods (Ronquest-Ross et al., 2018). Post-apartheid (after 1994) has seen new and smaller businesses emerging and playing an increasingly vital role within the changing competitive environment of the F&B sector in South Africa. **Figure 2.4** illustrates the income generated and employment figures within the F&B industry.

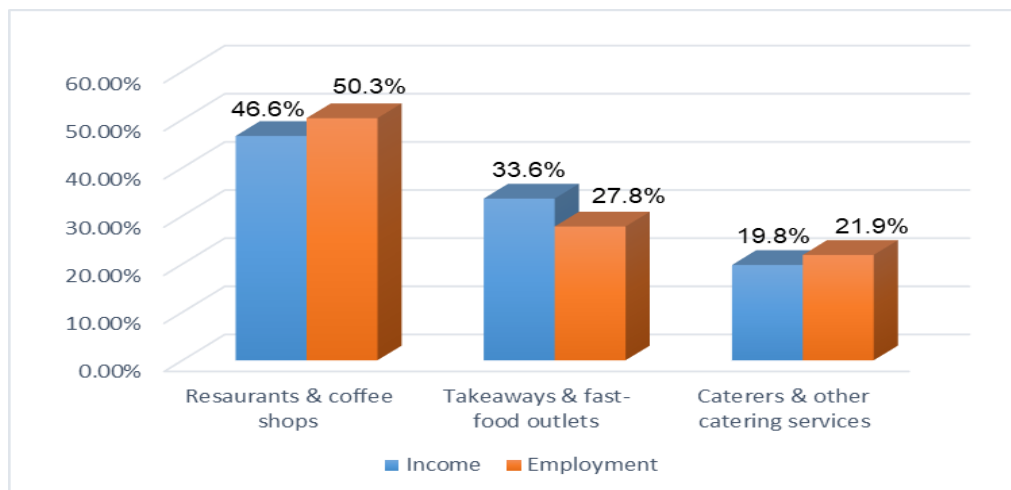


Figure 2.4 – Income and employment in the F&B sector

Note: Income and employment in the F&B sector. Adapted from StatsSA 2020, <http://www.statssa.gov.za/publications/Report-64-20-01/Report-64-20-012018.pdf>. Copyright (2018) by StatsSA. Adapted with permission.

In terms of enterprise size in the F&B sector, small and micro enterprises make up the bulk of the sector, with over 50% income and employment as illustrated in **Figure 2.5**.

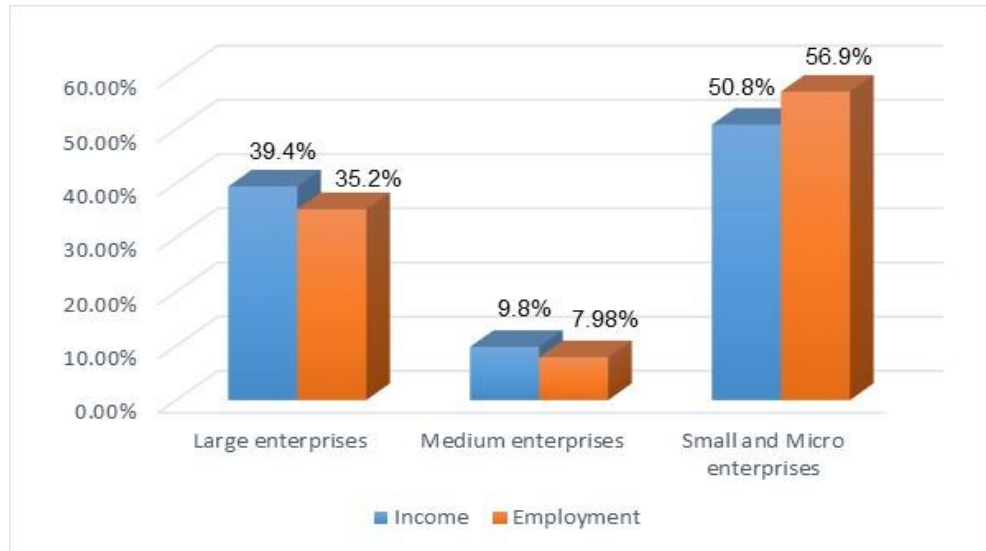


Figure 2.5 – Income and employment per enterprise size

Note: Income and employment per enterprise size. Adapted from StatsSA 2020, <http://www.statssa.gov.za/publications/Report-64-20-01/Report-64-20-012018.pdf>. Copyright (2018) by StatsSA. Adapted with permission.

The F&B industry's percentage contribution in terms of employment has remained at approximately 15.1% annually in recent years (DALRRD, 2019; StatsSA, 2020). Concerning exports, the South African F&B industry exports to various continents with the African continent sharing the highest export percentage of 49% (DAFF, 2017; DALRRD, 2019) as depicted in **Figure 2.6**.

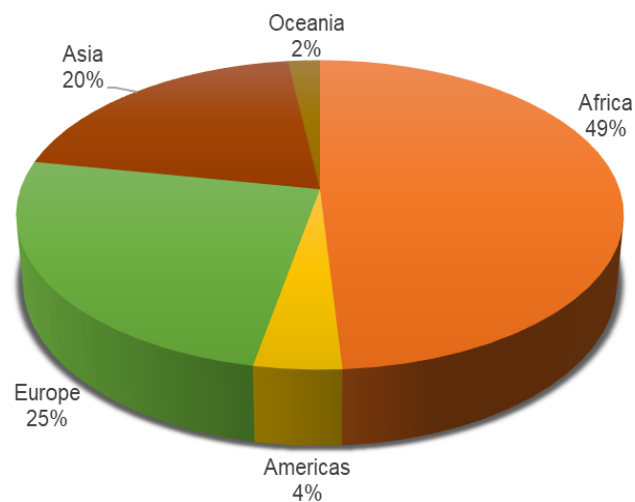


Figure 2.6 – Food export destinations share

Note: Food export destinations share. Adapted from DAFF (2017), [http://www.nda.agric.za/doaDev/sideMenu/AgroProcessingSupport/docs/Draft FB Q2 2017 \(2\) - edited \(3\) with corrections final.pdf](http://www.nda.agric.za/doaDev/sideMenu/AgroProcessingSupport/docs/Draft%20FB%20Q2%202017%20-%20edited%20(3)%20with%20corrections%20final.pdf). Copyright (2019) by Department of Agriculture, Fisheries and Forestry (DAFF). Adapted with permission.

The previous section confirmed the importance of the F&B sector in South Africa, in terms of the supply of food and food-related services in the country, as well as the

provision of employment. The importance of SMMEs in the F&B sector was also highlighted to confirm its importance in this research endeavour.

2.4 UNDERSTANDING SUSTAINABILITY IN SMALL AND MEDIUM-SIZED ENTERPRISES

2.4.1 THE COMPLEX ISSUE

Larger businesses have mostly already determined the mandatory frameworks and standards for sustainable business practices, which is not automatically true for small and medium-sized enterprises (SMEs) (Battisti & Perry, 2011; L. C. Leonidou et al., 2017). Considering environmentally responsible practices, smaller businesses, which are very important in terms of job creation globally, sadly, are inclined to disappoint (Cassells & Lewis, 2019) – mostly because sustainable business practices are impacted by how the owner-managers of SMEs engage in business activities. This may be attributed to a push or pull motivation for the sake of an opportunity to achieve anticipated results (Asah et al., 2015). The success criteria assumed by the owner-managers of small businesses that innately resonate with the value orientation of SMEs in South Africa are based on the effect of related motivations, personal values, and management skills on their performance (Asah et al., 2015). Sooner or later, the personal values of SME owner-managers are bound to govern management decisions, businesses' green performance, and the application of sustainable business practices (which this study focused on). This is generally aligned with the personal values of owner-managers to support "green" initiatives (or not).

In the economies of many countries, SMEs play a vital role in terms of employment, as well as a potentially significant ecological role in reducing the impact of business on the environment (European Commission, 2015). Unfortunately, most of the studies on environmental management, globally, have focused on large organisations, neglecting smaller firms and SMMEs (L. C. Leonidou et al., 2017). This is probably because SMMEs are not expected to exert the same influence concerning a major issue such as the environment (L. C. Leonidou et al., 2017), overseeing their collective influence that may indeed be significant (European Commission, 2015).

Masocha (2018) and Leonidou et al. (2017) believe that SMEs lack the tools and resources that are necessary to manage environmental problems. Smaller businesses generally have inadequate finances, and a lack of skilled labour, and are unable to determine the negative effects that they have on the environment. Furthermore, research conducted on SMEs' environmental practices has indicated an apparent

reluctance to embark on implementing environmental management practices due to the perceived cost, time, and resources required to reduce the impact of their conduct on the environment (L. C. Leonidou et al., 2017; Struwig & Lillah, 2017). Apparently, SMEs are inclined to be cynical about the business benefits of being more environmentally conscious and are often hesitant to engage in endeavours that will reduce their environmental impact (L. C. Leonidou et al., 2017). SMEs' approach is furthermore generally narrow in focus concerning particular aspects of the manufacturing process or the products that they attempt to change and tend to act in an ad hoc manner when managing so-called green issues (K. H. Lee, 2009). Another study concurs, encouraging ecological practices in SMEs such as attending to economic resources, organisational arrangement, style of management, and production competencies (L. C. Leonidou et al., 2017). SMEs' adoption of a strategic orientation that is more focused on environmental matters is important for several reasons, including cost savings, reduction of risks associated with violation of environmental regulations, building a favourable reputation and brand image, and the attraction of new environmentally sensitive customers (L. C. Leonidou et al., 2017). SMEs, from a macro-outlook, are key to sustainable development (Jansson et al., 2017) and play a significant economic role in the business setting. As such, the focus on SMMEs in this study has merit.

2.4.2 THE IMPORTANCE OF SMMEs IN DEVELOPING MARKETS

Akin to their developed market counterparts, SMEs in developing or emerging markets such as South Africa, Ghana, and Ethiopia are an essential part of the respective countries' wealth- and job creation (Ahinful et al., 2019; Buli, 2017). Historically African SMMEs, especially micro-enterprises that comprise the majority of small businesses, have attracted increased attention due to their labour-absorptive capacity in times of a decreasing private formal economy and public sector, and the rising numbers of entrants into the labour market (Peters & Naicker, 2019). The United Nations Economic Commission for Africa (UNECA, (2014) reported that SMEs in Africa provide between 60% and 70% of all employment. SMEs are, for example, a vital part of the Ethiopian economy, and as an agriculture-based economy (Abdissa et al., 2022; Mamo, 2020), account for 80% of the agricultural workforce of which 60% contributes to GDP, 40% contributes to export (Buli, 2017). Being in its embryonic stages in terms of development, 99% of the domestic private sector in Ethiopia conducts business as SMMEs, employing 60% of the workers in the country (Buli, 2017). These SMEs are however struggling with a lack of resources, lack of contact with international markets, lack of skills and lifelong learning, and intricate multiple-layered management structures (Buli, 2017; Mamo, 2020). Furthermore, SMEs in developing markets often

operate in a survivalist mode, lacking both capabilities and lucrative prospects compared to their developed market counterparts. Compared to their developed market peers, these SMEs lack the skills, resources, and relevant technologies that are required to prosper. Compared to large manufacturing industries, they mostly encounter considerable economic challenges that constrain their activities. Challenges encountered include a lack of access to finance and support services, as well as a lack of time to devote to issues such as environmental conservation, which obstruct their ability to attend to environmental management (Ahinful et al., 2019).

2.4.3 SOUTH AFRICAN SMALL BUSINESSES

From a South African outlook, Ndlovu and Makgetla (2017) have noted that small businesses are critical in terms of job creation, innovation, and equality in the country. This view has been echoed by several others more recently (Peters & Naicker, 2019; The Presidency, 2019; Vuba, 2019) stating that SMMEs are the future of the struggling South African economy with its low growth outlook and high unemployment rate. Business Partners (2018b) states that environmental sustainability is good for small businesses, as it implies multiple benefits as the businesses increase in size. Furthermore, the adoption of green practices and green strategies greatly compensates for cost implications over time (Business Partners, 2018b). President Cyril Ramaphosa, in his State of the Nation Address in 2019 (The Presidency, 2019), emphasised that small businesses play a significant role in boosting the financial activity and employment of South Africa. In his 2021 State of the Nation Address, he further supported the growth in small businesses by announcing measures for economic reform to create sustainable jobs, and thereby encouraging inclusive growth - clearly admitting that SMMEs are catalysts for economic growth. Indications are that there exists an increase in the awareness of SMMEs regarding ecological issues and their impact on the natural environment (Duffett et al., 2018; Masocha, 2018; Viviers, 2009). Evidence provided by Struwig and Lillah (2017) indicates that SMMEs are willing to implement environmental management systems and foster eco-friendly standards. Unfortunately, many still believe that green strategies are not relevant to them and are only applicable to big organisations (Business Partners, 2018a).

The terms SMEs, SMMEs, and MSMEs are used interchangeably within the South African context (Smit & Watkins, 2012). The DTIC also declares that the term “small business” and “SMME” can be used interchangeably, whereas the term “enterprise” refers explicitly to entities, especially close corporations, cooperatives, and companies, implying that different ideas of business exist (Le Fleur et al., 2014). As there is no unanimous definition, the country-specific legislation and geographical placement of

SMMEs influence the chosen definition. Bruwer and Watkins (2010) state that the South African government brought about the concept of SMMEs in 1996, with the main aim of poverty alleviation, job creation, and empowering the national economy. The National Small Enterprise Act, 2004 (Act No, 29 of 2004) defines a small enterprise as an isolated and different business unit, together with its divisions and affiliates (National Small Business Amendment Act 2004, 2004), which includes supportive initiatives that are managed by an owner. **Appendix B** in this document breaks down the definition of small business showing that “small business” applies in any sector or subsector of the economy as shown in column 1 and is categorised as a micro, a small or a medium enterprise by adhering to the conditions mentioned in column 3 and 4 (Revised Schedule 1 of the National Definition of Small Enterprise in South Africa, 2019).

The National Small Business Act characterises small businesses in South Africa into several distinctive clusters (Le Fleur et al., 2014; Smit & Watkins, 2012) namely:

- **Survivalist enterprise** – those generating below the lowest income criterion or poverty line that is deemed pre-entrepreneurial including hawkers, vendors, and subsistence farming that in practice are grouped with the following group of businesses.
- **Micro enterprises** – those generating a revenue below the value-added tax (VAT) registration limit of R150 000 per year; and lack formality in terms of registration for example spaza shops, minibus taxis, and household industries that employ no more than five (5) people.
- **Very small enterprises** – those generally having under ten (10) paid workers excluding mining, manufacturing, electricity, and construction sectors where the number of paid workers is fixed at 20 all operating in the formal market and having access to technology.
- **Small enterprises** – includes businesses with a maximum of fifty (50) workers. They are more established and generally show more intricate business practices.
- **Medium enterprises** – have between fifty (50) and two hundred (200) workers and are sector-dependent, and typically decentralise power to an additional management layer.

Divided into two sectors, SMMEs in South Africa fall into either the informal sector or the formal sector. **Table 2.4**, below, distinguishes typical characteristics.

Table 2.4 - Characteristics of SMMEs

No.	Informal Sector	Formal Sector
1.	Ease of entry	Restricted entry
2.	Indigenous resources	Reliance on national and foreign finance capital
3.	Family ownership	Corporate ownership
4.	Small-scale operation	Large-scale operation
5.	Labour-intensive and adapted technology	Capital-intensive and imported technology
6.	Skills acquired outside the formal system	Formal acquired skills
7.	Unregulated and competitive markets	Protected markets

Note: Reprinted from "Informal small, medium and micro enterprises (SMME) retailers in South Africa" by Le Fleur, H., Koor, J., Chetty, V., Nsthangase, S., Mackenzie, R., and Rawoot, F., 2014, p. 12. Copyright (2014) by Henley Business School. Adapted with permission.

The main difference and challenges that SMMEs in South Africa face when compared to other developing and developed markets, include access to finance and credit (BER & SEDA, 2016; IFC, 2018; Peters & Naicker, 2019; Vuba, 2019), as well as a shortage of skills (BER & SEDA, 2016; Peters & Naicker, 2019; Vuba, 2019). South African SMMEs struggle to remain as going concerns (Sifumba et al., 2017) explaining the high percentage of SMMEs that fail within the first year of operation (Le Fleur et al., 2014; Sifumba et al., 2017) mainly due to limited access to finance (IFC, 2018; Vuba, 2019). Poor infrastructure furthermore limits the development of SMMEs, while low levels of research and development capabilities of small businesses necessitate being linked with larger firms (BER & SEDA, 2016). The high rate of crime and corruption in South Africa (BER & SEDA, 2016; The Banking Association of South Africa, 2019) forces SMMEs to spend large amounts on security, considerably increasing their operational costs (BER & SEDA, 2016). Therefore, SMMEs in the country are faced with multiple challenges, other than the challenge of becoming more environmentally conscious in their operations.

2.5 CHAPTER SUMMARY

This chapter reviewed South Africa as a research setting for this research project, as previous studies concerning environmental sustainability were done in developed markets like the USA or Europe. Those, conducted in a developing market, were from an Asian perspective namely studies conducted in Taiwan, Indonesia, and Vietnam. Increasingly the African continent is capturing the imagination of scholars, providing a more balanced view if incorporated into mainstream research and theories enhancing diversity. Furthermore, Africa is seen as the new source of growth, igniting research interests, and displaying economic growth, and with this in mind, needs business

support. With a paucity of research within the continent, this study makes a valuable contribution.

Choosing the F&B sector as a research context was insightful from a food security point. Considered the fourth largest sector, the F&B sector plays a vital role in the communal-oriented society of South Africa, as food plays an important part in social interaction in communities and households. In trying to understand better ways of sustainable living, F&B SMMEs must understand green consumption patterns. Initiatives like the “Buy-Back South African” campaign, which is supporting small businesses to improve the economic situation of the country after the devastating effects of the COVID-19 pandemic, further encourage growth opportunities for small businesses. The South African F&B sector mainly consists of large organisations and therefore, focusing on small businesses is imperative as they are regarded as the economic growth engines of South Africa. As the COVID-19 pandemic has caused havoc across the world, the global F&B sector is experiencing the emergence of plant-based diets, and healthier food options with quality and health becoming synonymous in the eyes of consumers. The effects of COVID-19 lockdowns and supply chain disruptions have made manufacturers and businesses review various practices to ensure sustainable consumption and production practices. With the relaxation of lockdown regulations, further increase in foot traffic into restaurants and other eating establishments are foreseen, which will drive the need for manufacturers and service providers to review their strategies and to encompass some green aspect.

From a South African perspective, although considered a developing or emerging market, risks associated with failed State-Owned Enterprises (SOEs), corruption, and the need to redress the economic growth pattern, make a study on the F&B SMMEs in South Africa appealing, as SMMEs are the focus of economic growth. President Ramaphosa noted that SMMEs play a significant role in boosting the economy, offering support for growing small businesses that are willing to implement environmental sustainability strategies. Moreover, SMMEs in South Africa must prepare for the future, and with government support for the green economy, SMMEs must become more environmentally conscious in their operations. The next chapter will provide the theoretical framework for this study and discuss the associated literature for the main constructs of this study.

CHAPTER 3: LITERATURE REVIEW

“One of the very nicest things about life is the way we must regularly stop whatever it is we are doing and devote our attention to eating.”

- (Luciano Pavarotti Quotes, n.d.)

3.1 CHAPTER INTRODUCTION

Luciano Pavarotti cautions that we occasionally have to stop what we are doing and devote our attention to eating, which this literature study aims to achieve in terms of the relevant constructs within the study. By devoting attention to the literature, new insights can be gained and formulated to answer the research questions posed in this research endeavour.

The previous chapter (Chapter 2 – Research Setting), provided the context for this research study. The Western World has always had a plethora of research being conducted, and the time has now arisen for Africa to join the discussion. With specific nuances and takes on research topics, South Africa is an emerging market or developing country, rich in opportunities for scholars to conduct research. As new interest from scholars and businesses about, South Africa is the ideal setting where over 60% of business is conducted by small businesses, which are referred to as SMMEs in this study. These small businesses have experienced severe setbacks during the COVID-19 pandemic and have, therefore, been identified by the government as the driving engines for the green economy. To be future-ready, these small businesses must revisit their strategies. With the F&B industry being responsible for a large portion of food waste, small businesses should implement environmentally friendly practices to survive. As electricity disruptions and economic pressures further hinder the recovery of small businesses in South Africa, internal green practices such as reduced electricity consumption have to become common practices for them to continue operating. Water shortages in Cape Town recently and subsequent water usage reduction measures that had to be implemented in manufacturing-intensive operations and in the tourism sectors also reminded small businesses that change in their ways of conduct is inevitable.

Like the joy of eating many dishes and the contribution of everyone in terms of the wonderful meal, this chapter is split into several different “dishes” as depicted in **Figure 3.1** below. The literature review starts with the theoretical anchor of the study, followed by providing an introduction to green consumption, before discussing the various constructs.

Main Headings	Sub Headings
3.1 Chapter Introduction	
3.2 Theoretical Anchor: Resource Advantage Theory	3.2.1 An Overview of R-A Theory 3.2.2 The foundations of R-A Theory 3.2.3 Underlying assumptions of R-A theory 3.2.4 R-A Theory and a green market orientation 3.2.5 Application of R-A theory in this study
3.3 Contextualising Green Consumption	3.3.1 Background to green consumption 3.3.2 Responses to green consumption 3.3.3 Drivers of green consumption 3.3.4 South African consumption patterns
3.4 Market Orientation and Green Market Orientation	3.4.1 Background 3.4.2 The origins of a green market orientation 3.4.3 The multidimensionality of green market orientation
3.5 Green Management Values	3.5.1 Previous research 3.5.2 Green management values in perspective
3.6 Green Internal Practices	3.6.1 Background 3.6.2 Why are green practices required? 3.6.3 Adoption of green practices 3.6.4 Benefits of implementing green internal practices 3.6.5 Related definitions
3.7 Green Performance	3.7.1 Related definitions 3.7.2 Economic / financial performance 3.7.3 Social performance 3.7.4 Environmental performance
3.8 Chapter Summary	

Figure 3.1 – Structure of Chapter 3

Note. An overview of the structure and layout of the chapter. Own work.

3.2 THEORETICAL ANCHOR: RESOURCE ADVANTAGE THEORY

As stated in Chapter 1, this proposed study's theoretical anchor is the Resource-Advantage (R-A) theory (Bicen, 2021). It was chosen because the owner-managers of SMMEs' decisions concerning the choice and distinctive allocation of their resources as part of a unique market contribution, can provide them with a competitive advantage (Connor, 1991). An overview of R-A theory is discussed next.

3.2.1 AN OVERVIEW OF R-A THEORY

R-A theory served as a key theoretical perspective for understanding businesses' resources (R), their competitive advantage in the marketplace, and the businesses' response to changes within the marketplace, to grow value and contribute to a superior

performance (P) that is inclusive and sustainable (Bicen, 2021; S. D. Hunt & Morgan, 1995).

The competitive processes work is significantly influenced by five environmental factors as can be seen in **Figure 1.3** namely i) societal resources on which firms draw, ii) the societal institutions that manage the firms, iii) the actions of competitors and suppliers, iv) the consumers' behaviours, and v) public policy decisions (Bicen, 2021; S. D. Hunt, 2018; S. D. Hunt & Morgan, 2005). As the feedback loop indicates, firms learn through competition because of the feedback from relative financial performance signalling relative market position, which in turn signals relative resources. Through their inferior financial performance, firms competing for a market segment, learn from their positions of competitive disadvantage (see **Figure 1.4**) and in turn through innovation, prompted by the learning process, try to reduce and/or surpass the advantaged firm(s) through means of innovation or acquisition. Firms occupying positions of competitive advantage must continue to stay at the forefront through reinvestment in their resources that produce the competitive advantage. Furthermore, these firms may enjoy protection from societal institutions including patents and so forth which keeps them at a competitive advantage. Additionally, they keep these positions if rival efforts fail.

As displayed in **Figure 1.3** and **Figure 1.4** (see Section 1.4), R-A theory emphasizes the importance of (1) market segments, (2) heterogeneous firm resources, (3) comparative advantages/disadvantages in resources, and (4) marketplace positions of competitive advantages/disadvantages (S. D. Hunt, 2018; S. D. Hunt & Morgan, 2005). Specifically, as displayed in **Figure 1.3** and elaborated upon in **Figure 1.4**, looking at resources, when firms have comparative advantage, they will occupy market position of competitive advantage (cells 2, 3, and 6) for some market segment(s), which results in superior financial performance. Conversely, when firms have comparative disadvantage, they will occupy market position of competitive disadvantage (cells 4, 7, and 8), which results in inferior financial performance. The competitive processes work is significantly influenced by five environmental factors as can be seen in **Figure 1.3** namely i) societal resources on which firms draw, ii) the societal institutions that manage the firms, iii) the actions of competitors and suppliers, iv) the consumers' behaviours, and v) public policy decisions. As the feedback loop indicates, firms learn through competition because of the feedback from relative financial performance signalling relative market position, which in turn signals relative resources. Through their inferior financial performance, firms competing for a market segment, learn from their positions of competitive disadvantage (see **Figure 1.4**) and in turn through innovation, prompted by the learning process, try to reduce and/or surpass the

advantaged firm(s) through means of innovation or acquisition. Firms occupying positions of competitive advantage must continue to stay at the forefront through reinvestment in their resources that produce the competitive advantage. Furthermore, these firms may enjoy protection from societal institutions including patents and so forth which keeps them at a competitive advantage. Additionally, they keep these positions if rival efforts fail.

3.2.2 THE FOUNDATION OF R-A THEORY

As stated previously, all theories are derived from their underlying basic assumptions (S. D. Hunt, 2018; S. D. Hunt & Morgan, 2005) and **Table 1.1** in Chapter 1, Section 1.4 displays the core premises of R-A theory. The table is adapted from the original by removing the neoclassical theory propositions so as just to focus on the R-A theory premises. These core aspects are central in understanding the theory. R-A theory takes on scientific realism (S. D. Hunt, 2002) and each premise of R-A theory is a candidate for empirical testing (S. D. Hunt, 2018; S. D. Hunt & Morgan, 2005).

Commonly criticized, R-A theory has perfect competition as its comparative alternative for a number of reasons namely 1) the core concepts of perfect competition are well developed and well known so can be show the foundations and nature of R-A theory; 2) neoclassical theory confirms perfect competition as perfect which further corroborates that it is the correct comparison to use against; 3) perfect competition is the only theory of competition that is seen as socially beneficial and is a comparison standard; 4) being a general theory of competition R-A theory, there may not be another theory to compare it against; and 5) R-A theory is a work in progress (Bicen, 2021; S. D. Hunt, 2018; S. D. Hunt & Morgan, 2005).

Table 3.1 - The foundational premise of R-A theory

No.	Item	Resource-Advantage theory
P_1	Demand is	Heterogeneous across industries, within industries, and dynamic
P_2	Consumer information is	Imperfect and costly
P_3	Human motivation is	Constrained self-interest seeking
P_4	The firm's objective is	Superior financial performance
P_5	The firm's information is	Imperfect and costly
P_6	The firm's resources are	Financial, physical, legal, human, organizational, informational, and relational
P_7	Resource characteristics are	Heterogeneous and imperfectly mobile
P_8	The role of management is	To recognize, understand, create, select, implement, and modify strategies
P_9	Competitive dynamics are	Disequilibrium provoking with innovation endogenous

Note: An overview of the foundational premises of R-A theory. From Shelby D. Hunt's legacy, the R-A theory of competition, and its perspective on the geographical indications (Gis) debate by P. Bicen. (2021). *Journal of Global Scholars of Marketing Science*, 00(00), 1–21. <https://doi.org/10.1080/21639159.2020.1785919>;

From the foundational propositions of R-A theory (displayed in **Table 3.1**) nine (9) propositions are identified (S. D. Hunt, 1995, 2018; S. D. Hunt & Morgan, 2005). Delving into the propositional structure underlying the R-A theory, which is discussed in Hunt and Morgan (1995) and Hunt (2000b), the premises are expounded upon next.

3.2.2.1 P_1 – DEMAND

In line with the neoclassical theory, the R-A theory adopts the assumption of diversified (heterogeneous) inter-industry demand (S. D. Hunt & Morgan, 2005). Because consumers' taste and preferences vastly differ within a product category and always changing, intra-industry demand is both dynamic and heterogeneous unlike neoclassical theory (S. D. Hunt & Morgan, 2005, 1995). R-A theory presupposes that there are excessively more industries that are entirely or notably heterogeneous (S. D. Hunt & Morgan, 2005). Diversified intra-industry demand, thus, implies that there are limited industry markets i.e. fragments of demand within industries. This type of market segment is central in R-A theory for understanding competition. This implies that R-A theory is suitable for developing market offerings that affect firm performance, and that it can make correct predictions as to the diversity in business unit financial (S. D. Hunt & Morgan, 2005).

3.2.2.2 P_2 – CONSUMER INFORMATION

Drawing on Austrian economics (Jacobson, 1992), R-A theory presupposes that consumers do not have correct or adequate information when it comes to products that

may align with their tastes and desires i.e. imperfect information (S. D. Hunt & Morgan, 2005, 1995). Also, the effort, time, and money it takes for the consumer to search is most often great.

The fact that consumers have imperfect information is not an issue for R-A theory as 1) heterogenous, intra-industry demand and supply is viewed as natural in that consumers view trademarks as quality indicators; 2) that it is an intellectual property worthy of legal protection, which R-A theory views as firms protecting the equity in their trademark providing valuable source of information to consumers, powerful incentives for products to maintain quality, and for accountability in that poor quality will not be accepted; 3) static equilibrium is rejected by R-A theory and the heterogeneity of demand and supply doesn't pose an issue but a state of nature (S. D. Hunt & Morgan, 2005).

3.2.2.3 P3 – HUMAN MOTIVATION

Although neoclassical theory regards all human behaviour as maximizing self-interest, R-A theory conversely sees human behaviour being motivated by limited or constraint self-interest seeking (S. D. Hunt & Morgan, 2005, 1995) i.e., not being opportunistic and having a moral code. This personal moral code in R-A theory draws from ethics and can account for the economic value to firms and societies who have individuals that are motivated by these moral codes that emphasize deontological ethics. Deontological codes focus on specific actions or behaviours, making it right or wrong. In this environment trust can exist, and therefore, trustworthiness can be seen or taken as a competitive advantage (Barney & Hansen, 1994; S. D. Hunt & Morgan, 2005).

3.2.2.4 P4 - FIRM'S OBJECTIVE

Perfect competition theory assumes that owner-managed firms profit maximize which is consistent with the assumption that humans are self-interest maximizers. Neoclassical theory states that the sole objective of a firm is towards profit maximization because of self-interest in terms of human motivation. R-A theory conversely views the primary objective of the firm as to attain superior financial performance, which is consistent with Austrian economies (Jacobson, 1992). It pursues this superior financial performance under conditions of imperfect and often costly expense in order to obtain information concerning existing and potential market segments, competitors, suppliers, shareholders, and product technologies (S. D. Hunt & Morgan, 2005). Superior financial performance is characterised as primary, and although other objectives are included, they are not equal (S. D. Hunt, 1995; S. D. Hunt & Morgan, 2005). The superior implies *more than* as well as *better than* and that the level of financial

performance exceeds a previous level. R-A theory sees the firm's objective of superior financial performance as disequilibrating and is the extant of dynamism of competition (S. D. Hunt & Morgan, 2005).

3.2.2.5 P5 – FIRM'S INFORMATION

Following on from the firm's objective, efforts to profit maximize may be hampered because of imperfect information. The R-A theory provides a framework for investigating the role of different understandings of financial performance on managers, firms, industries, productivity, economic growth, and social welfare (Arnett & Hunt, 2002b; S. D. Hunt & Morgan, 2005). The primary descriptor of the firm's primary objective is superior financial performance due to superior rewards flowing to owners, managers, and employees of firms that produce superior rewards, and that R-A theory is dynamic (S. D. Hunt & Morgan, 2005). Firms do not maximize profit because imperfect information makes profit maximization not possible. Furthermore, ethical egoism frustrates maximisation. Moreover, firms that are guided by rule-based ethics may not be able to choose to maximize. Ethical code mismatches between owners, managers, and subordinate employees may result in non-maximizing behaviours (S. D. Hunt & Morgan, 2005).

3.2.2.6 P6 – RESOURCES

In the literature based on the resource-based view of the firm (RBV) (Barney, 1991; Wernerfelt, 1984) resources are seen as incorporating "all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc., controlled by a firm" (Barney, 1991, p. 101). These resources are seen as valuable, rare, imitable, and non-substitutable (Barney, 1991; Barney & Hesterly, 2014). Varadarajan (2024) defines resources as "a firm's assets and capabilities" with assets being "resources of economic value" and capabilities as "complex bundles of skills and knowledge embedded in a firm's organisational processes that enable it to transform its assets into valuable outputs (Day, 1994) and encompass various types of capabilities" (Varadarajan, 2024, p. 5).

In R-A theory resources as "the tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a product that offers value for some market segment(s)" (S. D. Hunt & Derozier, 2004, p. 7). Seeing that resources include tangible and intangible entities, the firm may not own resources, but may have access to the use of them. The resources may not be restricted to the tangible assets of the firm but may be anything that has an enabling capacity (S. D. Hunt & Morgan, 1995) i.e. firm's core competencies (Prahalad & Hamel, 1990) are higher-order, intangible entities.

They are categorised broadly as financial, physical, legal, human, organisational, informational, and relational (S. D. Hunt & Morgan, 2005; Varadarajan, 2024). Higher-order resources, as referenced in R-A theory, refer to capabilities.

3.2.2.7 P7 – RESOURCE CHARACTERISTICS

According to the neoclassical theory, all resources are perfectly homogeneous and mobile. Conversely, R-A theory states that resources are both significantly diverse across firms and imperfectly mobile ((S. D. Hunt & Morgan, 2005, 1995). This means that the resources for each and every firm is varied and unique in some way, neither being ubiquitous or easily or readily purchased and sold in the marketplace. Because of this, resource diversity can persist through time despite of firms trying to get similar resources as their competitors.

When a firm has a specific assortment of resources that is rare among competitors, it leads to a comparative advantage (Barney, 1991). Refer to Figure 1.4 and the explanation on comparative advantage.

3.2.2.8 P8 – ROLE OF MANAGEMENT

R-A theory states that the role of management in the firm is to acknowledge and understand current strategies, establish strategies, challenging and changing them over time as and when applicable. Strategies that yield a position of competitive advantage and superior financial performance will do so when they rely on those resources in which a firm has a comparative advantage over its competitors when a firm comparative advantage continues to yield a position of competitive advantage in spite of competitor actions then sustained superior financial performance occurs (S. D. Hunt & Morgan, 2005, 1995).

3.2.2.9 P9 – COMPETITIVE DYNAMICS

Neoclassical theory posits that in the long run, all resources are variable and each firm in each industry adjusts its resource assortment to reduce the costs of producing its profit-maximising quantity (S. D. Hunt & Morgan, 2005, 1995) leading to equilibrium and a “no profit” situation. R-A theory conversely, maintains that competition is disequilibrium provoking and innovation is endogenous. Instead of the firm’s environment strictly determining its strategy and profits (performance), R-A theory states that environmental factors only influence conduct and performance. Relative resource diversity and immobility implies that strategic choices must be made, which impact performance (S. D. Hunt & Morgan, 2005, 1995).

R-A focuses on groups of rivals competing for the patronage of customers in market segment(s). Firms will be spread at any time throughout nine (9) positions in **Figure 1.4**. Firms having a comparative advantage/disadvantage in resources will occupy positions of competitive advantage identified by cells 2, 3, and 6 or disadvantage depicted by cells 4, 7, and 8, and will enjoy or suffer financial returns that are superior or inferior.

3.2.3 UNDERLYING ASSUMPTIONS OF R-A THEORY

The underlying assumptions of R-A theory are to distinguish the resources that are required for the firm to establish a competitive advantage. The choice of resources will either create an advantage or a disadvantage if the choice of market segment is incorrect and this would have been based on the information achieved from the customer's preferences and tastes. Thus, the value of these resources needs to be identified and this is another assumption that the R-A theory makes. The last assumption is the resources in terms of competition. These three assumptions are discussed next.

3.2.3.1 DISTINGUISHING RESOURCES

Because all theories are consequent from their foundational grounds, adopting the R-A theory requires an understanding of its premises/assumptions (Wooliscroft & Hunt, 2012), which are depicted in **Table 1.1**. Accordingly, R-A theory accentuates the significance of comparative advantages/disadvantages in resources and the respective marketplace positions of competitive advantages/disadvantages. Resources, per R-A theory, are noticeable/imperceptible units, which are accessible to a business to efficiently and/or effectively produce a market offering that has value for a certain market segment(s) (S. D. Hunt, 2011; S. D. Hunt & Madhavaram, 2012; Wooliscroft & Hunt, 2012). Resources are considered to incorporate the fundamental capabilities of a business (Green et al., 2015). Also, every business in the marketplace possesses several unique resources, such as very experienced and knowledgeable employees, efficient production processes, unique offerings, and so forth. Some of these resources are distinctive as they cannot be replicated or acquired easily due to their relative immobility, for example, culture, competence, and processes, ensuring a long-term competitive advantage in the marketplace (Green et al., 2015; S. D. Hunt, 2011, 2018) as depicted in cells 2, 3, and 6 in **Figure 1.4**. Higher-order resources (Prahalad & Hamel, 1990) are not just land, labour, and capital, but represent:

- Financial resources, such as access to financial markets, and cash resources
- Physical resources, for example equipment
- Legal resources, such as licenses, and trademarks

- Organisational resources, for example, controls, policies, competencies, and culture
- Informational resources, for example, knowledge from consumer- and competitor intelligence
- Relational resources, such as relationships with customers, and suppliers (Green et al., 2015; S. D. Hunt, 2011; S. D. Hunt & Madhavaram, 2012).

3.2.3.2 THE VALUE OF UNIQUE RESOURCES

Inevitably, every business possesses unique resources, which can create a comparative advantage that could facilitate a competitive advantage (i.e., cells 2, 3, and 6 in **Figure 1.4**) (Bicen, 2021; S. D. Hunt, 2018). Some of these resources may not be acquired or easily imitated and may, therefore, provide a long-term competitive advantage. This study argues that this will be true for products that are sustainably sourced and responsibly produced while keeping the environment in mind. Green market orientation is an informational resource, which provides information about consumers' demand for environmentally friendly products and services, stressing the importance of using information about both customers and competitors in strategy formulation. Thus, the knowledge about a business's competitors (i.e., their products, pricing, and strategies) gathered from implementing a green market orientation could potentially enable a business to more effectively and/or efficiently product market offerings for a market segment(s) than their competitors (Green et al., 2015; S. D. Hunt, 1997a).

The marketing concept maintains that 1) all areas of the business shall be customer-oriented, 2) all marketing activities shall be integrated, and 3) profits, not just sales, shall be the objective (S. D. Hunt, 1997c). Market orientation acknowledges this idea, attending to customers' needs and wants by offering products in different market segments, catering for them by distinguishing various price points, and enabling them to compete in the marketplace across various segments. Therefore, R-A theory supports the importance of market divisions (nine conceivable levels of competitive marketplace positions are depicted in **Figure 1.4**, that admit differences in consumers' tastes and preferences (Bicen, 2021; S. D. Hunt, 1997c). R-A theory proposes that market divisions represent "intra-industry groups of consumers whose tastes and preferences with regards to an industry's output are relatively homogeneous" (S. D. Hunt, 2011, p. 2); that business resources are heterogeneous and possess comparative advantages/disadvantages; and, that marketplace positions of competitive advantages/disadvantages exist (S. D. Hunt, 2011, 2018; S. D. Hunt & Morgan, 2005) (see **Figure 1.3** and **Figure 1.4**).

3.2.3.3 RESOURCES IN TERMS OF COMPETITION

Competition implies that businesses will fight to position their products to achieve a competitive advantage, attracting certain market segments to attain superior financial performance (Bicen, 2021). Competition among businesses is influenced significantly by numerous macro factors, including societal resources, institutions, and public policy. At its core, the R-A theory pools heterogeneous demand theory with the resource-based view of the firm, which in contrast with perfect competition, views intra-industry needs concerning the taste and inclinations of the consumer as substantially diverse (S. D. Hunt, 1997a; S. D. Hunt & Morgan, 2005). Instead of a manufacturing function that combines similar, faultless moveable aspects of production, the resource-based view regards a business as an entity that combines various imperfectly moveable aspects (the resources). Green market orientation is such a resource in that it is an informational resource which is valuable, rare, imitable, and non-substitutable (VRIN). In essence, therefore, R-A theory emphasizes the importance of different market segments, the availability of various business resources, comparative advantages/disadvantages in resources, and marketplace positions of competitive advantages/disadvantages (S. D. Hunt, 1997c; S. D. Hunt & Morgan, 2005).

3.2.4 R-A THEORY AND A GREEN MARKET ORIENTATION

The central rule of market orientation strategy is twofold in that to obtain competitive advantage and superior financial performance, businesses should a) **firstly**, methodically collect information on current and future customers and competitors, and b) **secondly**, use this information in a synchronised manner to direct tactic recognition, understanding, creation selection, implementation, and modification (S. D. Hunt & Morgan, 2005). Following the R-A theory, a business's market orientation is a resource if it provides information that enables the business to produce an offering that is well-tailored to a market segment's specific tastes and preferences (S. D. Hunt, 1997c; S. D. Hunt & Morgan, 2005). A green market orientation would indicate that the business focuses on consumers who are progressively demanding environmentally sustainable products, which directly affects the adoption of green internal practices (Green et al., 2015; Li et al., 2018). The R-A theory can serve to predict positive performance effects on market orientation and green market orientation because these strategic orientations are considered VRIN (Bicen, 2021; S. D. Hunt & Morgan, 2005, 1995), and can facilitate a superior competitive advantage for businesses (Bicen, 2021).

Market orientation, and thus green market orientation, is not a skill nor a tangible resource, but rather an intangible entity. Previous studies (Jaworski & Kohli, 1993;

Narver & Slater, 1990), describe market orientation as a rare resource, explaining why it is expected to create a position of competitive advantage (cells 2, 3, or 6 in **Figure 1.4**), and subsequently, superior performance. Green market orientation is defined as an inter-functional approach that answers to the social and environmental requirements of consumers, facing competitors' engagement in environmental management (C. H. Wang, 2020). It entails the company's philosophy of discovering and meeting the needs and desires of its customers through its products and services (Li et al., 2018) that are then captured by the organisation and the resources of the company and intentionally support green initiatives (Jiang et al., 2020). Companies with a green market orientation always systematically collect, monitor, and analyse competitive strategies and take green action to achieve a competitive advantage over other businesses (Habib et al., 2021). Green market orientation is an intangible resource that improves management knowledge about customer demand for green products and services, and with the growth of concern about the environment in recent times, and customers demanding eco-friendly products, businesses need to satisfy these desires. A business that displays a green market orientation will highly likely enjoy a sustainable comparative advantage, which can facilitate a sustainable competitive advantage and superior long-run green performance (Green et al., 2015; S. D. Hunt & Morgan, 2005).

The R-A theory, furthermore, suggests that resources, such as a green market orientation, should be conveyed promptly and successfully to relevant market segments per customers' requirements and demands (Habib et al., 2021). Hereby, value is created through differentiation, enhancing the company's competitive advantage (Green et al., 2015), because appropriate management decisions have converted the indistinctive resources of a company into a market offering that meets the needs of selected market segments (Habib et al., 2020). A green market orientation, therefore, defines the strategies of an organisation and its operations, by collecting, monitoring, and analysing the demand trends of customers whilst investigating their competitors' strategies (Habib et al., 2020, 2021) to guide present and future applications (practices) of the product and market (Green et al., 2015), understanding that organisations with a stronger green market orientation will maintain good customer relationships and establish excellent customer value. Eventually, green internal practices are the organisational key distinction of environmental practices (how things are done) to achieve sustainable performance (Eltayeb et al., 2011).

3.2.5 APPLICATION OF R-A THEORY IN THIS STUDY

R-A theory provides meaningful insights into how firms develop the comparative advantage to gain a competitive advantage against their competitors. Accordingly,

higher-order learning processes assist firms to utilise complex resources and obtain a competitive advantage leading to superior financial performance (Hunt & Morgan, 1996; Liu et al., 2024). In this study, the importance of a business's green market orientation is assessed in terms of its ability to successfully implement green internal practices, thereby establishing superior green- or sustainable performance. In particular, the study argues that as consumers are becoming environmentally conscious about environmental sustainability, they are increasingly looking for products and services that are environmentally friendly (Green et al., 2015). Therefore, businesses should have environmentally sustainable processes and practices in place to ensure that environmental performance, as well as social- and financial performance, are improved (Green et al., 2015; Li et al., 2018; C. H. Wang, 2020). These businesses would thus need to identify and use the correct resource assortment to achieve this superior performance. This study suggests that SMMEs that adopt a green market orientation will succeed in implementing green internal practices, which then facilitate green or sustainable performance.

R-A theory posits that the role that management plays is very important as they are required to make decisions on the choice of the resource assortment that they will use to achieve the superior financial performance that is required. One of the foundational premises, P8, is the role of management (S. D. Hunt & Morgan, 2005), which recognises, understands, creates, selects, implements, and modifies the strategies for the business. This also includes looking at the necessary resources, both tangible and intangible needed. Because decision-making is an important factor, owner-manager's green management values, as a resource and human motivation (P3), ultimately direct their companies' decisions.

Without a strong green market orientation, SMMEs will not understand the changing demand of customers, will not identify their future customers, and will be less likely to implement green internal practices. In addition, if owner-managers do not have green management values, they will not encourage the implementation of green internal practices, which will impact their green or sustainable performance. The next section discusses the concept of green consumption.

3.3 CONTEXTUALISING GREEN CONSUMPTION

3.3.1 BACKGROUND TO GREEN CONSUMPTION

The marketplace is becoming increasingly ecologically conscious with consumers expressing increased concern about the environment, considering sustainable production, and consumption through their purchasing (Arun et al., 2021; A. Kumar et

al., 2022; Laroche et al., 2001; Le Van et al., 2019; T. N. Nguyen et al., 2018). With increased intentions to purchase green products (Albayrak et al., 2013; Simon-Kucher, 2023), consumers now tend to inspect food packaging to ensure that it is biodegradable for recycling (Trivium Packaging, 2022), that the product is CFC-free (Laroche et al., 2001), often willing to pay premium prices for ecologically sustainable friendly products (Daus et al., 2023; B. Kumar et al., 2017; Trivium Packaging, 2022).

Evidence that consumers are willing to engage in greener consumption behaviours has initiated research into consumers' purchasing activities and so-called green consumption (Peattie, 2010). Defined as "the behaviour having compatibility with sustainable environmental developments, to safeguard the environment from existing and future challenges" (Jalbani & Soomro, 2017, p. 71), green consumption behaviour is categorised as either "truncation", where consumers utilise less natural resources and spend no extra money acquiring green products; or "green purchase behaviour", where consumers not only adopt ecologically friendly habits but also spend more money to acquire green products (Jalbani & Soomro, 2017). Whilst the green consumption process is greatly affected by consumer values, norms, and habits, it is highly context-dependent (Joshi et al., 2021; Peattie, 2010). Eventually, consumers' behaviour determines the demand for environmentally sustainable products in a particular context (B. Kumar et al., 2017), and the need to supply these types of products.

Across the world, the consumption of and the demand for so-called green food that is organic or natural, has increased (Kushwah, Dhir, Sagar, et al., 2019; Tandon et al., 2020a, 2020b) motivating scholars to investigate the consumer's motives to purchase these products. Amid rapidly changing environmental and market requirements, businesses regard supporting green initiatives as profitable for their survival, regarding responsible consumption and production as a necessary strategic expectation (Guo et al., 2020). Ultimately, ecologically conscious businesses that acknowledge that it is imperative to integrate environmental concerns into their businesses' strategies to enhance financial and operational performance (Jiang et al., 2020; Liao, 2018), would uncover green-related prospects (L. C. Leonidou et al., 2017) and ensure that their businesses support society and the environment (C. H. Wang, 2020).

Considering the heightened understanding of sustainable development since the Brundtland Commission in 1983, there has been an increased focus by businesses and consumers to explore better ways of sustainable living. The international participants at the Earth Summit Conference (Hens et al., 2018) understood that prevailing global consumption patterns were not sustainable, and called for action to meet the broad

objectives to encourage and support patterns of consumption and production that will curb strain on the environment and meet the elementary needs of mankind (Manoochehri & UNEP, 2001). They furthermore called for improvement in people's understanding of the influence of their consumption, and how to enhance more sustainable consumption patterns (Manoochehri & UNEP, 2001).

In essence, there are two aspects to unsustainable consumption, namely *overconsumption*, which is largely associated with the economically affluent industrialised countries of the Global North, as well as underconsumption. The latter is associated with the less developed countries of the Global South, which are impaired by poverty and lack of infrastructure (Manoochehri & UNEP, 2001). Both, however, should be looked at collectively from both a government and a business perspective concerning the issue of green consumption. Kofi Annan, the previous UN Secretary-General stated, during the launch of Global Compact, that the time was "ripe" for collaboration with the academic community and that the NGO community plays a vital role in achieving sustainable consumption goals (Manoochehri & UNEP, 2001). Interest in this phenomenon has consequently grown, as is evident from numerous research studies on the topic in the years that followed (Dilotsotlhe, 2021; B. Kumar et al., 2017; T. N. Nguyen et al., 2018; Pothitou et al., 2016; Shiel et al., 2020; Song et al., 2015). Scholars' increased interest is ascribed to shared environmental-, social-, and health concerns that coherently influence consumers' demand for eco-friendly and safer food options (Pothitou et al., 2016).

3.3.2 RESPONSES TO GREEN CONSUMPTION

A vital part of securing a sustainable future is to minimise the production and consumption of products that are harmful to the environment while boosting eco-friendly goods and services (Liobikienė & Bernatoniene, 2017). The main aim of sustainable- or green consumption is to reduce the negative environmental impact, whilst encouraging consumers purchase of environmentally friendly or green products (Liobikienė & Bernatoniene, 2017) as consumers' purchase decisions clearly have an influence on the environment. Concern for the future is also termed generativity, which is a component of sustainable development (Shiel et al., 2020).

Environmentally friendly products have become widely available over time (Bhardwaj et al., 2020; Haws et al., 2014), offering consumers the opportunity to display green values and related attitudes (Jansson, 2011; Jansson et al., 2017). Product choices evolve around the choice of so-called "green products", products of which the composition and/or packaging is typified as "eco-friendly" (Haws et al., 2014; Trivium

Packaging, 2022). Per definition, green products or environmentally friendly products must include at least one positive environmental attribute, such as not exerting any harmful effects on the environment (Bhardwaj et al., 2020; Haws et al., 2014).

3.3.3 DRIVERS OF GREEN CONSUMPTION

Creating more environmentally sustainable consumption and production systems relies on the readiness of consumers to embrace more sustainable or greener consumption activities (Peattie, 2010). Amid rising interest in green consumption, the phenomenon of “ethical consumption” has increasingly emerged as a topic of interest (Crane & Matten, 2016) motivating researchers to understand the so-called green consumer (Peattie, 2010; Sreen et al., 2021). Clearly, consumers’ consumption habits in the 21st century are driven by compelling concerns about health and environmental sustainability (Moscato & Machin, 2018). Extant studies (Kushwah, Dhir, & Sagar, 2019; Kushwah, Dhir, Sagar, et al., 2019; Sreen et al., 2021) indicate an upward trend of green-, or ethical, or sustainable consumption (Sreen et al., 2021) indicating that consumers are making more ethical choices such as choosing fair traded and environmentally friendly products (Kushwah, Dhir, Sagar, et al., 2019; Laureti & Benedetti, 2018). Green consumption is frequently considered as the method of averting specific kinds of products, such as those contributing to pollution, or that may cause harm to animals, and indicating a preference for environmentally friendly products, or displaying recycling behaviour (Carrigan et al., 2004). Therefore, green consumption is considered a multi-faceted diverse issue and a route that is super sensitive to consumer values, -norms, and -habits, also depending on the context (H. V. Nguyen et al., 2019; Peattie, 2010).

Green consumption as a concept is rather awkward (H. V. Nguyen et al., 2019; Peattie, 2010) as it is an obvious oxymoron where the “green” implies sustainable conservation of the natural resources, and “consumption” involves their destruction (Peattie, 2010). The idea is also questioned as it overlaps other concepts such as ethical-, sustainable-, or responsible consumption, creating confusion and inconsistency within the academic literature (Peattie, 2010). Green consumption may, for example, be considered as a reference to environmental issues although it is interwoven with social and economic aspects of sustainable development. The United Nations Environmental Programme’s (UNEP) perception of sustainable consumption is that it is a natural extension of efforts to ensure sustainable production by defining sustainable consumption as “not about consuming less, it is about consuming differently, consuming efficiently, and having an improved quality of life. It also means sharing between the richer and the poorer (Manoochchri & UNEP, 2001), which may be perceived negatively in developed

countries although the idea is to achieve a better quality of life and new business opportunities for all (Manoochehri & UNEP, 2001).

3.3.4 SOUTH AFRICAN FOOD CONSUMPTION PATTERNS

Developing or emerging market consumers, like their developed market counterparts, are also now becoming increasingly concerned about environmental issues, contemplating which products to use (Dilotsotlhe, 2021). Generally, food selection and consumption are influenced by various factors such as geography, urbanisation, marketing, religion, disposable income, government- and other support services, culture, ethnicity, social networks, time, and consumer preferences (Ronquest-Ross et al., 2015). Food consumption is particularly affected by food availability, accessibility, and food choices (Ronquest-Ross et al., 2015). In South Africa, these elements of food consumption have changed considerably in many households after 27 April 1994, with the introduction of a new socio-political dispensation (Ronquest-Ross et al., 2018). Post-apartheid transformation and economic plans have led to an increase in the per capita income of many households in the country, resulting in the rise of the black middle class. However, rising population growth combined with urbanisation and disbanding of homelands have unfortunately contributed to higher unemployment rates (Ronquest-Ross et al., 2018). Accounting for up to 60% of retail sales, the growth in the number of supermarkets has been significant (Ronquest-Ross et al., 2015, 2018). With the increase in the black middle class, food consumption choices and dining in restaurants have increased (Burger et al., 2015), resulting in rather dramatic changes in South Africans' food consumption patterns that are foreseen to continue in the future (Ronquest-Ross et al., 2018). In 2018, a survey conducted by the South African National Health and Nutrition Examination revealed that almost 50% of South Africans dine in some form of food establishment from time to time, with 28.3% doing so weekly (Ronquest-Ross et al., 2018). Households' total food expenditure has also changed, with an increase in expenditure on certain foods such as fruit, vegetables, processed foods (e.g., spaghetti and ready-to-eat meals), and a decrease in the purchase of maize and wheat flour sales (Ronquest-Ross et al., 2015). Noteworthy, is the shift in South Africans' diets towards being more Western-oriented (Ronquest-Ross et al., 2015).

In recent research, conducted in April 2021 by MasterCard on sustainability (MasterCard, 2021), a notable upsurge was reported in consumers' passion for the environment due to a shift in personal attitudes that is largely ascribed to COVID-19-related experiences. The report indicated that 98% of South African adults were willing to personally take action to fight in favour of environmental and sustainability issues

(MasterCard, 2021), which exceeds the global figure of 85%. Since the COVID-19 pandemic, 81% of South Africans seem more aware and cognisant of their impact on the environment. This trend, according to MasterCard (2021), is led by Generation Z consumers who are described as shrewd, pragmatic, financially minded, and the first “digital natives”. The increase is also due to a social media drive, and an increase in environmentally conscious consumers, with 52% of respondents acknowledging that they have noted climate change information across social media platforms (MasterCard, 2021). This explains the growing trend towards eco-conscious spending and green consumption among South Africans, who want to contribute to the survival of the planet through their purchases and adapted consumption. Around 78% of South African respondents also indicated that more than ever before, businesses should now behave in a more sustainable and environmentally friendly manner. They highlighted that businesses need to focus on the health and well-being of their employees (39%), reduce waste (34%), and reduce air and water pollution (34%) (MasterCard, 2021). Businesses such as restaurants have had to change their strategies to become more sustainable as customers began taking more of an interest in the origin of their food and the sustainable practices of the establishments, they patronise (Eat Out, 2017). To promote this shift in consumer behaviour, Woolworths established the Eat Out Sustainability Award in 2016 which acknowledged restaurants that moved towards a more sustainable food system (Eat Out, 2017). The award has been identified as a transformative one where the food supply chain is changing to become more transparent and sustainable. This change is evident with FYN Restaurant in Cape Town being awarded the best sustainable restaurant in the world (Eat Out, 2023), highlighting the fact that South African small businesses are indeed able to adopt more sustainable business strategies.

For some time now, South African consumers and procurement managers of businesses have been urged to buy local products (SAnews, 2018), promoted by the then minister of the Department of Trade and Industry (DTI), Rob Davies. He even launched the Buy Back South African campaign including the Proudly South African initiative. The idea was to support South African small businesses and the local economy by buying local, and from local entrepreneurs and small businesses (Mashimbye, 2020; The Small Business Site, 2020). Other benefits include protection of the environment by reducing the negative impact on the carbon footprint, designing local products with the South African consumer in mind; and enabling deliveries with fewer hassles (The Small Business Site, 2020). Unfortunately, the aftermath of the 2008 global financial crisis and the COVID-19 pandemic that struck in 2020 hit the South African manufacturing sector hard, resulting in many job losses and the closure of many businesses, especially in the F&B industry (Govinden et al., 2020). As a result,

SMMEs operating in this industry have to find innovative ways to stay in business, including considering a strategic change to go green to achieve greater performance, which a green market orientation will provide.

3.4 MARKET ORIENTATION AND GREEN MARKET ORIENTATION

3.4.1 BACKGROUND

For some time now, governments and academics have attended to the global environmental crisis, seeking solutions to reduce the harmful effects culminating from human practices on nature (Jiang et al., 2020). Accordingly, businesses like SMMEs need to transform their business practices to be future-ready considering their orientation, business model flexibility, and their societal impacts (WEF, 2021). Although factors, that influence businesses externally have been identified in scholarly research, limited evidence exists concerning internal influences emerging from within businesses, like pursuing a green market orientation to achieve superior competitive performance and to minimise environmental degradation (C. H. Wang, 2020). These internal factors include strategic philosophies, processes, and behaviours, which are also termed the strategic orientation of the organization (Wales et al., 2020).

Despite extensive recognition from management, there is no universally accepted definition of strategic orientation (Hakala, 2011; Schweiger et al., 2019). Having been developed in terms of business enterprise, the strategic construct was first defined in the seminal study by Venkatraman by reviewing the theoretical questions about “scope, hierarchical level, domain, and intentions versus realizations” (Venkatraman, 1989). The construct was distinguished in this way, to define it theoretically in terms of four theoretical questions (Venkatraman, 1989). Noble et al., (2002), then added a fourth alternative to the Morgan and Strong (1998) framework, which utilizes internal significances and processes to classify the organization, providing a “competitive culture” (Noble et al., 2002, p. 27) slant to evaluating strategic orientation. They argued that competitive culture offers interactions of principles and significances of an organization with both competitors and customers and impacts more precise tactics and strategies (Noble et al., 2002). The definition by Noble et al., (2002) is based on the belief that there is an inherent culture-driven specific of an organization which disturbs an organization's inner practices related to marketing, and strategic thinking, and tactics of the organization (Noble et al., 2002). It separates orientation and culture and considers strategic orientation as a sub-element of the culture concept. Culture, in the organizational culture literature, refers to the design of shared principles and beliefs that assist individuals to comprehend the operational aspects of the organization, providing the organisation with standards for behaviour, and focusing on inculcating

values and beliefs that direct behaviour, which ultimately influences performance. Many scholars (Deutscher et al., 2016; Hakala, 2011; Laukkanen et al., 2013; Mu et al., 2017; Mu & Di Benedetto, 2011; Wales et al., 2020; K. Z. Zhou et al., 2005) support a definition provided by (Gatignon & Xuereb, 1997), who, unlike (Noble et al., 2002), have a more flexible perspective that is less culture-like, drawing upon the direction the organization takes to create appropriate behaviours to ensure the unceasing greater performance of the organization (Gatignon & Xuereb, 1997). Strategic orientation can, therefore, be defined as the strategic directions implemented by a business to create the appropriate behaviours for the continuous superior performance of the business (Deutscher et al., 2016; Gatignon & Xuereb, 1997; Hakala, 2011), and mirrors the beliefs and mental models of the senior executives (Hitt et al., 1997).

A growing body of evidence deals with ecologically sustainable strategies and how business should be conducted to enhance environmentally sustainable and so-called “green” practices (Gast et al., 2017; Sarkis & Zhu, 2018), per Goal 12 of the SDGs (UNDP, 2017) to promote responsible consumption and production that are vital for the strategic outlook of a business. Extant literature indicates that there are numerous strategic orientations (Deutscher et al., 2016; Hakala, 2011; Schweiger et al., 2019). The orientations that have received the most theoretical and empirical attention from scholars are *market orientation*, *entrepreneurial orientation*, and *learning orientation* (Hakala, 2011; Schweiger et al., 2019), and the majority of the literature focuses on a specific orientation (Deutscher et al., 2016; Schweiger et al., 2019).

At its heart, a strategic orientation is a type of business culture that could exert an influence on decision-making at a corporate level (Narver et al., 1998). As a strategic orientation, market orientation refers to a business’s reaction to the wants of its customers and explains that it has its foundations in the culture of the organisation (Newman et al., 2016). A business’s market orientation is “the business philosophy adopted to explore, and meet customers’ needs or wants” (Lin et al., 2020, p. 3). Previous studies were consulted (Abdulsamad et al., 2021; Fatoki, 2019b; Green et al., 2015; Jiang et al., 2020; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020) to determine how market orientation from an environmental perspective – hence green market orientation – impacts how SMMEs deal with environmental sustainability within the F&B sector in South Africa. Concerning the consequences of strategic orientation, Hillary (2004) cautioned that corporate culture could be an obstacle to environmental sustainability, which is supported by Kok et al., (2019) who noted that subcultures within the business organisation can have a totally different and even contrasting culture than the corporate culture.

Acknowledging previous studies (Abdulsamad et al., 2021; Fatoki, 2019b; Green et al., 2015; Jiang et al., 2020; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020) this research focused on how a market orientation - from an environmental perspective, hence green market orientation - impacts how SMMEs deal with environmental sustainability within the F&B sector in South Africa. To understand the complex interplay of factors that are relevant to this study, literature concerning green market orientation, green management values, green internal practices, and green- or sustainable performance is presented in the following sections.

3.4.2 THE ORIGINS OF GREEN MARKET ORIENTATION

The decision-making style of the business, its management philosophy, and its corporate culture are all affected by a business orientation, which is a deeply engrained guiding principle (Wiklund & Shepherd, 2005). When facing ecological disasters or when confronted with challenges and pertinent market anticipations, the business orientation of a company dictates its aims or objectives, its approach towards the situation, and the actions taken (Li et al., 2018). The following section discusses the definition of market orientation, its extension to green market orientation, and the subsequent definition of green market orientation.

3.4.2.1 MARKET ORIENTATION AS THE FUNDAMENTAL

The foundation of modern marketing theory is market orientation (Jansson et al., 2017; Montiel-Campos, 2018; Wijesekara et al., 2016). It is universally accepted that marketing shapes a particular business strategy (Hunt & Lambe, 2000b), which represents a significant facet of a successful business culture. The seminal works by Kohli and Jaworski (1990), as well as Narver and Slater (1990), helped to propel market orientation into prominence. Kohli and Jaworski (1990) defined the market concept as a business philosophy, an idea, or a policy statement, suggesting that market orientation refers to the implementation of this marketing concept. In defining market orientation, various researchers have alluded to different aspects of the phenomenon, focusing on behavioural aspects (Jaworski & Kohli, 1993; Kohli et al., 1993); cultural aspects (Hunt & Lambe, 2000b; Kohli & Jaworski, 1990; Narver & Slater, 1990); or a combination of them (Homburg & Pflesser, 2000; Na et al., 2019; Oakley, 2012). The various definitions are presented in **Appendix A**. This study approached market orientation from a *cultural perspective*, arguing that the organisational culture and its decision-making abilities influence business performance (Abdulsamad et al., 2021; Green et al., 2015; Jiang et al., 2020).

From a behavioural stance, market orientation, according to Kohli et al. (1993) and Jaworski and Kohli (1993) is defined as: "The organisation-wide generation of market intelligence about current and future customer needs, dissemination of the intelligence across departments, and organisation-wide responsiveness to it" (Kohli & Jaworski, 1990, p. 6), which is criticised for its narrow view (Abdulsamad et al., 2021). The definition of market orientation that considers the cultural aspects, as identified by Kohli and Jaworski (1990) and Narver and Slater (1990), presents a better, more reliable and valid definition (Abdulsamad et al., 2021), stating that it represents: "The organisation culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers, and thus, continuous superior performance for the business" (Narver & Slater, 1990, p. 21). C. H. Wang (2020) concurs with the definition of Narver and Slater (1990), although specifying the "business's superior inter-functional collaboration and customer-linking capabilities", which would guarantee the business's superior performance (C. H. Wang, 2020, p. 3124). Ultimately, a market orientation empowers businesses to develop long-term customer value, facilitating the collection of critical information concerning market needs and trends, improving their decision-making capabilities (Nasution et al., 2011) and connection to their customers' needs, enhancing the organisation's performance (C. H. Wang, 2020).

3.4.2.2 EXTENSION OF MARKET ORIENTATION TO GREEN MARKET ORIENTATION

Due to growing ecological pressures, the implementation of a market orientation that integrates green resources and skills into their market orientation has become critical (Crittenden et al., 2011; Hart & Dowell, 2011) to create a competitive advantage and strategically align sustainability with marketing strategies (Crittenden et al., 2011). Market orientation should hence be extended to signify a green market orientation (Borazon et al., 2022; Li et al., 2018; Ngo, 2022b; C. H. Wang, 2020). By enhancing awareness of the environment, a change in consumers' buyer behaviour is envisaged that will instigate pro-environmental changes in regulations (Pawaskar et al., 2018).

Previous studies on the topic of market orientation have mostly concentrated on business profitability (Iyer et al., 2018; Jaworski & Kohli, 1993) devoting little attention to the relationship between market orientation and environmental sustainability. The notable exceptions are Crittenden et al. (2011) and J. González-Benito and Ó González-Benito (2005). Several studies (Cuerva et al., 2014; Perez-Sanchez et al., 2003; Triguero et al., 2013) have indicated that customer and stakeholder pressures urge SMMEs to develop environmentally friendly measures and that businesses devote considerably more attention to the environment provided it holds benefits for their

customers (Kammerer, 2009). Recently, the emergence of so-called green consumers has altered the competitive landscape of the business world (Fatoki, 2019b; Tjahjadi et al., 2020).

An extension of the market orientation concepts that look at it from a sustainable and environmental perspective (Green et al., 2015; Jiang et al., 2020; C. H. Wang, 2020) argues that sustainable development creates superior value for customers. Scholars have classified market orientation into various dimensions (Jiang et al., 2020), distinguishing *organisational performance*, *customer consequences*, *innovation consequences*, and *employee consequences*. Green market orientation, which is a novel construct, is situated in another category of *environmental consequences*, according to Chen et al. (2015) and Green et al. (2015). As an extension of market orientation (Borazon et al., 2022; Li et al., 2018; Ngo, 2022b; C. H. Wang, 2020) green market orientation reflects business orientation that encompasses a commitment to the environment (Jansson et al., 2017; Menon & Menon, 1997) by acknowledging the difficulties related to environmental concerns (Li et al., 2018).

3.4.2.3 DEFINITION OF GREEN MARKET ORIENTATION

Initially, green market orientation was defined as “the recognition of the importance of environmental issues facing their businesses” (Banerjee et al., 2003, p. 106), which was later expanded to incorporate the philosophy of a business to determine and address the requirements and wishes of its customers through its products and services (Li et al., 2018). Li et al., (2018) defined green market orientation as “a firm robustly exploring and developing environmental competencies, products, and services to achieve superior performance by influencing the acquisition and deployment of organizational resources that can lead to unique capabilities and ensure the success of environmental management” (Li et al., 2018, p. 926). The latter definition expands the initial one of Banerjee et al., (2003) in terms of details about the customer. In contrast, C. H. Wang (2020) refers to green market orientation as “an inter-functional organisation that responds to social and environmental needs of its customers, facing competitors' engagement in environmental management” (C. H. Wang, 2020, p. 3124). This view embraces the components of green market orientation (i.e., green customer orientation, green competitor orientation, and green inter-functional coordination). It also considers the response of the business in terms of social and environmental aspects (Fatoki, 2019b; C. H. Wang, 2020), linking with the definition by Cheng and Krumweide (2012).

With the existing definitions in mind, this study defined green market orientation as the ability of a business to acknowledge the environmental issues businesses are confronted with, as well as the discovery and development of the necessary ecological skills, products, processes, and services to address these environmental issues. Moreover, it is the response to the social and environmental engagement with their competitors in environmental management to achieve superior performance (Cheng & Krumwiede, 2012; Li et al., 2018; C. H. Wang, 2020).

3.4.3 MULTIDIMENSIONALITY OF GREEN MARKET ORIENTATION

Superior customer value can be achieved by implementing the marketing concept in numerous ways for example, through a market orientation, and a green market orientation (Tsiotsou, 2010). C. H. Wang (2020), Jiang et al. (2020), Borazon et al., (2022), as well as Fatoki (2019), considered green market orientation as a multidimensional construct and disentangled three components, each having its own locus of interest and activities (C. H. Wang, 2020) per previous discussions of Kohli and Jaworski (1990) that were supported by Narver and Slater (1990). The three sub-constructs of green market orientation namely green customer orientation, green competitor orientation, and green inter-functional coordination are explicated in the following sections.

3.4.3.1 GREEN CUSTOMER ORIENTATION

Background: The increasing demand for green products and services should not be overlooked or ignored by any producer or service provider that wants to achieve a long-term, sustainable competitive advantage (Y. Zhou, 2018). Subsequently, universally, manufacturers and service providers are now introducing green products and related solutions to the market (Y. Zhou, 2018). Green customer orientation is crucial for any organisation's connection to its market (Deshpandé et al., 1993; Frambach et al., 2016; Kohli & Jaworski, 1990), being the central and first component of green market orientation (Liao, 2018; Narver & Slater, 1990; C. H. Wang, 2020). It is considered a driver for organisational performance (Abdulsamad et al., 2021; Frambach et al., 2016; Kirca et al., 2005), and is a key dimension of green market orientation as it best reflects the core of the marketing concept (Deshpandé et al., 1993; J. K. Han et al., 1998; Pekovic et al., 2016). Green customer orientation is the strategic orientation that has received the most attention and has long been recognised as a valuable strategic orientation for SMMEs (Ngek, 2019), including other organisations (Gatignon & Xuereb, 1997; Q. Wang et al., 2016; K. Z. Zhou et al., 2005). It represents an organisation's tactical stance towards its customers (Kohli & Jaworski, 1990; Narver & Slater, 1990), indicating how strategic orientations, which are deemed as strategic assets or

resources, are positioned, and utilised that signify value in achieving performance and competitive advantage (Ziggers & Henseler, 2016).

Green customer orientation, being a component of green market orientation, as well as a strategic orientation, involves all pursuits required to generate information, disseminate it within the firm, and take the required actions to respond to both the current and future needs of the customer (Jaworski & Kohli, 2017; Linder, 2019). Kohli and Jaworski's take on green customer orientation focuses on the firm's establishment, distribution, and openness to market intelligence (Kohli & Jaworski, 1990). Their view is supported by Narver and Slater (1990), who distinguish the three behavioural components as indicated before. Green customer orientation is a responsive construct that is reactive in nature (Slater & Narver, 1998). Being customer-oriented involves an understanding of the articulated desires of the firm's customers in the marketplace, and in manufacturing products and services that gratify those needs (Eggers et al., 2013; Slater & Narver, 1998). This type of philosophy may, however, be a dangerous strategy to employ as it may lead to firm failure in dynamic markets, despite being suitable and useful in stable market environments (Eggers et al., 2013). Being customer-led allows the organisation to focus on the customer, who becomes central to all the efforts in the organisation, to drive business performance as it better serves and provides for customers (Eggers et al., 2013).

Related definitions: Many scholars (Frambach et al., 2016; Ngeek, 2019; Pekovic et al., 2016; Q. Wang et al., 2016) have adopted the definition by Narver and Slater (1990), stating that green customer orientation is “the sufficient understanding of one’s target buyers to be able to create superior value for them continuously” (Narver & Slater, 1990, p. 21). Pekovic et al. (2016) further add that in understanding one’s target buyers, the firm needs to have the ability to identify, appreciate and respond to those buyers. Although similar to the Narver and Slater definition, Liao (2018) describes it as a process of adding value, stating that it includes getting to know customers’ consumption abilities, inclinations and activities so that the firm can satisfy their desires on a dynamic basis (Liao, 2018). Contrary to Narver and Slater (1990), Ziggers and Hensler (2016) define green customer orientation as “the degree to which the organisation obtains and utilises information from customers to establish a strategy that will meet customers’ desires and implements it by being responsive to the needs and wants of the customers reflecting the organisation’s understanding of its target customers” (Ziggers & Henseler, 2016, p. 19). This definition relates to strategy and how customer information is used to meet customers’ desires and wants. Similarly, Linder (2019) states that a green customer orientation indicates “the degree to which the organisation obtains and uses customer information, including actions taken to

produce a strategy according to the desires of the customer and how to implement and respond to those requirements” (Linder, 2019, p. 107).

Another slant by Deshpandé et al. (1993), is that green customer orientation represents “the set of beliefs that put the customer’s interest first, while not excluding those of all other stakeholders such as owners, managers, and employees, to develop a long-term profitable enterprise” (Deshpandé et al., 1993, p. 27). This view is supported more recently by Domi, Capelleras, and Musabelliu (2020), indicating that it is a way for an organisation to achieve competitive advantages by generating product value, that favourably impacts performance. For SMMEs, the lack of economies of scale and long-term view drives them towards a green customer orientation focusing on formulating goals and directing actions (Domi et al., 2020). Because SMMEs are close to their customers, they can meet customer needs quickly and are more flexible in doing so (Domi et al., 2020; Keskin, 2006).

This study relied on the definition of green customer orientation as formulated by C. H. Wang (2020), who described the phenomenon as developing information concerned with major environmental changes to comply with customers’ ecological conservation concerns. It furthermore encompasses how a business obtains and uses customers’ information to establish a strategy that will aptly address customers’ needs and concerns (Kohli & Jaworski, 1990; Ziggers & Henseler, 2016). Green customer orientation has green market-sensing and customer-linking capabilities (Ziggers & Henseler, 2016) that will increase businesses’ green environmental performance beyond that of others that do not follow a green customer orientation (C. H. Wang, 2020), even enabling businesses to outperform competitors because they understand customers’ needs, and can amend products and services accordingly, to meet and forecast demand in terms of product standards, distribution, consistency and reliability, boosting customer satisfaction (Ziggers & Henseler, 2016).

Green customer orientation is distinguished in terms of different components/elements. On the one hand, Dawes (2000) and Ziggers and Hensler (2016) specify two components, namely **green customer sensing** (Ziggers & Henseler, 2016), also termed green customer analysis (Dawes, 2000), and **green customer responsiveness** (Dawes, 2000; Ziggers & Henseler, 2016). In another approach, Pekovic et al. (2016), specify three different dimensions of green customer orientation that remind us of the theoretical dimensions of attitude, namely **affective-**, **cognitive -**, and **responsive** dimensions, which are discussed below.

Green customer sensing/green customer analysis implies that businesses collect information about customers' requirements and preferences as dynamic elements (Ziggers & Henseler, 2016) to enable them to understand customers' concerns, and detect future customer preferences and tastes, to predict future trends (Ziggers & Henseler, 2016) generating insights to make informed business decisions (Varadarajan, 2020). Dawes (2000) explains that it encompasses the analysis of customer needs and the greater forces that shape those needs, which Pekovic et al. (2016) have referred to as the cognitive dimension that mirrors an organisation's ability to produce, distribute and answer the market intelligence (Kohli & Jaworski, 1990; Pekovic et al., 2016). This information can be obtained through meetings and discussions with trade partners, customer surveys, and an analysis of sales reports (Ziggers & Henseler, 2016). The generation of information through customers was first highlighted by Deshpandè et al., (1993) who argued that customers can define problems and can provide solutions. Customer-firm interaction provides necessary inputs to improve efficiency and effectively allows for the capturing of market information (Ziggers & Henseler, 2016).

Green customer responsiveness: From a green customer responsiveness perspective, firms must reply to the information generated through customer interactions. Responsiveness, in this sense, refers to measures taken in reply to information or intelligence that is created and distributed (Kohli et al., 1993; Ziggers & Henseler, 2016). Dawes (2000) explains that it comprises actions taken in response to information about customer needs or market dynamics. According to Pekovic et al. (2016), this dimension denotes an organisation's attempts to determine, comprehend and gratify the requests articulated by customers including value-adding activities (Narver et al., 2004). Through interaction with customers e.g., customer relationship management, and inter-organisational teams, a customer orientation profile is established (Nwankwo, 1995; Ziggers & Henseler, 2016) to select target markets and create and present products that accommodate customers' present and foreseeable needs. It furthermore includes the manufacture, distribution, and promotion of products in a manner that will entice the customer (Nwankwo, 1995; Ziggers & Henseler, 2016).

Affective dimension: Also referred to as the cultural approach, the affective dimension is referred to by Pekovic et al. (2016) who recognize the dual outlook of the behavioural approach of Kohli and Jaworski (1990), and the cultural approach of Narver and Slater (1990). This dual perspective is also embraced by Homburg and Pflesser (2000). The affective dimension presents the culture of the organisation that successfully and competently establishes behaviours (the **responsive dimension**) that produce superior value for buyers, which is mirrored in the organisation's performance

(Narver & Slater, 1990; Pekovic et al., 2016), and is linked to the values and norms of the organisation (**cognitive dimension**) (Pekovic et al., 2016).

Industry sector influences on green customer orientation: For SMMEs to be strategically relevant, customer orientation must incorporate business objectives, resources, and competencies to achieve green environmental performance (Linder, 2019). *Green customer sensing* allows firms to identify and assess new manufacturing opportunities, mobilise the necessary resources to take advantage of this opportunity and capture its value by engaging in renewal activities (Linder, 2019). A business's generation and dissemination of information is deeply entrenched in its *responsiveness*, hence its interaction with customers and consumers (Linder, 2019; Q. Wang et al., 2016). From a service perspective, a green customer orientation implies service providers' competency and long-term commitment to acknowledge customer's expressed and hidden or future needs, innovating solutions to achieve superior value for them (C. M. J. Lee et al., 2021). Nowadays, in a service environment, green customer orientation is vital (Q. Wang et al., 2016) and is an intangible resource from an R-A theory perspective (Bicen, 2021; S. D. Hunt & Morgan, 1995) that can be a successful strategy to achieve a sustainable competitive advantage for SMMEs (C. M. J. Lee et al., 2021). A constant exchange of dialogue between customers and a business in a service environment permits customers to detect whether a company is indeed offering greater value in the particular service domain, which is described as an informational and relational resource for R-A theory (Bicen, 2021; S. D. Hunt & Morgan, 1995). Being customer-oriented in a service organisation implies attending closely to the voice of the customers (C. M. J. Lee et al., 2021) as a key source of information that provides multiple perspectives of various stakeholders, who all have a claim on the natural environment. Businesses with a green customer orientation can achieve a competitive advantage by developing certain competencies as a resource (which are VRIN), and which do not necessarily require huge capital investment in a service setting (C. M. J. Lee et al., 2021).

3.4.3.2 GREEN COMPETITOR ORIENTATION

Background: Impacted by increasing environmental degradation, rising laws and regulations, and growing customer and stakeholder expectations, organisations have accepted the inevitability of incorporating environmental issues into their strategic orientations to improve sustainable performance (Jiang et al., 2020). As the second component of green market orientation, green competitor orientation is an important strategic orientation (Gatignon & Xuereb, 1997; K. Z. Zhou et al., 2005), representing marketing's contribution towards the business strategy (S. D. Hunt & Lambe, 2000) that

may even have negative consequences on a company's performance if a strong preoccupation with competitors and competitive intelligence develops (Sørensen, 2009). Evidence of a negative impact on financial performance also exists (Armstrong & Collopy, 1996). Rather than being treated as a target, competitor information should be an input into the process of strategy formulation (Armstrong & Collopy, 1996; Sørensen, 2009).

Accordingly, competitor-oriented activities must be included in green market orientation to ensure that businesses have a well-adjusted customer and competitor orientation (Day & Wensley, 1988), where both customer and competitor orientations are prominent (S. D. Hunt & Morgan, 1995), and green market orientation "skills" cannot be defined excluding competitors and competitive substitutes (Sørensen, 2009). Thereby, it is admitted that customer- and competitor orientations both provide various types of valuable information to guide business decisions (Slater & Narver, 1994). The purpose of a green competitor orientation, therefore, is to provide a firm foundation of environmental intelligence relating to present and potential competitors, for executive action (Sørensen, 2009).

Van Horen, van der Wal, and Grinstein (2018) are of the view that competition could even be a strategy that promotes sustainable behaviour. A thorough understanding of the resources, goals, and strategies of competitors is an essential component of a good competitive strategy (Arnett et al., 2021). Managers are expected to develop forecasts of the future actions of competitors and to react swiftly to changes in competitors' strategies (Arnett et al., 2021). Furthermore, they are expected to benchmark their own activities against those of their competitors and assess their marketplace positions, striving to develop sustainable competitive advantages over their competitors (Arnett et al., 2021). However, a manager first needs to know who their competitors are to formulate their strategic decisions. Motivation to compete has always been a fundamental part of human nature that is present in all societies around the world and is discussed in various literary disciplines (van Horen et al., 2018). Competition typically has three characteristics: a challenge between two or more persons; being inspired by the likelihood of obtaining a variety of benefits; and gambling on relative instead of absolute performance (van Horen et al., 2018).

Competition is a major part of market economies, often driving businesses to pursue greater market share. However, competing for greater market share often comes at a cost to the environment, influencing the natural resources adversely. Furthermore, cooperation, rather than competition could be a more suitable strategy when striving for a sustainable environment (van Horen et al., 2018), while competition may not

necessarily encourage sustainable behaviour as it might seem inappropriate. Nevertheless, competition may develop deeper participation and motivation, bringing about diverse and varied solutions, be highly rewarding and can create excitement (van Horen et al., 2018).

As indicated before, a business needs to identify its major competitors to formulate a competitive strategy, which is achieved by using market commonality and resource similarity are the frameworks for competitor identification (Peng & Liang, 2016). Competing businesses have common contact in a market, which is more severe if they are direct and immediate competitors. Similarly, resource similarity refers to the extent to which a competitor possesses strategic gifts that are comparable to another business (Peng & Liang, 2016). Although each business possesses a specific, exclusive profile, and a set of strategic resource gifts, they may operate in a market that is common to both (Peng & Liang, 2016). This could create competitive tension if the one that creates more value for the customer, gains a competitive advantage over the other.

In SMMEs, because of limited resources, a green market orientation culture can represent a competitive advantage. Because SMMEs are smaller in size, they understand their customers and their competitors, and to simplify the competitive environment they may adopt a customer-oriented perspective, or a competitor-oriented outlook (Day & Wensley, 1988; O'Dwyer & Gilmore, 2019). Whilst it may be beneficial to have both viewpoints, most businesses favour one over the other. Many SMMEs may be more familiar with their customers and do not focus on competitor identification. However, failure to identify competitors leads to SMMEs being ignorant of the extent and impact of the competencies, networks and experiential learning of competitors and how knowledge of them may advance a competitive advantage (O'Dwyer & Gilmore, 2019). The identification of competitors will allow SMMEs to compare information about vital skills and resources within the competitive landscape, to position themselves more competitively.

Related definitions: Ultimately, green competitor orientation encompasses a company's consideration of a current and potential competitor's short-term strengths and weaknesses, and long-term capabilities and strategies (Narver & Slater, 1990). Jiang et al. (2020), concur although indicating that green competitor orientation also refers to a company's ability to learn more quickly than its competitors about pertinent issues. Further extending Narver and Slater's definition, G. P. Wang and Miao (2015) include the aspect of monitoring strengths and weaknesses, capabilities, and strategies of the current and potential competitors. They argue that monitoring reflects competitor

intelligence on the subject and signifies a deep understanding of the trends of the competitors that captures current and emerging tactics, which are a good yardstick for more effective establishment of customer value (G. P. Wang & Miao, 2015), and technologies that can please the existing and expected desires of the company's target market (Narver & Slater, 1990). Conversely, Bendle and Vandenbosch (2014) see a competitor orientation as a focus on winning the competition rather than profit maximisation. Even though organisations are called to maximise shareholder wealth, as depicted in traditional economic theory, managers do not always explicitly pursue the maximisation of profits when following a green competitor orientation (Armstrong & Collopy, 1996; Bendle & Vandenbosch, 2014). On the contrary, C. H. Wang (2020) defines green competitor analysis as "a set of behaviours associated with acquiring, disseminating, and processing competitors' environmental strategy information" (C. H. Wang, 2020, p. 3125). This definition differs from the rest in that the competitor information is acquired or obtained, distributed between various functional or business units, and processed or evaluated thoroughly to obtain the key aspects of their environmental strategy.

3.4.3.3 GREEN INTER-FUNCTIONAL COORDINATION

Background: In today's ever-changing, fast-paced environment, businesses have to restructure and rebuild their management and organisation approaches to meet the new competitive conditions. One of the main mechanisms that may assist businesses to survive and achieve a competitive advantage, is green inter-functional coordination (Bartošek & Tomášková, 2013). In a component-wise approach to green market orientation, most studies have focused on green customer orientation and green competitor orientation overlooking green inter-functional orientation (Mohiuddin Babu, 2018; Tsiotsou, 2010). Largely, the level of a firm's green market orientation is influenced by green inter-functional coordination through inter-functional conflict and connectedness (Jaworski & Kohli, 1993; Ruekert & Walker, 1987). As the third of the three components of green market orientation, green inter-functional coordination, plays a key role in implementing a business's green customer orientation strategy (Lengler et al., 2013; Mohiuddin Babu, 2018). To optimise long-term business profits, the implementation of the marketing concept is instrumental. However, the skilful integration of all other business functions with those of marketing is a precondition (Tsiotsou, 2010). Subsequently, green inter-functional coordination plays the dual role of providing intelligence about the market and environment, as well as integrating the resources of the business to achieve its green customer orientation goals (Auh & Menguc, 2005b; Mohiuddin Babu, 2018).

The nature of the interactions between departments and units in business varies as they have different strategies, and these differences may have significant inferences for the effective implementation of those strategies (Ruekert & Walker, 1987). It requires that the departments and functional areas work together and dispel any conflicts. Research has supported the view that greater green inter-functional coordination through diversity is likely to develop and encourage diverse approaches to problem-solving. When employees across departments work together, a common goal, problem-solving capabilities and reaction times are increased (Rapp et al., 2012). The degree of communication and cohesiveness is vital for green inter-functional coordination (Rapp et al., 2012).

Related definitions: Narver and Slater (1990), and other scholars later on (Jiang et al., 2020; G. P. Wang & Miao, 2015), define green inter-functional coordination as the coordinated utilisation of firm resources in establishing superior value for specific customers. This definition, unlike Jiang et al. (2020) and G. P. Wang and Miao (2015) targets specific customers and indicates that the communication, collaboration, coordination, and cohesion between the different functional areas target specific customers. This suggests that anyone within the organisation can generate value if they act accordingly (Auh & Menguc, 2005a). Auh and Menguc (2005b, 2005a) refer to green inter-functional coordination as a key form of internal social capital of an organization when interpreted in terms of social capital theory. Established networks generated value through greater access to social resources, including contacts and relationships, which in turn assists in achieving certain goals. Furthermore, green inter-functional coordination is a structural mechanism for enhancing these common goals and objectives in the organisation and is viewed as a means to foster greater communication, collaboration, and cohesiveness, which enhances the relationships between groups who differ in terms of functional knowledge, experience and education levels (Auh & Menguc, 2005b). This paves the way to build trust and commitment between top management, who are from diverse backgrounds, thus strengthening the bonds and relationships among them (Auh & Menguc, 2005b).

More recently, green inter-functional coordination is described as referring to the teamwork of various sections of a business that can produce, gather, and distribute market environmental intelligence, encouraging unity, communication, and trust between the different functional sections of a firm to enhance superior sustainable performance (Auh & Menguc, 2005b; C. H. Wang, 2020). By including teamwork, unlike the definitions by Jiang et al. (2020) and Narver and Slater (1990), the definition by C.H. Wang (2020) provides inclusion through unity, incorporating the trust aspect. This definition enhances the image of the firm by expressing environmentally friendly

surroundings to customers and recognising the value of sustainable performance. Therefore, this study will use this definition.

3.5 GREEN MANAGEMENT VALUES

Managerial personality, especially in relation to their values and goals, are inseparable from business objectives (Zainol & Ayadurai, 2011). Furthermore, managers' personal values and their motivation according to Zainol and Ayadurai (2011) influence the business and the management practices that are implemented, ultimately affecting the success of their businesses. Personal values are considered to be the most influential leader characteristics (Ling et al., 2007) and business performance can be seen as reflections of the values and cognitive bases of powerful actors in the organisation. Values are key to understanding the relationship between managers' personal characteristics and the firm's performance.

SMMEs, unlike large organisations, have a flatter and more informal organisational structure allowing ownership, control, and operations to be managed by a single person or a small group of individuals (referred to as management influence going forward) (Jenkins, 2009; Parry, 2012). Considering this management influence, it is hardly surprising that scholars have shown great interest in researching pro-environmental behaviours, attitudes, values, and knowledge of these individuals to explain environmental sustainability practices (Cassells & Lewis, 2011; Williams & Schaefer, 2013). Due to the specific nature of SMMEs, management influence has the potential to significantly impact decision-making and the culture of a business (Jansson et al., 2017). The next section provides insight from prior research.

3.5.1 PREVIOUS RESEARCH

Literature links personal values with sustainable conduct and leadership behaviours (Ahmić et al., 2016; Nedelko & Potocan, 2021). However, the issue of how the personal values of leaders, such as the owner-managers of SMMEs specifically - in their capacity as managers of their businesses – influence the behaviours of businesses, deserves more attention. Several scholars have indeed confirmed a connection between the attitudes and personal values of managers and the implementation of environmental practices in their businesses (Cassells & Lewis, 2011; Williams & Schaefer, 2013). Accordingly, the owner-manager of an SMME accepts the responsibilities that may extend beyond mere financial objectives, considering social and environmentally responsible actions (Chasse & Current, 2018; Jenkins, 2009). Environment-related behaviours specifically, are associated with enhancing green purchasing behaviours. Channa et al. (2021) explain that behaviours that focus on the

protection of the environment precipitate environmentally friendly actions. Therefore, individuals (business owners) who are more concerned about the environment are more likely to display environmentally friendly behaviours in their conduct (Albayrak et al., 2013). Several studies (Bansal & Roth, 2000; Nedelko & Potocan, 2021; Papagiannakis & Lioukas, 2012) have noted the significance of managers' personal values concerning environmental responsiveness, indicating that personal values do indeed predict managers' behavioural orientations (Nedelko & Potocan, 2021). Two decades ago, Bansal and Roth (2000) stated that the personal values of owner-managers impact the environmental responsiveness of their businesses because values guide decision-maker's distinction between significant and insignificant aspects of the business (Papagiannakis & Lioukas, 2012). Also, ingrained personal values may inspire individuals (owners of the businesses) to champion environmental responses, changing the way owner-managers operate their businesses, which is particularly noteworthy if that change is aligned with personal green values (Andersson & Bateman, 2000; Papagiannakis & Lioukas, 2012).

Lombardi et al. (2020) explored how the personal values of entrepreneurs impacted strategic decision-making and related outcomes, concluding that personal values influence strategic entrepreneurship and ultimately, business performance. This is particularly true and evident in SMMEs, as the behaviour of the owner-manager of a business influences others' perceptions of the business (Aragón-Correa et al., 2008) while the personal values and opinions of the owner-manager, affect the behaviour (operation) of the business (Chasse & Courrent, 2018). This supposes a link between personal values and business practices, as well as managerial actions. Subsequently, owner-managers would, based on their personal values, establish the strategic orientation of the particular SMMEs, as well as their practices following set targets, objects, and values (Aragón-Correa et al., 2008; Cassells & Lewis, 2011; Roxas & Coetzer, 2012).

3.5.2 DEFINITION AND CHARACTERISTICS OF VALUES

Changing social position within a social group alters man's relationship to values as they are dynamic, making it difficult to define values (Ahmić et al., 2016). Reviewing the numerous definitions of values, Bilsky and Schwartz (1994) highlight five common features, namely that values...:

- are beliefs or concepts,
- are about looked-for end states or behaviours,
- surpass specific circumstances,
- direct choice or assessment of behaviour and events, and

- are ordered by relative importance.

Despite numerous definitions of values, some of the most common definitions include:

- “An enduring belief that a particular mode of conduct or that a particular end-state of existence is personally and socially preferable to alternative modes of conduct or end-states of existence” (Rokeach, 1968, p. 550)
- “Values are desirable, trans-situational goals, varying in importance that serve as guiding principles in people’s lives” (Schwartz, 1999, p. 25).
- “Values are cognitive representations of the important human goals or motivations about which people must communicate to coordinate their behaviour” (Bilsky & Schwartz, 1994, p. 164).

Converse to emotions and attitudes, values are relatively stable and cannot be easily changed (Ahmić et al., 2016; Rokeach, 1968). According to Bardi and Schwartz (2003), values are drivers and motivators of behaviour. Therefore, personal values carry implications for the behaviour of leaders and managers and impact their decision-making and management characteristics (Ahmić et al., 2016). Personal values are the nexus between decision-making and managerial values in the organization, the nexus between organizational values and managerial values, and the nexus between managerial values and strategy (Ahmić et al., 2016).

3.5.3 GREEN MANAGEMENT VALUES IN PERSPECTIVE

People’s adverse impact on the global ecosystem is increasing, elevating the importance of studying human-nature interactions (Duff et al., 2022). Despite rising awareness of environmental issues (Milfont et al., 2017), people’s indifference to ecological degradation continues to be ubiquitous (Bengston et al., 2019; Duff et al., 2022), hindering the expansion of a global sustainability movement (Duff et al., 2022). More than two decades ago, already, the environmental movement was positioned as a conflict and as a series of trade-offs between development versus protection (Schultz & Zelezny, 2003). For example, economic growth versus environmental safeguarding; convenience or sacrifice; and trees versus employment. Noteworthy, is that people’s lifestyle choices concerning the environment are linked to their values (Schultz & Zelezny, 2003). Consequently, it has become vital for scholars to understand why some people are more anxious about ecological issues than others (Stern et al., 1993). The following sections explicate values, the influence that they have, their involvement in business, and their association with green internal practices and ultimately with green performance.

3.5.3.1 MANAGERS'/EMPLOYEES' VALUES, ATTITUDES, AND BEHAVIOUR

The personal values concept is one of the most imperative psychological individualities of man. It governs the individual and common sense of a man and has a great motivational perspective of affecting all the desires, thinking, and workings of man (Ahmić et al., 2016). Values are infused into every individual decision, action, and lifestyle of man and his society, representing important life goals (Schultz & Zelezny, 2003); standards which serve as guiding principles in the life of a person (Schwartz, 1992); necessary trans-situational objectives which differ in importance (Bilsky & Schwartz, 1994); qualities that enhance an individual's enduring and distinctive forms of feeling, thinking and behaviour (Asah et al., 2015). The seminal work of Rokeach (1968) illustrates that values serve as an organisational structure (Schultz & Zelezny, 2003). Key features of values include that they mirror a belief in the desirable outcome, or a preference (de Groot & Steg, 2008). Furthermore, values are conceptual and cut across specific situations, serving as guiding principles for choosing or determining behaviour, people and events (de Groot & Steg, 2008). Lastly, values follow a priority based on what is most relevant to act on.

Both values and beliefs are relevant concerning people's willingness to take pro-environmental actions (Stern & Dietz, 1994), as values determine or influence people's behaviour (Weber, 1990) and can either be compatible or in conflict with one another. For example, conformity and security are adjacent on the value continuum of (Schwartz, 2012), and are hence compatible values, while benevolence and power are opposite to one another and conflicting. Compatible or congruent values are synergistic and when one is pursued, the other is also relevant, while conflicting values will not be pursued simultaneously. The first dimension of the value structure, as displayed in **Figure 3.2** is "openness to change", and is clustered with "conservation", which differentiates values that enhance openness to new things and ideas (such as self-direction and stimulation) from values that highlight tradition and conformity (de Groot & Thøgersen, 2013). The second dimension differentiates values that emphasize the interest of others, society, and nature (i.e., universalism and benevolence) from those stressing self-interest (i.e., power and achievement) (de Groot & Thøgersen, 2013). The self-transcendence versus self-enhancement dimension is analogous to altruistic and egoistic values. This cluster is associated with environmental beliefs, norms, and related behaviours (Stern et al., 1993; Stern & Dietz, 1994).

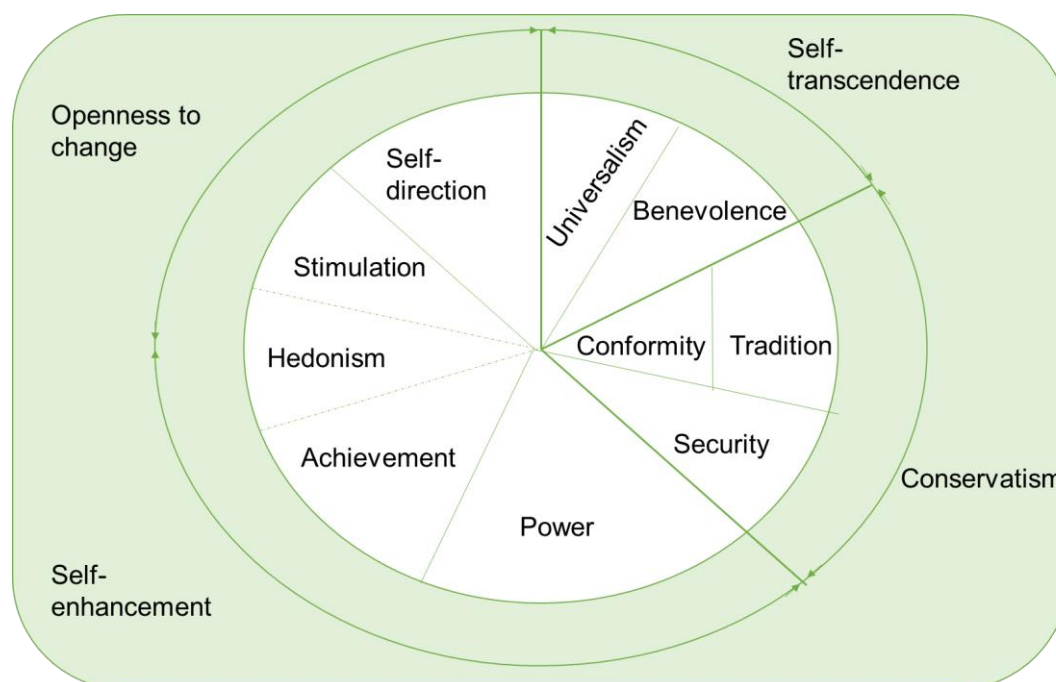


Figure 3.2 - The motivational types of values

Note: An overview of the various types of values that Swartz identified. From *Values and personality* by W. Bilsky, and S. Swartz. (1994). *European Journal of Personality*, 8(3), 163-181.

In his social learning theory, which is an expectancy-value theory model, Rotter (1982) explains how personal values influence choice, determination, and performance. Similar to Schwartz's value theory (1992), it supports the likelihood that a specific behaviour will culminate as a function of an individual's expectation. It will support one's goals and honour the values that are associated with those goals. Personal values are considered the most influential characteristics that drive people's behaviour (Ling et al., 2007), and business performance can be seen as a reflection of the values and cognitive deliberations of powerful actors (managers and employees) within the organization. Values, therefore, are vital to understanding the interaction between an entrepreneur's personal characteristics and business performance.

3.5.3.2 THE RELEVANCE OF PERSONAL VALUES FOR BUSINESS CONDUCT

Businesses' drive towards environmentally friendly operations to protect the environment may be inspired by several reasons including an organisation's personal preference in embracing environmentally friendly procedures to honour their responsibility to the environment (Dangelico, 2015). It may also be a result of an organisation's responsiveness to growing customer demand for green products and services, thereby, fuelling the customer-driven business ideology (Chang & Fong, 2010). It may also be due to government regulations intended to ensure sustainable business growth (Tang et al., 2018). Acknowledging the reality of green economies,

businesses are encouraged to incorporate environmental goals in their organisational objectives and targets as part of the sustainability-performance nexus (Mohd Saudi et al., 2019).

There is a paucity of information about how owner-managers of SMMEs perceive the environmental issues in their activities (Hasan et al., 2020). The developing country's standpoint is of vital importance due to the links between economic development and ecological harm. Existing studies on SMMEs and the environment from a developing country context mostly indicate barriers that SMME owner-managers experience in taking pro-environmental initiatives (Agan et al., 2013). The perpetuating effects of environmental degradation have also driven businesses to devote more attention to establishing green products and services, pushing their businesses towards green behaviour that involves management teams and employees (Bartolacci et al., 2020; Boakye et al., 2020; Uddin et al., 2021). Businesses are, subsequently, aligning their environmental strategies to the values of the management, which will influence the attitudes of their employees towards advantageous and accountable environmental behaviours (Cop et al., 2020; Latan et al., 2018; Uddin et al., 2021). Research indicates that managers who are serious about the environment, influence pro-environmental behaviours in the workplace by implementing green practices (Andersén et al., 2020; Cop et al., 2020; Robertson & Carleton, 2018).

Environmental sustainability at the business level is primarily shaped by and depends on individual-level pro-environmental behaviour (Robertson & Carleton, 2018), which is influenced by values (Rahman & Reynolds, 2019). The ongoing debate is still whether environmental values will stimulate people's environmentally friendly behaviours (Hu et al., 2016) considering that managers' values and goals are intertwined with the business objectives of the organization (Ahmić et al., 2016; Zainol & Ayadurai, 2011). Top management is often the owners of SMMEs, implying that in small, pro-environmentally oriented businesses, the personal values of owner-managers will play a more enhanced role in motivating pro-environmental behaviours compared to other SMMEs (Ahmić et al., 2016; Jansson et al., 2017; Lawrence et al., 2006). This study, therefore, examines how green management values of SMME owner-managers enhance the relationship between green market orientation and green practices, to improve green performance.

3.5.3.3 *THE RELEVANCE OF MANAGEMENT VALUES FOR BUSINESS CONDUCT*

The social roles that businesses play and their responsibilities to the surrounding society have been debated (Setó-Pamies & Papaioikonomou, 2016). Values influence how people perceive and experience events, deal with situations, and how to evaluate other individuals and their values (Alsaad, 2018). Individuals get involved in business actions due to different motivations that could be a push motivation (i.e., through being forced) or a pull motivation (i.e., by spotting an opportunity) (Asah et al., 2015). Values, thus, serve as a compelling justification for human behaviour, serving as standards for evaluating and assessing conduct and forming the foundation of individual perception (Gorgievski et al., 2011).

The success criteria that direct business owners' behaviour reflect their value orientation, suggesting that the personal values of SMME owner-managers greatly control management decisions and performance and that the managerial skills of an owner are vital resources for the success of the SMME (Asah et al., 2015). Banerjee (2001) states that the role of the manager is central in the progression of assimilating ecological matters into management decision-making due to the significant impact that managerial skills have on the tactical decisions of the SMME and their implementation (Asah et al., 2015). As managers' responsibilities increase, involving more intricate and comprehensive resolutions, they require - as an essential guide for organizational behaviour - a corporate values standard, which then forms the foundation of businesses' corporate culture (Asah et al., 2015). These values provide a sense of common direction for all employees and present guidelines for their day-to-day behaviour, as the business's philosophy for achieving its goals. Therefore, for a business that has corporate value principles, its managers and employees know what their business stands for, and what principles they are to uphold, so that they are more likely to make decisions that will support those principles (Asah et al., 2015). Both managers and employees should, therefore, align their personal values to those of the business to achieve organizational and personal goals because both personal and organizational values provide the basis for implementing the business strategy, mission, and structure. Consequently, a vital key to greater organizational effectiveness is a close link between personal and organizational values.

3.6 GREEN INTERNAL PRACTICES

3.6.1 BACKGROUND

In the tourism and hospitality industry, green practices can be primarily traced back to the notion of sustainable tourism and have been widely addressed (Chou et al., 2012; Luo et al., 2021). As environmental practices in owner-managed businesses are based on personal values (Chasse & Courrent, 2018), concern about the environment is likely to ensure that businesses will implement green practices. Driven by the enhanced decline of the environment over time, scholars and experts are increasingly focusing on how green practices, that incorporate the three Rs, namely reduce, reuse, and recycle (Mohindra, 2008), can be implemented to advance business performance (Suganthi, 2019). Green practices, however, also include other initiatives, such as pollution prevention practices, green product development practices (Miroshnychenko et al., 2017), energy and water efficiency, eco-friendly cleaning materials (R. Wang, 2012), environmental management practices (Jabbour et al., 2012; Li et al., 2018), and green supply chain management practices (Green et al., 2015; Kuei et al., 2015; Miroshnychenko et al., 2017; Zailani, Eltayeb, et al., 2012).

3.6.2 WHY ARE GREEN PRACTICES REQUIRED?

F&B businesses have come under increasing pressure from various actors such as consumers, governmental and non-governmental organisations, and other entities who all require that these businesses improve their sustainable practices across their operations, as their operations have very significant ecological and social impacts (Adams et al., 2023). Being a service industry, the F&B industry has largely impacted the environment negatively by contributing to greenhouse gas (GHG) emissions (Chou et al., 2012; Gössling et al., 2024). The tourism industry, which the F&B industry is a part of, has been seen as one of the least sustainable economic sectors in the world (Gössling et al., 2024). According to the Energy Information Administration (EIA), the two most energy-intensive commercial buildings are restaurants and food sales buildings due to their refrigeration, cooking, and food preparation activities (Nano LiquiTec, 2016). Food establishments in the USA, as an illustration, consume an enormous quantity of disposable products, water, and energy (Chou et al., 2012). Therefore, the detrimental effects on the environment would be significant if the F&B industry did not actively drive the implementation of green practices (Chou et al., 2012).

Stricter environmental regulations, greater societal awareness of ecological problems, and increased enthusiasm for green products (C. N. Leonidou et al., 2013) have pushed organisations to align their competitive priorities with environmental and social

standards in their pursuit to obtain competitive advantage (Chen et al., 2015; Li et al., 2018). Consumers' preferences have also changed due to increased environmental awareness and regulations that are encouraging them to purchase eco-friendly products (Tjahjadi et al., 2020). In turn, businesses are increasingly looking at markets that are environmentally friendly to promote their environmental and social responsibilities (El-Kassar & Kumar, 2019). Green internal practices are implemented by businesses to comply with consumers' demands and to reduce the negative impacts of their manufacturing processes on the environment (Tjahjadi et al., 2020), competing to be perceived as green to project the right image, hence implementing green environmental practices to boost their performance (Suganthi, 2019).

3.6.3 ADOPTION OF GREEN PRACTICES

The implementation of green practices is expanding within the F&B industry (León-Bravo, Caniato, et al., 2019), as a new way of thinking that will permit F&B businesses to gain by improving their environmental performance (Chou et al., 2012; Revell & Blackburn, 2007). Whilst larger organisations have a more structured approach (León-Bravo, Moretto, et al., 2019) and assume a hands-on governance approach to internal sustainability practices across their operations (Bager & Lambin, 2020), SMMEs conversely rely on a hands-off governance approach, directed by external sustainability standards that are voluntary and external (Adams et al., 2023). Empirical studies indicate that the adoption of sustainable or green internal practices within the hospitality sector makes economic sense (Afum et al., 2021; Ahmed et al., 2018; Chiu & Hsieh, 2016; Miroshnychenko et al., 2017), facilitate competitive advantages and innovation (Goodman, 2000; León-Bravo, Caniato, et al., 2019; León-Bravo, Moretto, et al., 2019), enhance customer satisfaction and loyalty for the industry (Kassinis & Soteriou, 2003), and reduce CO₂ emissions (Bohdanowicz, 2009).

Although large organisations are responsible for most of the ecological degradation experienced, SMMEs are not exempt from the blame due to their collective contribution (L. C. Leonidou et al., 2017). With developing markets becoming more industrialised, there is excessive manufacture of disposable products that are wasted in huge quantities by consumers despite good utility value, contributing to environmental pollution (Suganthi, 2019). This contributes to waste, a waste of resources, a loss in energy, and a loss in raw materials because products are not utilised fully (Miroshnychenko et al., 2017; Porter & Van Der Linde, 1995). Green internal organisational practices such as pollution prevention and clean technology can aid in reducing costs for businesses and enhance sustainable competencies for the future (Miroshnychenko et al., 2017). Product stewardship and a vision of sustainability form

part of external organisational practices and can aid in assimilating stakeholder views into organisational operations, to formulate business growth patterns (Hart & Milstein, 2003; Miroshnychenko et al., 2017). Together, green internal and external organisational practices contribute to a more sustainable environment and facilitate shareholder value (Miroshnychenko et al., 2017). Therefore, green internal practices play a crucial role in creating a competitive advantage and exert a significant impact on business performance.

To overcome environmental pressures placed on businesses through regulations and consumer demands, they must adopt green internal practices to gain a competitive advantage. The greater the green market orientation, the more vital green internal practice is, and the greater the sustainable performance. Norton (2010) explains the practical implications of a decision to implement green practices, namely consuming fewer resources (i.e., energy, water, raw materials), and shifting to an economy that imitates the natural environment (i.e., less consumption of raw materials, less pollution of the economic systems, practising recycling, and consuming renewable energy). This can extend to customers if organisations that adopt green practices also include certification, especially environmental certifications like ISO 14000. From a South African context, FYN Restaurant serves as an example, having won the coveted Flor de Caña Sustainable Restaurant Award at The World's 50 Best Restaurants ceremony held in Valencia, Spain (Eat Out, 2023). Opened in 2018, the restaurant has also won the Eat Out Woolworths Restaurant award. Its strategy is to source locally from suppliers who also follow eco-friendly practices, to support social initiatives of the communities by supporting the fishermen, farmers, foragers and so forth (Eat Out, 2017, 2023).

3.6.4 BENEFITS OF IMPLEMENTING GREEN INTERNAL PRACTICES

Some believe that being green is a business decision rather than a strategy to attract new customers in the current competitive environment (C. H. Lee et al., 2013) even though businesses are embracing environmental sustainability and green initiatives in their strategies and activities (Dangelico & Pontrandolfo, 2015). In the literature, several advantages are associated with such an approach, for example, return on investment, improved sales, expansion of new markets, enhanced corporate image, and product differentiation (Dangelico & Pontrandolfo, 2015), elevating the importance of the adoption of green practices as an important business consideration (Shu et al., 2016; Tang et al., 2018) that could facilitate positive outcomes, such as increased business sustainability, cost savings, saving the environment, and an enhanced business reputation (C. H. Lee et al., 2013).

By implementing both internal and external green practices in a business strategy to improve environmental performance (Zhu et al., 2007) the entire supply chain can become green (Suganthi, 2019). This would facilitate a business's competitive advantage, enabling superior financial performance (Aragón-Correa & Sharma, 2003; Hart & Dowell, 2011; Shrivastava, 1995), and competencies such as increased flexibility, agility and versatility of the organisation (Perez-Valls et al., 2016). These qualities are particularly valuable in turbulent environments such as developing markets, and during crisis periods as experienced during the COVID-19 pandemic.

3.6.5 RELATED DEFINITIONS

There exists a plethora of definitions of green practices. The sustainable-value framework of Hart and Milstein (2003) considered the purpose of an organisation as creating sustainable value through the adoption of *internal-* and *external* green practices. This was later supported by Miroshynchenko et al. (2017), R. Wang (2012), and Li et al., (2018), who described the two dimensions of green practices practically in terms of recycling and composting, and back-of-the-house practices (i.e., energy-efficient lighting).

J. González-Benito and Ó. González-Benito (2005) distinguished green practices in terms of *product-related practices* and *process-related* green practices comprising practices such as emission filters, end-of-pipe controls, and acquisition of clean technology equipment as a substitution of polluting and hazardous materials, and design that focus on reducing consumption and waste generation. Per Manaktola and Jauhari (2007), green practices denote the assurance of several thorough practices that diminish negative environmental effects such as energy conservation, water conservation and reducing solid waste.

Mohindra's view (2008) of the construct encompasses the three Rs of reduce, reuse, and recycle, was supported by R. Wang (2012), as well as other scholars a few years later (Miroshynchenko et al., 2017; Suganthi, 2019). Miroshynchenko et al. (2017) view external green practices in terms of *product stewardship* and a *sustainability vision*, where green practices encompass pollution prevention, green supply chain management practices, green product development practices, and environmental management systems. Specifically focusing on fast food restaurants, Lee, Wahid, and Goh (2013) summarised green practices as decreasing the adverse environmental impacts of their facilities and operations in terms of seven categories including:

- water efficiency,

- waste reduction and recycling,
- sustainable furnishings and building materials,
- sustainable food,
- energy,
- disposables, and
- chemical and pollution reduction that mostly encompass operational practices.

3.7 GREEN PERFORMANCE

In its attempt to address sustainable- or green performance (these terms will be used interchangeably), especially related to climate change, the South African government has committed itself to transition to an inclusive, environmentally sustainable climate-resilient economy (PAGE & DEA, 2017). Through the Green Economy Inventory for South Africa (GEI-SA), which was commissioned by the SA government, it was envisaged that green economy initiatives would be monitored and measured to cultivate compliance and identify gaps for further support (PAGE & DEA, 2017). Based on the established relationship between market orientation and businesses' performance, the relationship between green market orientation and green performance is assumed. The main drivers of green performance are distinguished as being internal and external (Jiang et al., 2020) whereby – internal drivers constitute, among others, board characteristics and environmental innovation, whereas external drivers constitute, among others, social pressure (Jiang et al., 2020), customer pressure (Zailani, Eltayeb, et al., 2012), regulatory framework (Wagner, 2015), and competition (Graafland, 2016).

Of particular importance in this study, is that green performance is a multidimensional construct, which does not exclusively focus on financial performance. It also focuses on social and environmental performance, which are non-financial indicators (Fatoki, 2019b; Malik et al., 2021; C. H. Wang, 2020). This is due to pressure on businesses to not only engage in profitability but to also acknowledge social and environmental responsibility (Fatoki, 2019b).

3.7.1 RELATED DEFINITION

Although there is much controversy about its definition and measurement, green performance as defined by C. H. Wang (2020) entails “businesses' intention to meet its financial objectives, exceed social expectations for environmental responsibility, and mitigate environmental challenges caused by its production activities” (C. H. Wang, 2020, p. 3125). Over time, therefore, the explanation of value creation as measured by

economic profit has expanded to include non-profit gains. Despite the focus on the drivers of green performance in recent times, the influence of the multidimensionality of green market orientation on green performance is still under-explored (Jiang et al., 2020; C. H. Wang, 2020).

Performance improvement is central to the strategic management discipline among others, as it has been of interest to both scholars and practising managers (Venkatraman & Ramanujam, 1986). Performance is the time test of any strategy and empirically most strategy research employs the construct of business performance. Since the emergence of the World Commission on Environment and Development (WCED) report – commonly known as the Bruntland Report – the term sustainable development is more common. According to Schneider and Meins (2012), sustainability is an approach to unite economic, social, and environmental effects within a sturdy business strategy. Chou et al., (2012) refer to it as stewardship of natural resources, environmental conservation, and the distribution of material benefits. It is defined as meeting the requirements of the current without conceding the capability of forthcoming generations to meet their own requirements (Habib et al., 2021; Malik et al., 2021). Introduced over two decades ago, sustainability or consumer consciousness for environmentally, socially, and economically friendly products and services represents and reflects organisations' responsibility to their customers and society as a collective (Pantouvakis et al., 2017). From a business viewpoint, the Environmental Protection Agency (EPA) declares that sustainability is the endpoint for long-term shareholder and social value creation by reducing the adverse ecological influence (Habib et al., 2021).

Performance is viewed as a complex construct consisting of multiple dimensions, i.e., *market-, financial-, social-, and environmental* dimensions (Abdulsamad et al., 2021; Fatoki, 2019b). Multidimensional constructs in health and social science literature are familiar to scholars (Law et al., 1998; Peterson, 2014). A construct may be classified as multidimensional if it involves several diverse, but associated components or dimensions that are thought about as part of a single theoretical concept (Law et al., 1998; Peterson, 2014). The most accepted principle of green performance has three dimensions namely *economic, social, and environmental performance* (Elkington, 1994; Khan et al., 2021). Looking at financial matters rests under economic performance whilst taking care of environmental matters is part of environmental performance while looking at the interests of stakeholders is part of the ambit of social performance (Habib et al., 2021; Malik et al., 2021). Recent research reported that combining sustainability with business processes is vital to successful performance (Habib et al., 2021). Sustainability takes an interest in the well-being of employees, society, customers, and other stakeholders and not just the financial aspects. Therefore, organisations are

gearing themselves towards green internal practices, and sustainability implies the implementation of approaches to solve persisting environmental as well as societal issues (Kuckertz & Wagner, 2010; Malik et al., 2021).

Increasingly, organisations throughout the world have embraced environmental sustainability and have started implementing environmental initiatives (Tuan, 2021). Consequently, literature has taken note of the importance of businesses' environmental performance. Therefore, green performance has become a much-talked-about topic in the environmental literature space (C. H. Wang, 2020; Yang et al., 2013). The debate has included its definition and measurement, which still has not been resolved (C. H. Wang, 2020). Taken from green theory, green performance links a business's operations to the environment (Abbas, 2020; Yang et al., 2013). Green performance brings together a business's environmental responsibilities and its objectives providing guidance for the processes of the business and its compliance with environmental regulations (C. H. Wang, 2019), signifying the efficiency of the environmental actions of the business.

In defining green performance, C. H. Wang (2020) highlights the fact that it denotes the intention of the business to reach its financial objectives, surpass its social outlooks for environmental accountabilities, and alleviate ecological challenges caused by its production activities (Jacobs et al., 2010). Focusing on the harmful effects, Ge et al., (2016) stipulate that green performance represents a decrease of the undesirable influences on the environment whilst achieving stability of business and environmental interests. This definition requires businesses to eliminate or at least reduce pollution, waste, and energy consumption and improve consumer safety. It also requires business survival and development (Ge et al., 2016). From a measurement perspective, green performance includes numerous indicators, which have a negative impact on the environment, and each variable or index assesses the business' environmental impacts (Ge et al., 2016; Yang et al., 2013). These include reduced use of water, energy, non-renewable resources, toxic inputs, solid waste, soil contamination, wastewater emissions, emissions into the air, noise, smell/odour emissions, landscape damage, and risk of severe accidents (Ge et al., 2016; Yang et al., 2013). Being a multidimensional construct, green performance comprises various dimensions, which are discussed in the following sections.

3.7.2 ECONOMIC/FINANCIAL PERFORMANCE

Economic/financial performance is the first fundamental component of green performance (Khan et al., 2021). Understandably, every business, to survive, must

look at financial feasibility and sustainability. Although profit maximisation may not necessarily be the reason to be in business, a business has to achieve some sort of financial revenue and has to be able to cover its expenses. Literature shows that economic (financial) performance is evaluated per various indicators, including profitability indicators such as return on assets, gross profit margin, operating profit margin, return on investment, net income, return on equity, and economic value added (EVA). Market value indicators include earnings per share, change in share price, and growth performance such as market-share growth, asset growth, net revenue growth, and net income growth (Fatoki, 2019b; Khan et al., 2021). Although financial measures are important, they are strategically short-term orientated (Fatoki, 2019b). Business value is established through various activities (i.e., quality customer, employee satisfaction, innovation), and financial indicators alone cannot suffice as they cannot measure and fully imitate the long-term consequences of a company's activities (Fatoki, 2019b). Furthermore, financial measurements are lagging indicators of performance whilst non-financial measures are leading indicators providing insights concerning future performance. Stakeholders pushing businesses to meet ecological objectives are similarly important as economic performance producing a conduit towards achieving sustainable performance (Khan et al., 2021).

3.7.3 SOCIAL PERFORMANCE

Green performance also concerns social performance (Khan et al., 2021) which reflects the responsibility of a business for its multiple stakeholders including employees and the society in which it operates at large (Fatoki, 2019b). It assesses organisational performance on social indicators including training and development, welfare support, social commitment, working conditions, and other employee-related benefits (Amui et al., 2017). Social performance is equally important to financial performance (Lopes de Sousa Jabbour et al., 2020) in that employee programs, occupational health and safety, consumer relations management, and product responsibility form part of a company's assessment indicators (Khan et al., 2021).

3.7.4 ENVIRONMENTAL PERFORMANCE

Environmental performance is the third essential component of green performance (Khan et al., 2021) that is important to secure long-standing profits. Businesses are increasingly being held responsible for their environmental actions and behaviours, as evidenced by the increase in the number of penalties, laws, and regulations (Fatoki, 2019b). Also, environmental performance measures serve to confirm the achievement of environmental objectives and the distribution of limited resources to enhance business practices and a business' performance (Fatoki, 2019b). Companies chasing a

win-win situation, therefore incorporate these critical components to support their sustainable performance (Khan et al., 2021).

Several definitions of environmental performance exist, with many scholars defining it based on their environmental perceptions and alignments (Nutsugah et al., 2020). Environmental performance, according to Green et al. (2015), echoes the ability of the organisation's manufacturing to decrease emissions inclusive of air, effluent, and water, as well as to decrease solid wastes and limit or omit the use of toxic materials within the production processes. This view focuses on pollution control and the image of the business per the R-A theory, explaining how the resources of a business are to be used in environmental management strategy (Green et al., 2015). Environmental performance is described as the "output of environmental management, that is, the effects the firms' activities and products have on the natural environment" (Albertini, 2017, p. 277). Albertini's (2017) definition, in contrast, which is supported by Nutsugah et al. (2020), reveals environmental performance as a multidimensional construct, which includes the outcomes and impacts firms have on both the environment and stakeholders. It also includes the philosophies of environmental responsibility and the progressions of responsiveness to the environment that regulate future consequences and influences. Similarly, C. H. Wang (2019) also includes the objectives of the firm, inclusive of environmental responsibilities, as it provides guidance to the business's processes and its obedience to environmental regulations (C. H. Wang, 2019, 2020). C. H. Wang (2020) extends this definition to include social expectations stating that "green performance refers to the firm's intentions to meet its financial objectives, exceed social expectations for environmental responsibility, and mitigate environmental challenges caused by its production activities" (C. H. Wang, 2020, p. 3125). Per other scholars, it furthermore encompasses ecological influences of the organisational green product (Chiou et al., 2011), green process (Xie et al., 2019), and resource intake (Masocha, 2018) in an effective response to lawful environmental necessities (C. H. Wang, 2020). It is consequently vital for a business to know and understand what factors would increase its environmental performance. In contrast, Ardito and Dangelico (2018) put the issue on the doorstep of the management of a business's strategic activities and the impact thereof, good or bad, emphasizing that performance outcomes need to be measurable.

3.8 CHAPTER SUMMARY

The literature review started with establishing the theoretical anchor for the study namely the resource-advantage theory. Being a process of competition, R-A theory accentuates the significance of comparative advantage/disadvantage in resources and

marketplace positions of competitive advantage/disadvantage. The resources are VRIN and produce a market offering that has value for certain segments, and in this study, the resources included green market orientation. Without a strong green market orientation, SMMEs will not understand the changing customer demand, and will not identify future customers resulting in not implementing green internal practices. Furthermore, managers of SMMEs who are not oriented in terms of green management values, will not push for the implementation of green internal practices, which will impact their green or sustainable performance.

With the impact of climate change and the depletion of natural resources, consumers have been changing their consumption habits to be more environmentally friendly or conscious. This has led to businesses having to consider more sustainable consumption and production practices, as consumers consider more ethical and sustainable options. With an increase in the black middle class in South Africa, consumption patterns have also changed to more Western styles, which also include a greener or sustainably based manner. Post COVID-19, indications are that consumers are turning more and more to sustainable options spending more on green product options. Attention to the environmental impact has grown substantially and with the emerging black middle class, food consumption choices have changed. Considering that 98% of South Africans – in a recent study – expressed willingness to personally take action to fight for environmental sustainability, manufacturers and service providers have to change behaviours and embrace more sustainable and environmentally friendly conduct.

Developed from the marketing concept, market orientation is the foundation of modern marketing theory. As marketing shapes business strategy, market orientation, which is the implementation of the marketing concept, has been referred to as behavioural, cultural, or a combination of both. This study relied on the cultural approach, arguing that the organisational culture and its decision-making competencies impact business performance. Because of increased environmental pressure, market orientation was extended to incorporate green resources and skills into it. This extension reviews market orientation from a sustainable and environmental aspect creating superior value for customers. Scholars classify this extension as green market orientation, which is a novel concept and reflects business orientation including commitment to the environment. Defining green market orientation as “an inter-functional organisation that responds to social and environmental needs of its customers, facing competitors’ engagement in environmental management” (C. H. Wang, 2020, p. 3124), C. H. Wang embraces the novel concept concerning its components of green customer orientation, green competitor orientation, and green inter-functional coordination.

Former literature has linked personal values with sustainable conduct and leadership behaviours (Nedelko & Potocan, 2021). Several scholars propose a connection between the personal values of managers and the implementation of environmental practices in their businesses (Ahmić et al., 2016). Values and beliefs are relevant relating to the willingness of people to take pro-environmental actions. The owners of SMMEs' personal values have a more enhanced role in motivating pro-environmental behaviours compared to other SMMEs. Individuals' business actions are driven by different motivations – either a push motivation or a pull motivation. Green management values can, therefore, impact the decision-making of owners of SMMEs, which can encourage SMME owners to implement green internal practices.

In owner-managed businesses, environmental practices are based on personal values, which promote concern about the environment and are likely to ensure that businesses will implement green internal practices. Guided by the degradation of the environment, scholars are focusing on how the implementation of green internal practices can enhance business performance. These green internal practices include a wide range of initiatives including pollution prevention, development of green practices, eco-friendly cleaning materials and practices, environmental management practices, and green supply chain practices. By implementing green internal practices in a business strategy to improve business performance, the whole supply chain can become green and facilitate the competitive advantage of a business, achieving superior financial performance.

Performance improvement is key to the strategic management discipline as it has been of interest to both scholars and practising managers. Performance is seen as a complex construct in this study, sustainable/green performance consists of financial/economic, social, and environmental dimensions. Based on the established relationship between market orientation and businesses' performance, the relationship between green market orientation and green performance is expected. As it is taken from green theory, green performance links the business's operations to the environment (Abbas, 2020; Yang et al., 2013) and links together a business's environmental responsibilities and its objectives giving guidance for the processes of the business and its compliance with environmental regulations (C. H. Wang, 2019). The next section develops the hypotheses and conceptual framework for this study.

CHAPTER 4: THEORETICAL FRAMEWORK AND CONCEPTUAL MODEL

“Food for us comes from our relatives, whether they have wings or fins or roots. That is how we consider food. Food has a culture. It has a history. It has a story. It has relationships.”

- (Winona LaDuke Quotes, n.d.)

4.1 CHAPTER INTRODUCTION

As an American Indian activist, author, and environmentalist, Winona LaDuke stated that food has relationships, which reminds us of hypotheses that generally propose relationships. The hypotheses for this research study were deduced from the theoretical reflections presented in Chapter 3.

The previous chapter (Chapter 3 – Literature Review) provided a review of the literature and presented theoretical reflections for consideration. The theoretical anchor for the study, R-A theory, was expounded upon. The variables namely **green market orientation**, **green internal practices**, **green management values**, and **green performance** were attended to, and explicated. From the review, **green market orientation** was identified as a novel, multi-dimensional, second-order variable consisting of three constructs i.e., **green customer orientation**, **green competitor orientation**, and **green inter-functional coordination** (Borazon et al., 2022; C. H. Wang, 2020). Taken from market orientation, green market orientation was considered from an environmental perspective (C. H. Wang, 2020). **Green performance** was also identified as a multi-dimensional, second-order construct consisting of three constructs, namely **financial or economic performance**, **social performance**, and **environmental performance** (Abdulsamad et al., 2021; Fatoki, 2019b; Paulraj, 2011). **Green management values** reflect the attitude of management towards the environment and influence pro-environmental behaviours in the workplace by implementing and supporting green practices (Andersén et al., 2020; Cop et al., 2020; Robertson & Carleton, 2018). **Green internal practices**, when implemented by a business, will establish strict standards on various internal processes such as manufacturing, and distribution, and closely monitor the environmental impact of its products and services (Li et al., 2018). It spans a wide range of practices including the three Rs (reduce, reuse, and recycle) (Mohindra, 2008), pollution prevention, green product development (Miroshnychenko et al., 2017), energy- and waste-efficiency, eco-friendly cleaning materials (R. Wang, 2012), environmental management practices (Jabbour et al., 2012; Li et al., 2018), green innovation practices (C. H. Wang, 2020)

and green supply chain management practices (Eltayeb et al., 2011; Green et al., 2015; Kuei et al., 2015; Miroshnychenko et al., 2017).

This chapter expands the literature review, indicating possible relationships between selected variables to establish the hypotheses for the study. To test the hypotheses, the researcher needed to move from the conceptual domain into the observable domain (Field, 2018), and needed to measure the variables. This chapter, therefore, develops the hypotheses, which are to be tested, and establishes the conceptual model for this research study. The layout for the chapter is depicted in **Figure 4.1**.

Main Headings	Sub Headings
4.1 Chapter introduction	
4.2 Hypothesis Development - GMO and GP (H1)	4.2.1 Effect of green customer orientation on green performance (H1a)
	4.2.2 Effect of green competitor orientation on green performance (H1b)
	4.2.3 Effect of green inter-functional coordination on green performance (H1c)
4.3 Hypothesis Development - GMO and GIP (H2)	4.3.1 Effect of green customer orientation on green internal practices (H2a)
	4.3.2 Effect of green competitor orientation on green internal practices (H2b)
	4.3.3 Effect of green inter-functional coordination on green internal practices (H2c)
4.4 Hypothesis Development - GIP and GP (H3)	4.4.1 Effect of green internal practices on green performance (H3)
4.5 Hypothesis Development - moderation (H4) and mediation (H5)	4.5.1 Moderating role of green management values (H4a,b,c)
	4.5.2 Mediating role of green internal practices (H5a,b,c)
4.6 Summary and Proposed Conceptual Model	4.6.1 Summary of hypotheses development
	4.6.2 Proposed conceptual model
4.7 Chapter Summary	

Figure 4.1 – Structure of Chapter 4

Note: An overview of the structure and layout of the chapter. Own work.

4.2 HYPOTHESIS DEVELOPMENT – GMO AND GP (H1)

The following sections present the replications for this study. These replications have been tested and confirmed from previously hypothesised relationships (K. Hunt, 1975; Morrison et al., 2010). Therefore, the replications in this study have been tested in several contexts before, producing evidence to verify their outcomes. The replications

in this study have been formulated within a developing market context in South Africa, while most established theories have been formulated in developed countries (Green et al., 2015; Jansson et al., 2017; Kassinis et al., 2016) and within developing countries from an Asian perspective (Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020) with vastly different circumstances compared to South Africa.

The theoretical motivation for the various selected replications for this study is discussed next starting with green market orientation and its three constructs. The construct referred to in hypothesis 1, namely green market orientation has been directly and positively linked to green performance (Borazon et al., 2022; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020). These were, however, in different contexts. To better understand the impact of green market orientation on sustainable/green performance of F&B SMMEs, this study adopted R-A theory to explain the mechanism by which green market orientation affects the sustainable/green performance of F&B SMMEs (Bicen, 2021; S. D. Hunt, 1995, 2018). R-A theory provided meaningful insights into how F&B SMMEs develop a comparative advantage to gain competitiveness in the process of competition. According to R-A theory, resources (P6), especially higher-order resources, methods of learning assist businesses to use intricate resources and achieve a competitive advantage resulting in superior performance (S. D. Hunt, 2018; S. D. Hunt & Morgan, 2005, 1995). Green market orientation, and in turn its components, is a resource (P6) and strategy businesses can use to unlock a comparative advantage relative to their competitors based on their existing business. The relationship or effect green market orientation poses on green performance determines the resource characteristic (P7). This research study hypothesised that green market orientation will have a direct and significantly positive influence on green performance in F&B SMMEs in South Africa.

H1: Green market orientation is directly and positively related to green performance among F&B SMMEs in South Africa.

As green market orientation is a multidimensional construct consisting of green customer orientation, green competitor orientation, and green inter-functional coordination, the hypotheses presented next, expand H1 in terms of its dimensions, which are discussed next.

4.2.1 EFFECT OF GREEN CUSTOMER ORIENTATION ON GREEN PERFORMANCE (H1A)

The three dimensions of green market orientation are positively associated with business performance (Abdulsamad et al., 2021; Mubarak, 2019) with all three dimensions influencing the performance in varying ways (Abdulsamad et al., 2021). Other authors have, however, reached different conclusions. Nonetheless, green customer orientation has impacted performance with either of the two other dimensions in studies concerning green competitor orientation (Prayitno et al., 2017) as well as green inter-functional coordination (Chebet et al., 2018). Green customer orientation has the most significant impact on performance in some studies (Dawes, 2000; Noble et al., 2002). It has been identified as the driving factor for the competitive advantage of organisations (Alhakimi & Mahmoud, 2020; Sasha et al., 2020), as well as innovation and service performance (Alhakimi & Mahmoud, 2020; Tsiotsou, 2010). Additionally, other scholars have found a curvilinear inverted U-shaped interaction between green customer orientation and performance (Kadic-Maglajlic et al., 2017). This implies that green customer orientation may be advantageous at some point after which the benefits begin to weaken (Ngek, 2019).

For most studies that opted for a component-wise approach (Day & Wensley, 1988; Deshpandé et al., 1998; Sin et al., 2005), green customer orientation was found to shape the performance of the organisation (Tsiotsou, 2010). As the fundamental element of the value strategy of customers, it provides the basis for sustainable competitive advantage contributing to financial performance (Deshpandé et al., 1993; Kohli & Jaworski, 1990; Tsiotsou, 2010). Moreover, it has been reported that only green customer orientation significantly impacts performance and is associated with it (K. Z. Zhou et al., 2007). Furthermore, various studies (Abdulsamad et al., 2021; Mohiuddin Babu, 2018; Mubarak, 2019; Sin et al., 2005; Tsiotsou, 2010) have shown that green customer orientation is the sole component that exhibits a strong and marked impact on marketing and overall performance. As green customer-oriented organisations acquire more information through green market-sensing and customer-linking capabilities (C. H. Wang, 2020), their green performance increases. They are able to notice novel customer opportunities and initiate creative outputs (Pekovic et al., 2016). The information allows the customer's desires to be satisfied by being reactive and making necessary corrections (Ketchen et al., 2007). In line with R-A theory, green customer orientation as an informational resource (P6), through the process of competition – as depicted in Figure 1.3 – becomes a comparative advantage that contributes to superior performance (S. D. Hunt & Morgan, 2005). The effect of green customer orientation on sustainable/green performance is the resource's characteristic

(P7). Thus, the proposed study conceives green customer orientation as a potential framework through which SMMEs can achieve a sustainable competitive advantage in the marketplace and boost green performance. The study, therefore, hypothesizes that:

H1a: Green customer orientation is directly and positively related to the green performance of F&B SMMEs in South Africa.

4.2.2 EFFECT OF GREEN COMPETITOR ORIENTATION ON GREEN PERFORMANCE (H1B)

Even though firms are called to maximise shareholder wealth, as depicted in traditional economic theory, managers often do not explicitly pursue this maximisation of profits (Armstrong & Collopy, 1996; Bendle & Vandenbosch, 2014). With a green competitor orientation, they would prefer beating others at the expense of profit (Bendle & Vandenbosch, 2014). As per the R-A theory, green competitor orientation is considered an intangible informational resource. Thereby, green competitor orientation is available to the firm enabling it to produce a market offering that is of value to the market segment. Being an informational resource, it gains knowledge resulting from consumer and competitor intelligence. Furthermore, it focuses on competition, which R-A theory defines as “the disequilibrating process that consists of the constant struggle among firms for comparative advantages in resources that will yield marketplace positions of competitive advantage for some market segment(s) and, thereby, superior financial performance” (S. D. Hunt & Lambe, 2000). Looking at **Figure 1.4**, firms occupying positions of competitive advantage (i.e. cells 2, 3, and 6) can continue to do so provided: 1) they continue to engage in proactive innovation, 2) continually reinvest in the resources that produced the competitive advantage, and 3) if competitor’s reactive innovation efforts fail or take a long time to succeed, as well as if their acquisition efforts fail (Bicen, 2021; S. D. Hunt & Lambe, 2000). S.D. Hunt and Morgan (1995, p. 109) define proactive innovation as “innovation by firms in the absence of specific competitive pressures” and reactive innovation as “innovation directly prompted by competition”.

Research indicates that a green competitor orientation is important for the success of a firm because a comprehensive understanding of a firm’s competitors in terms of their goals, strategies, and resources is considered a key component of a worthwhile competitive strategy (Arnett et al., 2021). Managers have to forecast/anticipate the future actions of competitors and swiftly react to changes in the strategies of their competitors using their own activities as a yardstick to judge competitors’ activities (Alhakimi & Mahmoud, 2020). Furthermore, they must review their marketplace

position as well as that of their competitors' (Newman et al., 2016), and endeavour to establish a sustainable competitive advantage over them (Arnett et al., 2021). However, before these can all be achieved, managers need to determine who their competitors are, and what the competitive landscape looks like.

Although the link between green market orientation and performance has been made, the results of the studies conducted on the effects of the different dimensions of green market orientation were inconsistent (Abdulsamad et al., 2021; Tjahjadi et al., 2020; C. H. Wang, 2020). Mubarak (2019) and C. H. Wang (2020) reported that green competitor orientation, together with the other two dimensions, is positively linked with business performance. Other researchers have found that not all the dimensions of green market orientation have a significant impact on performance (Abdulsamad et al., 2021). According to Prayitno et al., (2017), only green competitor orientation and green customer orientation significantly influence business performance. Conversely, Chebet et al., (2018) reported that green customer orientation and green inter-functional coordination significantly affect business performance. Others (Dawes, 2000; Noble et al., 2002) have placed green competitor orientation as the first dimension of green market orientation, and as the main determinant of business performance.

In a hyper-competitive environment, an organisation with a green competitor orientation must have competitive sensing abilities, which, like market sensing abilities of green customer orientation, gathers green information from a variety of competitors (C. H. Wang, 2020). The green information is then used as input for establishing a green strategy for the firm. This will ensure that the firm can better forecast future environmental strategies. Without them the information is worthless, and this impacts its green environmental performance (C. H. Wang, 2020). In line with R-A theory, green competitor orientation as an informational resource (P6), through the process of competition – as depicted in **Figure 1.3**– achieves a competitive advantage, enhancing superior performance (S. D. Hunt & Morgan, 2005). The impact or effect of green competitor orientation on sustainable/green performance is the resource's characteristic (P7). The study, therefore, hypothesised that:

H1b: Green competitor orientation is positively related to the sustainable performance of SMMEs in South Africa.

4.2.3 EFFECT OF GREEN INTER-FUNCTIONAL COORDINATION ON GREEN PERFORMANCE (H1C)

Achieving green market orientation requires the resources of the entire organisation and is not the sole responsibility of the marketing department (Mohiuddin Babu, 2018; Tajeddini & Ratten, 2020). It requires the internal efforts of different departments to achieve organisational goals and objectives (Mohiuddin Babu, 2018; Tajeddini & Ratten, 2020). According to the R-A theory, this leads to superior financial performance, which is pursued under conditions of imperfect information about customers and competitors (Bicen, 2021; S. D. Hunt & Lambe, 2000; S. D. Hunt & Morgan, 1995). In addition, the firm's information is imperfect and costly as it operates under bounded rationality (S. D. Hunt & Morgan, 1995). Most firms do not maximise profits due to a lack of information to do so.

Green inter-functional coordination, as per the R-A theory, is also a resource (P6), which is an intangible entity and is available to the firm. It enables the firm to produce a market offering effectively and efficiently and of value (Bicen, 2021; S. D. Hunt & Morgan, 1995). It is an informational resource that provides knowledge about consumer- and competitor intelligence (Bicen, 2021; S. D. Hunt & Lambe, 2000; S. D. Hunt & Morgan, 1995).

In terms of green operations and sustainability, green inter-functional coordination is vital in assisting the organisation to manage the immense pressure enforced by high-volume information and uncertainty generated during the evolution process, as well as sustainable operations (Liu et al., 2018). Considering the COVID-19 pandemic, the level of uncertainty that was created, was immense, and the sharing of information became vital. Green inter-functional coordination means that every employee in the company has a marketing outlook and participates in marketing activities to generate value for customers (Özcam & Kuscu, 2020). They harmonise all resources of the company in line with this philosophy and share market information within the organisation involving different functional units in preparing business strategies and plans (Özcam & Kuscu, 2020). Furthermore, they integrate job activities within the organisation and regularly explore market trends, discussing development topics in inter-organisational meetings (Özcam & Kuscu, 2020). Information, thus, needs to be shared and circulated across different business units and departments – on time, and efficiently. The high level of interaction and connectedness within the organisation requires close coordination and collaboration (Liu et al., 2018). To enhance the green market orientation of the organisation, green inter-functional coordination can aid various internal business units to accommodate various views of green initiatives, and

to solve conflicting perspectives to achieve the goal of sustainability (Liu et al., 2018). Higher green inter-functional coordination levels lead to higher customer satisfaction levels, increased profitability, and good decisions for strategic planning (Özcam & Kuscu, 2020).

The few studies that have examined the direct effect of green inter-functional coordination on performance (Dawes, 2000; J. K. Han et al., 1998; Sin et al., 2005) could not find a direct link between the constructs (Tsiotsou, 2010). The study by Gatignon and Xuereb (1997) did not include green inter-functional coordination with green market orientation and considered it as the mediator of strategic orientation and performance. Recent studies (Abdulsamad et al., 2021; Mohiuddin Babu, 2018; Tjahjadi et al., 2020; C. H. Wang, 2020) have shown that green inter-functional coordination and performance are positively associated. Since green inter-functional coordination involves the integration of various functional areas, the promotion of an environmentally friendly image to customers is encouraged together with conveying the value of sustainable performance (C. H. Wang, 2020). Internal efforts of the various functional departments are necessary to achieve the goals and objectives of the organisation. Green targets can be set for the firm, and resources could be allocated to further boost and thus stimulate a firm's sustainable performance. Organisations are inclined to develop their green inter-functional coordination, establish sustainable performance targets for their businesses, and shuffle resources to attain green targets. In line with R-A theory, green inter-functional coordination, being an informational resource (P6), through the process of competition, as depicted in **Figure 1.3**, achieves a comparative advantage contributing to superior performance (S. D. Hunt & Morgan, 2005). The impact or effect that green inter-functional has on sustainable/green performance is the resource's characteristic (P7). Thus, green inter-functional coordination can stimulate an organisation's sustainable performance (Auh & Menguc, 2005a, 2005b; C. H. Wang, 2020). This study, therefore, hypothesised that:

H1c: Green inter-functional coordination is positively related to the sustainable performance of SMMEs in South Africa.

4.3 HYPOTHESIS DEVELOPMENT – GMO AND GIP (H2)

This study hypothesised that a green market orientation of F&B SMMEs in South Africa will have a direct, positive effect on the implementation of green internal practices i.e. the resource characteristic (P7). Both green market orientation and its components and green internal practices are viewed as resources (P6) (Bicen, 2021; S. D. Hunt & Morgan, 2005). Specifically green market orientation and its components are

informational resources, whilst green internal practices are considered organizational resources. The firm will recruit the appropriate resources and combine them to achieve the objective of superior financial performance (P4). The choice of resources to implement and the strategy to use, is the role of management (P8). The combination of resources will impact or have an effect on performance and this study proposes the following:

H2: F&B SMMEs in South Africa with a green market orientation are more likely to implement green internal practices.

Because green market orientation is a multidimensional construct, the hypothesis is expanded in terms of its separate dimensions.

4.3.1 EFFECT OF GREEN CUSTOMER ORIENTATION ON GREEN INTERNAL PRACTICES (H2A)

The strategic orientation of an organisation is the guiding principle that influences its decision-making style, management philosophy, and corporate culture (Li et al., 2018; Wiklund & Shepherd, 2005). The seminal work of Venkatraman (1989) identified the strategic orientation of business enterprise, and researchers have been elaborating on the essentials of the strategic construct (Schweiger et al., 2019). It determines the purpose of the organisation, the tactics it assumes, and the activities it considers when facing environmental possibilities or market prospects (Lau & Bruton, 2011). Green market orientation plays a strategic part in the organisation's reaction to environmental pressures on the profitable conception and conservation of customer worth to attain competitive advantages with green practices (Ketchen et al., 2007; Slater & Narver, 1995). It can identify the value of green practices, explore green competition, and express an environmentally friendly image to customers (Li et al., 2018). Customers are, therefore, vital as they determine how important the environment is through their consumption behaviours (Pekovic et al., 2016). Green internal practices such as ISO 14000 standards and Responsible Care programmes are indicated as reducing the hazardous effects of the activities of the business. They require new clerical processes that endorse a pledge to the environment within the organisation (Darnall et al., 2010).

The implementation of green internal practices is because of the hidden demand or unconcealed market pressure from customers. Customers can drive the implementation of green practices (customer information – P2 in R-A theory), as organisations with disputed green internal practices experience reduced customer demand (Klassen & McLaughlin, 1996) and therefore, a positive interaction between

green customer orientation and green internal practices is proposed (P7 – resource characteristic). The central aim of green internal practices is to recognise the desires of customers, receive customer satisfaction feedback and decide on product and service improvements (Darnall et al., 2010). Green customer orientation enables organisations to establish and encourage environmentally friendly products and services that are valued by customers (Crittenden et al., 2011). In the same vein, Chen et al. (2015) state that customer-oriented businesses must create a good image, and demonstrate cultural values associated with environmental issues to be accepted by customers. Green customer orientation aids organisations in setting the cultural and operational basis for grander compassion for ecological burdens (Ó. González-Benito & González-Benito, 2008). The marketing literature emphasizes that because customers benefit from the environmental strategy of the organisation, they further inspire innovations (Kammerer, 2009). This is in line with the foundations of R-A theory where informational resources (like green customer orientation) and organizational resources (like green internal practices) play an important role in determining the performance of the business. Therefore, an organisation that demonstrates green customer orientation innovates to meet the product and service desires of its customers and to ensure environmental performance (Dibrell et al., 2011).

Because environmental and social activities share the same objective, further support for the positive association between green customer orientation and green practices is evident in the corporate social responsibility (CSR) literature (Pekovic et al., 2016). Green internal practices represent a vital component of CSR. Findings show that consumers have positive attitudes, feelings, and responses towards organisations that display strong CSR activities (Handelman & Arnold, 1999). Furthermore, a strong green customer orientation within a business ensures a thorough understanding of both consumer needs and environmental requirements (Salavou et al., 2004; C. H. Wang, 2020). This new knowledge can further engage the business in green internal practices activities. Conversely, a business with a weak green customer orientation, cannot meet consumer needs and is misaligned with consumers' environmental concerns (C. H. Wang, 2020). This study proposed a positive relationship between green customer orientation and its components (i.e., green customer sensing, green customer responsiveness, and green values and norms) with green internal practices (P7) and proposed the following:

H2a: Green customer orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa.

4.3.2 GREEN COMPETITOR ORIENTATION AND GREEN INTERNAL PRACTICES (H2B)

In dynamic environments, organisations must be able to respond to ecological change and survive (Perez-Valls et al., 2016). Competition arises from new entrants, as well as existing competitors in the marketplace. In surveying the environmental actions of competitors, a business can identify new opportunities and directions (Ngo, 2022b; Voss & Voss, 2000). Besides customer demand, the tension from competitors is vital in altering the implementation of green strategies (Berrett & Slack, 2001) and encouraging businesses to upgrade their proactive environmental strategies (Dai et al., 2018). The pressure from competitors can strengthen a business's capabilities and its internal operational activities (Borazon et al., 2022). Several studies (Gatignon & Xuereb, 1997; Narver & Slater, 1990; Paulraj, 2011) have looked at the impact of competition, but evidence of the influence of green competitor orientation on innovations is inconclusive (J. K. Han et al., 1998). Organisations with a green competitor orientation can be on the lookout judiciously for green competition and gather information concerning their competitors' environmental strategies, using this information to their own advantage and convey an environmentally friendly image to their customers (Li et al., 2018). Like green customer sensing, green competitor orientation employs green competitor sensing (Ngo, 2022b), and analyses the information for relevance and use. Knowing competitors' orientation permits a business to use the obtained knowledge to improve its ability to implement practices that will improve its performance. Moreover, it is argued that once the competitors' capabilities are known, businesses will strive to exceed them by exploring new abilities or practices (Ngo, 2022b). Per R-A theory, green competitor orientation is therefore an informational resource and green internal practices an organizational resource. Their impact on one another is the resource characteristic (P7). In this regard, green competitor orientation allows SMMEs to review their current green internal practices and to implement new practices that are of value to their business. This study, therefore, proposed a direct, positive relationship between green competitor orientation with the implementation of green internal practices (P7) stating:

H2b: Green competitor orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa.

4.3.3 GREEN INTER-FUNCTIONAL COORDINATION AND GREEN INTERNAL PRACTICES (H2C)

The greater the uncertainty of the environment, the greater the integration between manufacturers and suppliers is supposed to be to respond to external changes (Borazon et al., 2022). Green inter-functional coordination encourages collaboration between departments, businesses, and their suppliers to work together. The implementation of green internal practices requires inter-functional coordination to ensure smooth implementation of these practices, as well as to solve any issues that may arise. Diffusion of knowledge not only generates buy-in from other departments but embeds the practices throughout the organisation. Previous research has found that green inter-functional coordination positively aids the implementation of green supply chain management capability (Borazon et al., 2022), that positively associates with explorational and exploitative green innovation (Ngo, 2022b), positively impacts green innovation (Tjahjadi et al., 2020; C. H. Wang, 2020). In accordance with R-A theory green inter-functional coordination is considered an informational resource (P6) and green internal practices an organizational resource (P6). A firm would develop a comparative advantage through green inter-functional coordination to get a competitive advantage in the market (see Figure 1.3), which ultimately leads to a superior financial advantage. This is achieved through higher-order learning processes which help the firm to utilize complex resources like green internal practices to achieve a competitive advantage (Bicen, 2021; S. D. Hunt & Morgan, 2005). Green inter-functional coordination is a strategy that management can choose (P8) to unlock the implementation of green internal practices to have a comparative advantage relative to their competitors based on their existing business. This study, therefore, proposed a positive relationship between green inter-functional coordination with the implementation of green internal practices (P7) and hypothesised:

H2c: Green inter-functional coordination is positively related to the implementation of green internal practices by F&B SMMEs in South Africa.

4.4 EFFECT OF GREEN INTERNAL PRACTICES ON GREEN PERFORMANCE (H3)

The argument about the effectiveness of green practices and cooperation has revoked vibrant discussion among scholars (Dangelico & Pontrandolfo, 2015). Various studies (J. González-Benito & González-Benito, 2005; Jabbour et al., 2012; Li et al., 2018; Miroshnychenko et al., 2017) have found that green practices improve business performance. Evidence suggests that proactivity in green practices is positively linked

with financial results (Darnall et al., 2008) and greater operational efficiency. In addition, marketing performance improves when incorporating green practices with other organisational functions (Wagner, 2008). Specifically concerning green internal practices, the relationship between green internal practices and the business performance of a firm has been examined in management and economics literature. It is suggested that green internal practices are likely to assist firms in gaining a competitive advantage by revealing and removing resource inefficiencies (Pekovic et al., 2016; Porter & Van Der Linde, 1995).

Although the relationship between green internal practices and performance has been studied numerous times, there is no consensus that it is economically profitable (Dowell & Muthulingam, 2017). Inconclusive results have been found for the green practices-performance nexus. Positive relationships between green internal practices and organizational performance have been identified (Geng et al., 2017; Golicic & Smith, 2013). Some scholars see the adoption of green practices as increasing costs and reducing business processes, decreasing economic performance (Ambec & Lanoie, 2008). Scholars hence question the merit of being green and if it does, under what circumstances (Ambec & Lanoie, 2008; Dowell & Muthulingam, 2017; Hart & Dowell, 2011). Furthermore, from a financial perspective, studies have found that internal and external green practices are positively associated with financial performance (Miroshnychenko et al., 2017). From a social, economic, and operational performance viewpoint, Zailani et al., (2012) found a positive association when reviewing green practices. Similarly, Jabbour et al., (2015) reported a positive association between green product development practices and green performance, operational and market performance. The study also described the multidimensionality of firms' performance, distinguishing four dimensions namely financial- (economic cost), operational- (manufacturing), social- (market), and environmental (green) performance (Jabbour et al., 2015). Even though a positive relationship has been reported between green practices and performance, many of the results have been inconclusive (Suganthi, 2019). Studies have reported negative associations between green practices and environmental and operational performances (Eltayeb et al., 2011; Green et al., 2012). In line with R-A theory, green internal practices, being an organizational resource (P6), through the process of competition, as depicted in Figure 1.3, achieves a comparative advantage contributing to superior performance (S. D. Hunt, 2018; S. D. Hunt & Morgan, 2005). The impact or effect that green internal practices exerts on sustainable/green performance is the resource's characteristic (P7). R-A theory suggests that higher-order learning processes help firms to utilise complex resources and obtain the competitive advantage, which leads to superior financial performance (S. D. Hunt, 2018; S. D. Hunt & Morgan, 2005). The implementation of green internal

practices (P6) through the decision of management (P8) can open up a comparative advantage relative to the competitors of the business based on their existing business. This study proposes a positive relationship between green internal practices and green performances (P7), stating:

H3: Green internal practices are positively related to the green performance of F&B SMMEs in South Africa.

4.5 HYPOTHESES DEVELOPMENT – MODERATION (H4) AND MEDIATION (H5)

The following section presents the hypothesis development of this study for moderation and mediation effects.

4.5.1 THE MODERATING EFFECT OF GMV ON THE RELATIONSHIP BETWEEN GMO AND GIP (H4 A,B,C)

Environmental attitudes are the result of a person's more general set of values (Schultz & Zelezny, 2003). Three distinct bases for environmental attitudes are shown in the value-based theory based on the individual, all people, and all living things. Egoistic values reflect the individual and are based on belief about the effect that environmental destruction may have on the individual (Schultz & Zelezny, 2003). Social-altruistic values reflect all people and are based on the benefit of humanity or human goals. Biocentric or biospheric values reflect nature and focus on the inherent value of the natural environment (Schultz & Zelezny, 2003).

Based on previous research, the nexus between market orientation and performance was not consistent, with some studies finding a direct relationship between the two variables (Borazon et al., 2022; Kirca et al., 2005; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020), and others not being able to confirm a relationship (Ngo, 2022b; Nwokah, 2008; Sin et al., 2003). This prompted scholars to call for more studies to be conducted to assess this relationship within other business environments and industry sectors (Aziz & Yassin, 2010; Green et al., 2015; C. H. Wang, 2020); other cultural contexts apart from Western cultures (Aziz & Yassin, 2010); and knowing that the relationship is situation-specific and subject to several moderating influences (Diamantopoulos & Hart, 1993) on this relationship. Given the disparity of findings, others have suggested that the nexus between market orientation and performance may be moderated by other variables (Aziz & Yassin, 2010; Ellis, 2006), that affect this relationship (Ellis, 2006). Environmentally engaged managers display an internal locus

of control i.e., they display egoistic value (Williams & Schaefer, 2013). It may be assumed that because certain managers are environmentally aware, they would be more likely to push for adopting environmental practices in the face of greater demand from the environment (J. González-Benito & González-Benito, 2005). Conversely, those with little or no environmental awareness will reject the demands from stakeholders to make any type of environmental change. Rather they would consider another possibility to divert them delaying the process or would regard these types of actions as a lower priority. This line of reasoning concurs with literature suggesting that the beliefs and intellectual characteristics of managers have vital effects on organisations' strategic decision-making abilities and the processes that are already established within the organisation (J. González-Benito & González-Benito, 2005). It has been reported that in small businesses that are environmentally proactive, the personal values of the owner-managers play a stronger role in motivating environmentally friendly behaviours than in other SMMEs (Lawrence et al., 2006). Where SMME owner-managers have strong environmental convictions and also have strong ethical convictions, they become pioneers of sustainability rather than being restrained and reactive in their ecological engagement (Williams & Schaefer, 2013). R-A theory calls for the achievement of comparative advantages that are rare, valuable, inimitable and non-substitutable (Barney, 1991; S. D. Hunt & Morgan, 1996; Wernerfelt, 1984). Improving their resource utilization in competition can assist businesses to efficiently product and/or provide valuable market products for specific market segments (S. D. Hunt & Davis, 2008). This suggests that concentrating on the service business can lead to the development of a comparative advantage in the marketplace (S. D. Hunt & Morgan, 2005). Besides the recent digital transformation that businesses have had to deal with and the investment into novel digital technologies, environmental concerns have also expounded the choice of resource assortment that businesses have and how they provide a comparative advantage. Environmentally friendly attitudes or green management values are defined as human motivation (P3) according to R-A theory. A business that displays this motivation would be more encouraged – from an ethical perspective – not to harm the environment and to rather choose resources that would assist the business to acquire more suitable and valuable market products.

Subsequently, this study proposed that green management values (P3) moderate the relationship between green market orientation (P6) and the implementation of green internal practices (P6). The impact of green management values on the relationship between green market orientation and green internal practices is the resource characteristic (P7). The following section distinguishes green market orientation per the three components to determine the individual effects of each on the implementation

of green internal practices and how green management values moderate these relationships.

4.5.1.1 THE MODERATING EFFECT OF GMV ON THE RELATIONSHIP BETWEEN GCUO AND GIP (H4A)

The theory of planned behaviour argues that attitude impacts decisions (Ajzen, 1991), and based on this theory an individual or business demonstrating a high degree or high level of acceptance and a positive attitude towards something would be more motivated to adopt environmental behaviour. This shows that the environmental behaviour of a business is mainly driven by the environmental attitudes of management (Liao, 2018). On the contrary, the basic theory of values suggests that environmental attitude comprises values (self-interest and altruism) and environmental or ecological orientations (Spash & Vatn, 2006). It is posited that an eco-orientated individual or business is driven to adopt environmental behaviour due to underlying values, and this type of behaviour would increase the inclination of a business to, for example, pay for certification to show its dependability (Husted et al., 2014). Other theories like the ABC theory of attitude-behaviour-context suggest that the environmental attitude of a business culminates from an amalgamation of its intrinsic environmental attitude and its extrinsic environment or condition (Guagnano et al., 1995).

Therefore, the implementation of green practices is more likely to occur if businesses with a green customer orientation have positive environmental attitudes (De Barcellos et al., 2015), and green management values. Receiving customer feedback, and assimilating, and disseminating customer information will motivate SMMEs to implement green practices that for example address things like pollution reduction, wastage reduction, and similar environmentally friendly practices to maintain a positive customer image (González-Moreno et al., 2013). R-A theory proposes that the impact of green management values (P3) on the relationship between green customer orientation (P6) and green internal practices (P6) is the resource characteristic (P7). The related hypothesis is:

H4a: The relationship between green customer orientation and the implementation of green internal practices is moderated by the green management values of SMMEs in South Africa.

4.5.1.2 THE MODERATING EFFECT OF GMV ON THE RELATIONSHIP BETWEEN GCOO AND GIP (H4B)

The implementation of green practices is more likely to occur in businesses that display positive green management values and that are attentive to all the market information concerning their competitors so that they can differentiate themselves from them and obtain a competitive advantage (Segarra-Onã et al., 2014).

Because competition is important for small businesses, they must adopt similar or better practices than their competitors to survive. The adoption or implementation of green internal practices is an important differentiator for businesses to set themselves apart from the competition, and to become the industry benchmark. The implementation of green competitor orientation, by SMMEs, will permit them to study their competitors and apply strategies accordingly to distinguish themselves from their competitors and to obtain a competitive advantage (Segarra-Onã et al., 2014). R-A theory proposes that the impact of green management values (P3) on the relationship between green competitor orientation (P6) and green internal practices (P6) is the resource characteristic (P7). Considering the above, this study hypothesised that:

H4b: The relationship between green competitor orientation and the implementation of green internal practices is moderated by the green management values of F&B SMMEs in South Africa.

4.5.1.3 THE MODERATING EFFECT OF GMV ON THE RELATIONSHIP BETWEEN GIFC AND GIP (H4C)

Green inter-functional coordination facilitates the implementation of green internal practices specifically when information and knowledge can be shared among individuals and teams generating synergy (Nissen et al., 2014). Previous studies have shown that collaboration between groups can balance each other playing a positive role within the group due to the collective disposition, commitment, and array of skills and awareness that is obtained (Boughzala & De Vreede, 2015; Montelisciani et al., 2014). When managers display a positive environmental attitude and have values that indicate they are environmentally conscious, they will favour implementing green internal practices reducing negative impacts on the environment like reducing wastage, pollution, and emissions. They will actively seek green practices to address negative impacts on the environment and will encourage individuals and departments within their businesses to adopt these practices. R-A theory proposes that the impact of green management values (P3) on the relationship between green inter-functional

coordination (P6) and green internal practices (P6) is the resource characteristic (P7). Therefore, this study hypothesized that:

H4c: The relationship between green inter-functional coordination and the implementation of green internal practices is moderated by the green management values of F&B SMMEs in South Africa.

4.5.2 THE MEDIATING EFFECT OF GIP ON THE RELATIONSHIP BETWEEN GMO AND GP (H5A,B,C)

Mediation analysis can only be conducted if one has already established proof of a relationship between *X* and *Y* (Hayes, 2018). This direct relationship in the study is between green market orientation and green performance, and between green practices and green performance. From previous studies (Abdulsamad et al., 2021; Fatoki, 2019b; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020) it has been determined that there is a direct relationship between green market orientation and green performance. Other studies (De Sousa Jabbour et al., 2017; Miroshnychenko et al., 2017; Suganthi, 2019) have found a direct relationship between green practices and green performance. Based on this direct relationship, one can ask how this association arises.

In research conducted on market orientation, Gotteland and Boulé (2006) have suggested that research needs to identify important intervening processes that can mediate relationships between market orientation and its outcome. Additionally, Crick (2021) suggested recently that when studying market orientation, and to get a more nuanced view, it should not be discussed as a unit but be deconstructed into its components/elements/dimensions. Therefore, this study integrated these two requirements and investigated green market orientation from a component perspective and suggested that the relationship between the components and sustainable performance should be moderated.

Existing literature indicates that market orientation indirectly impacts the performance of a business through a mediating variable for example supply chain (Min et al., 2007), supply chain management strategy (Green et al., 2006), and green supply chain management practices (Green et al., 2015). In the study by Li et al., (2018), green internal practices mediated the relationship between green market orientation and environmental performance. Additionally, Ngo (2022b) found that green innovation (exploitation and exploratory) exerts a mediating effect on the relationship between GMO and operational performance. As per R-A theory, holding a market position of

competitive advantage assists the business to achieve superior financial performance (Bicen, 2021; S. D. Hunt, 1995, 2018). Having a service-type business, like F&B SMMEs, aids the business to create a market position with a competitive advantage by adopting green market orientation and improve their financial performance. Utilizing complex resources like green internal practices, leads to superior performance. Therefore, this study proposed that green internal practices mediate the relationship between green market orientation and green performance (P7). The following sections look to distinguish these components to determine the mediating effect of green internal practices on the relationship between the individual components and sustainable performance.

4.5.2.1 THE MEDIATING ROLE OF GREEN INTERNAL PRACTICES ON THE RELATIONSHIP BETWEEN GREEN CUSTOMER ORIENTATION AND SUSTAINABLE/GREEN PERFORMANCE (H5A)

Green customer orientation is described as developing information about major environmental changes to meet customers' environmental concerns (Kohli et al., 1993; C. H. Wang, 2020). Having customer-linking and market-sensing abilities allows green customer orientation to impact sustainable or green performance more (Feng et al., 2014). According to Beak et al., (2020), a business that has a green customer orientation can successfully identify and fulfil customers' needs to achieve sustainable performance. Identifying customers' environmental needs allows green customer-oriented businesses to implement green internal practices, which address some of the environmental concerns of the customers, establishing enhanced sustainable performance. Customers can exert strong pressure on businesses to adopt green practices that would limit the negative effects on the environment, enhancing their level of green performance (Kahraman & Kazançoğlu, 2019). Accordingly, this study hypothesised:

H5a: The relationship between green customer orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa.

4.5.2.2 THE MEDIATING ROLE OF GREEN INTERNAL PRACTICES ON THE RELATIONSHIP BETWEEN GREEN COMPETITOR ORIENTATION AND SUSTAINABLE/GREEN PERFORMANCE (H5B)

Green competitor orientation describes a set of behaviours that are linked to obtaining, distributing, and handling the environmental strategy information of competitors in the

industry (Armstrong & Collopy, 1996; Lukas & Ferrell, 2000). A business with a green competitor orientation will have competitive sensing abilities that, like green customer orientation, enhance their sustainable or green performance because environmental information about competitors is gathered and assessed as input to implementing a green strategy. This detailed information enables a business to understand the future environmental strategies of the competition (C. H. Wang, 2020). This detailed information can also motivate a business to implement green internal practices that would further enhance its sustainable performance. A business's green practices can be the same or better than that of its competitors further improving sustainable performance. Therefore, this study proposed that:

H5b: The relationship between green competitor orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa.

4.5.2.3 THE MEDIATING ROLE OF GREEN INTERNAL PRACTICES ON THE RELATIONSHIP BETWEEN GREEN INTER-FUNCTIONAL COORDINATION AND SUSTAINABLE/GREEN PERFORMANCE (H5C)

Green inter-functional coordination is defined as the collaboration of various sections of a business that can collectively generate, collect, and disseminate market intelligence, which fosters communication, cohesiveness, and trust between different functional areas (Auh & Menguc, 2005a, 2005b; Kharabsheh et al., 2015; C. H. Wang, 2020). It enhances sustainable performance by portraying an environmentally friendly image to customers acknowledging the value of green performance. Having synergies between the different sections of a business that all have the same goal enables the implementation of green internal practices to enhance sustainable- or green performance in that resources throughout the business are allocated for the cause. The related hypothesis is:

H5c: The relationship between green inter-functional coordination and green performance is mediated by the green internal practices of F&B SMMEs in South Africa.

4.6 SUMMARY AND PROPOSED CONCEPTUAL MODEL

4.6.1 SUMMARY

Considering existing literature and the foundational premises of R-A theory as presented in **Table 3.1**, hypotheses for the research were developed as discussed in the previous sections of the chapter. **Table 4.1** presents the summary.

Table 4.1 - Summary of proposed hypotheses

No.	The proposition	Link to R-A Theory								
		P1	P2	P3	P4	P5	P6	P7	P8	P9
H1a	Green customer orientation is directly and positively related to the green performance of F&B SMMEs in South Africa				X	X	X	X		
H1b	Green competitor orientation is positively related to the green performance of SMMEs in South Africa				X	X	X	X		
H1c	Green inter-functional coordination is positively related to the green performance of SMMEs in South Africa				X	X	X	X		
H2a	Green customer orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa						X	X	X	
H2b	Green competitor orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa						X	X	X	
H2c	Green inter-functional coordination is positively related to the implementation of green internal practices by F&B SMMEs in South Africa						X	X	X	
H3	The implementation of green internal practices is directly and positively related to the green performance of F&B SMMEs in South Africa						X	X	X	
H4a	The relationship between green customer orientation and the implementation of green internal practices is moderated by the green management values of SMMEs in South Africa			X			X	X	X	

<i>Link to R-A Theory</i>										
No.	The proposition	<i>P1</i>	<i>P2</i>	<i>P3</i>	<i>P4</i>	<i>P5</i>	<i>P6</i>	<i>P7</i>	<i>P8</i>	<i>P9</i>
<i>H4b</i>	<i>The relationship between green competitor orientation and the implementation of green internal practices is moderated by the green management values of F&B SMMEs in South Africa</i>			X			X	X	X	
<i>H4c</i>	<i>The relationship between green inter-functional coordination and the implementation of green internal practices is moderated by the green management values of F&B SMMEs in South Africa</i>			X			X	X	X	
<i>H5a</i>	<i>The relationship between green customer orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa</i>						X	X	X	
<i>H5b</i>	<i>The relationship between green competitor orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa</i>						X	X	X	
<i>H5c</i>	<i>The relationship between green inter-functional coordination and green performance is mediated by the green internal practices of F&B SMMEs in South Africa</i>						X	X	X	

Note: An overview of the summary of the hypotheses and the links to the R-A theory. Own work.

Appendix C displays a summary of the research questions and the related hypotheses.

4.6.2 PROPOSED CONCEPTUAL MODEL

The outcome of the literature review is the development of the conceptual model that indicates the relationships of the constructs in the study. This process, known as conceptualisation, as described by Hair et al., (2020), involves identifying the variables and constructs, specifying the relationships and hypotheses, and constructing a conceptual model that visually represents the theoretical basis of the relationships being examined. Having established the hypotheses in the previous section, the conceptualisation of this study is presented in **Figure 4.2**.

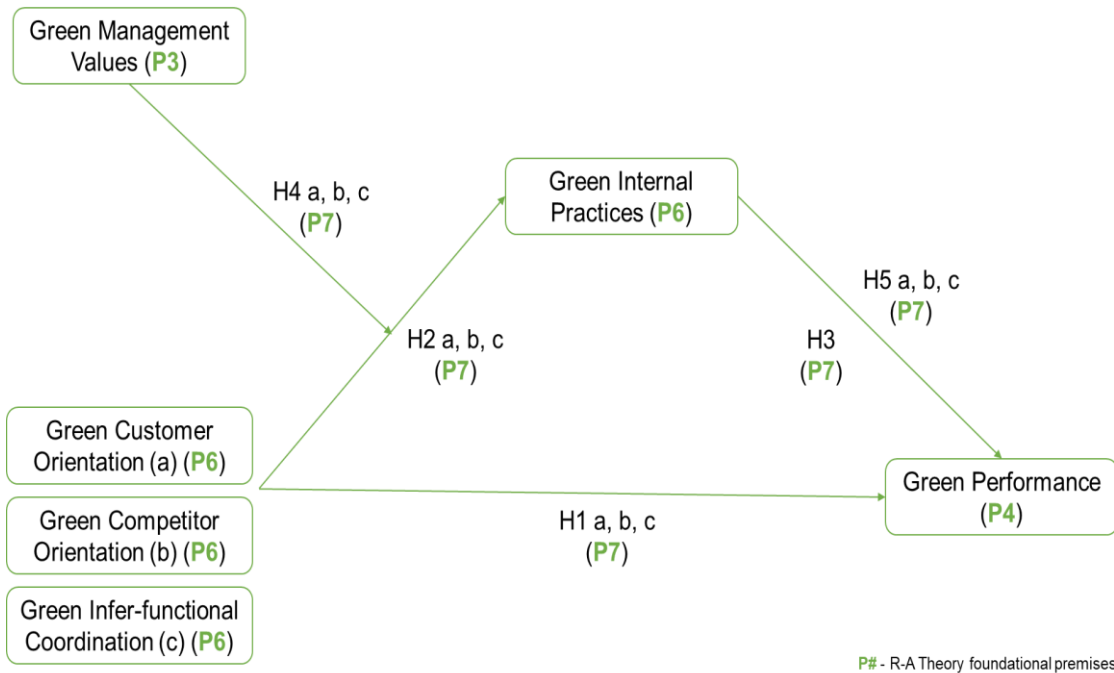


Figure 4.2 – Proposed conceptual model.

Note: An overview of the proposed conceptual model indicating the link to R-A theory. Own work.

The model was developed using R-A theory as the theoretical anchor and by incorporating the multidimensional variable of green market orientation and its dimensions (green customer orientation, green competitor orientation, and green inter-functional coordination), which influences green performance ultimately. Within this model, green management values and green internal practices are indicated as moderator and mediator variables respectively.

The relationships between these variables have not yet been empirically tested in the South African F&B sector. The conceptual model was proposed to indicate the relationships between the variables, i.e., the multidimensional green market orientation variable and its constructs of green customer orientation, green competitor orientation, green inter-functional coordination, green management values, green internal practices, and green performance.

4.7 CHAPTER SUMMARY

Research questions were formulated based on the research problem (Chapter 1). Founded on the literature (Chapter 3), and to narrow down the theory present, deductive reasoning was used to formulate the research hypotheses. Five main research hypotheses were established involving all the constructs of the study, including green market orientation and its components (green customer orientation, green competitor orientation, and green inter-functional coordination), green

management values, green internal practices, and sustainable- or green performance. Testing of these hypotheses allowed an examination of the relationships between green market orientation and its sub-constructs (green customer orientation, green competitor orientation, and green inter-functional coordination), green management values, green internal practices, and green performance. From the established hypotheses, a conceptual model was developed. The following chapter describes the research methodology that was used for this study.

CHAPTER 5: RESEARCH METHODOLOGY AND DESIGN

“I like to talk about food, ingredients, and how to adapt recipes. It’s a dialogue”.

- (Yotam Ottolenghi Quotes, n.d.)

5.1 CHAPTER INTRODUCTION

Like a recipe is about ingredients and is a dialogue – according to Israeli-born British chef, restaurateur, and food writer Yotam Ottolenghi – this research methodology chapter specifies the research paradigm that inspired the procedures used to identify, gather, process, and analyse data about selected phenomena.

The previous chapter (Chapter 4) established the hypotheses and conceptual model using R-A theory as a theoretical anchor, for this study and proposed various relationships between the constructs of the study (P7), namely *green market orientation* and its components (*green customer orientation*, *green competitor orientation*, and *green inter-functional coordination*); *green management values*; *green internal practices*; and *green performance*. Several hypotheses were developed for this study, which guided the design of the conceptual framework, shown in **Figure 5.1**.

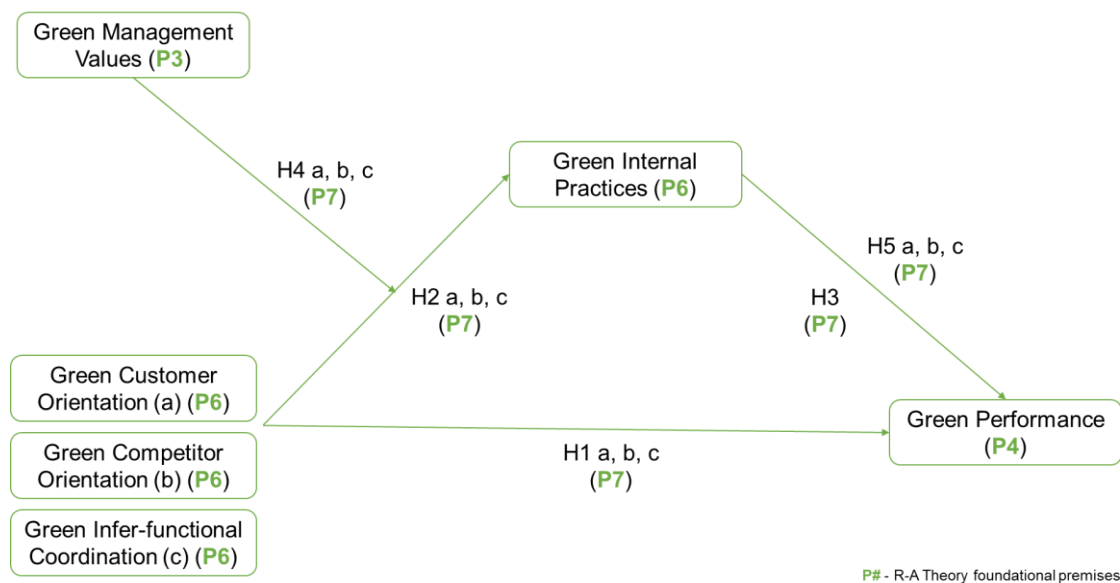


Figure 5.1 – Proposed conceptual model for this study.

Source: Author’s own compilation

This chapter discusses the research questions and research setting, before discussing the research methodology and design used to test the hypotheses presented in Chapter 4, drawing inspiration for the choices from the literature review (presented in Chapter 3) that reported previous research and recent findings on the relevant topics. Following the guidelines on methodological transparency by Aguinis et al., (2018), the

chapter details the research design, how the measurement instrument was designed, the sampling design process, the design of the data collection process, and how the collected data was analysed. Furthermore, ethical considerations and limitations of the research are discussed. A summary of the layout of this chapter is depicted in **Figure 5.2**.

Main Headings	Sub Headings
5.1 Chapter introduction	
5.2 Research Questions	
5.3 Research Setting	
5.4 Research Design	5.4.1 Philosophical Assumptions
	5.4.2 Research Approach
	5.4.3 Methodological Choice
	5.4.4 Research Objectives
	5.4.5 Research Strategy
	5.4.6 Research Time Horizon
5.5 Measurement Instrument Design	5.5.1 Operationalisation of Constructs
	5.5.2 Structure of Questions
	5.5.3 Scale Measurement
	5.5.4 Layout of Questionnaire
	5.5.5 Piloting of Questionnaire
	5.5.6 Finalisation of Questionnaire
5.6 The Sampling Design Process	5.6.1 Target Population
	5.6.2 Level and Unit of Analysis
	5.6.3 Sampling Frame
	5.6.4 Sampling Method or Technique
	5.6.5 Determining the Sample Size
5.7 Design of Data Collection Process	5.7.1 The Launch
	5.7.2 Survey Instructions and Options
	5.7.3 Types and Sources of Data Collected
5.8 Analysing the Collected Data	5.8.1 Data Screening and Preparation
	5.8.2 Descriptive Statistics
	5.8.3 Factor Analysis
	5.8.4 Assurance of Reliability and Validity
	5.8.5 Preparation for Multiple Regression
	5.8.6 Hypothesis Testing
5.9 Research Ethics Consideration	
5.10 Limitations to the Research	
5.11 Chapter Summary	

Figure 5.2 – Structure of Chapter 5

Note. An overview of the structure and layout of the chapter. Own work.

5.2 RESEARCH QUESTIONS

Research is based on the formation of research questions which are directed and supported by theory (Hair et al., 2016). “The research question is the central input to the process of theorizing, without which there is nothing to theorize about” (Makadok et al., 2018, p. 1533). To achieve the purpose of this study, the research question, set out in Chapter 1, proposed the following with the overall primary research question for this study being:

Primary Research Question – How do South African F&B SMMEs’ environmental values, in accord with their environmentally focussed market orientation, support the implementation of their sustainability practices, and improve their sustainable performance?

This study examined the influence of green market orientation, a novel construct, on green performance in the context of a developing market, and within the F&B industry. This study also investigated the moderating effects of green management values on green market orientation and the implementation of green internal practices. Furthermore, the study considered the mediating effects of the implementation of green internal practices on the relationship between green market orientation and its components (i.e., green customer orientation, green competitor orientation, and green inter-functional coordination) and green performance (i.e., economic-, social-, and environmental performance).

The primary research question was broken down into the following supplementary research questions:

Supplementary Research Question 1 (RQ1) – What is the relationship between green market orientation and green performance in F&B SMMEs in South Africa?

With increasing environmental pressures on businesses, it has become vital for them to implement a market orientation that incorporates green resources and skills (Crittenden et al., 2011; Hart & Dowell, 2011). In this manner, businesses can establish a competitive advantage and tactically align their marketing and sustainability strategies (Crittenden et al., 2011). This implies that market orientation should be extended to include environmental sustainability and become green market orientation (Borazon et al., 2022; Li et al., 2018; Ngo, 2022b; C. H. Wang, 2020). Understanding the extension of market orientation into green market orientation (see Section 3.4.2.2) is expected to provide insights for both scholars and F&B SMMEs into how to adapt and modify their business strategies to include the environmental aspects of it.

Environmentally conscious businesses may be inclined to ensure that the outcomes of their business activities do not cause harm to the environment or surrounding communities and bring economic value to them. Having been identified and evident in the literature, green market orientation has a positive effect on a firm's performance. Previous research has identified a link between green market orientation and performance (Borazon et al., 2022; Fatoki, 2019b; Li et al., 2018; Ngo, 2022b; C. H. Wang, 2020). Sustainable or green performance (see Section 3.7) consisting of economic-, social-, and environmental performance, has been identified by the South African government to be part of the green economy initiative (PAGE & DEA, 2017). Understanding both green market orientation (see Section 3.4.3) and sustainable or green performance (see Section 3.7) independently and in conjunction with each other, is expected to provide insights to both academic scholars and F&B SMMEs on how to optimise the business strategy to gain superior competitive advantage. The first research question was investigated by asking respondents questions in an online survey questionnaire (see Section 5.5.4.3). The data obtained was then used to test the conceptual framework (see Section 4.2).

Supplementary Research Question 2 (RQ2) – What is the relationship between F&B SMMEs' green market orientation and their implementation of green internal practices?

Driven by the rapid degradation of the environment, businesses have been pushed by consumers, governmental agencies, and non-governmental organisations to improve their sustainable practices throughout their operations as these operations have significant environmental and social impacts (Adams et al., 2023). Scholars and experts are, therefore, progressively more concentrating on how green practices, that incorporate the three Rs, namely reduce, reuse, and recycle (Mohindra, 2008), can be implemented to advance business performance (Suganthi, 2019). Earlier literature suggested that firms that have a green market orientation will implement green internal practices (Li et al., 2018; C. H. Wang, 2020). Understanding green internal practices and their implementation (see Section 3.6.3) is expected to provide insights to both academics and F&B SMMEs on optimising their performance by implementing green internal practices. The second research question was investigated by asking respondents questions in an online survey questionnaire (see Section 5.5.4.4). The data obtained was then used to test the conceptual framework (see Section 4.3).

Supplementary Research Question 3 (RQ3) – What is the relationship between the implementation of **green internal practices** and **green performance** in F&B SMMEs in South Africa?

Several advantages associated with the implementation of green internal practices (see Section 3.6.4) have been identified, which could result in better business performance and reputation (C. H. Lee et al., 2013), as well as elevating the importance of the implementation of green practices as an important business consideration (Shu et al., 2016; Tang et al., 2018). Former literature has identified that green practices have a positive effect on a firm's performance (Borazon et al., 2022; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020). Understanding both the implementation of green internal practices (see Section 3.6) and green performance (see Section 3.7) is anticipated to provide insights to scholars and F&B SMMEs on how adopting green practices can enhance business performance. The third research question was investigated by asking respondents questions in an online survey questionnaire (see Section 5.5.4.4 and Section 5.5.4.6). The data obtained was then used to test the conceptual framework (see Section 4.4).

Supplementary Research Question 4 (RQ4) – What is the possible moderating influence of green management values in the relationship between green market orientation and the implementation of green practices in F&B SMMEs in South Africa?

Managerial personality cannot be separated from business objectives as the manager's values and goals impact the achievement of these objectives (Zainol & Ayadurai, 2011). Additionally, manager's personal values and motivation influence the organisation, which ultimately affects the success of their businesses (Zainol & Ayadurai, 2011). This is especially true for SMMEs as they have flatter structures permitting control to a limited number of people (Jenkins, 2009; Parry, 2012). Therefore, the manager's values will impact the implementation of green practices. Earlier literature has established a positive relationship between green market orientation and green internal practices. Understanding the green management values (see Section 3.5.3) in F&B SMMEs is anticipated to provide insights into how top management in these businesses implements green internal practices and how this ultimately affects business performance. The fourth research question was investigated by asking respondents questions in an online survey questionnaire (see Section 5.5.4.5). The data obtained was then used to test the conceptual framework (see Section 4.5.1).

Supplementary Research Question 5 (RQ5) – What is the mediating influence of the implementation of green internal practices in the relationship between green market orientation and green performance in F&B SMMEs in South Africa?

Former studies have searched for linkages between strategy implementation and business performance and whether there is a mediating influence on this relationship (Gotteland & Boulé, 2006). Green market orientation has a positive impact on green performance, and earlier studies have identified intervening variables (Borazon et al., 2022; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020). Understanding the implementation of green internal practices as a mediating variable is expected to provide insights to scholars and F&B SMMEs on how to adopt green market orientation as a business strategy and implement green internal practices, thereby facilitating green performance. The fifth research question was investigated by asking respondents questions in an online survey questionnaire (see Section 5.5.4). The data obtained was then used to test the conceptual framework (see Section 4.5.2). The research setting is outlined next.

5.3 RESEARCH SETTING

The F&B industry within South Africa, a developing country, was chosen as the research setting to conduct this study. Within this setting, SMMEs in the F&B manufacturing and services industries' responses to environmental sustainability were observed when they were given a survey questionnaire to complete. The owner-managers of the SMMEs were targeted to provide the necessary information. **Table 5.1** represents a summary of the selected research setting.

Table 5.1 - Summary of the research setting

Context	Study Section	Theoretical Support
South Africa as a developing country	2.2.2	(Cavusgil, 2021; R. Daniel & Virk, 2014; Davies & Edinger, 2017; Hanusch, 2018; Hofbauer et al., 2020; OECD, 2021b; The World Bank, 2021)
South African Food and Beverage Industry	2.3.2	(Bonsu & Ntloedibe, 2019; Frost & Sullivan, 2018; InterGest, 2021; Ntloedibe, 2016; PMG, 2021; StatsSA, 2019)
South African small, medium, and micro enterprises	2.4.3	(Business Partners, 2018a; Duffett et al., 2018; Fatoki, 2019a; Le Fleur et al., 2014; Masocha, 2018; Ndlovu & Makgetla, 2017; Struwig & Lillah, 2017; The Presidency, 2019; Viviers, 2009)

Note. An overview of the research setting summary and theoretical support. Own work.

5.4 RESEARCH DESIGN

This research study honoured the principles of a positivist philosophy (as further explained in section 5.4.1), which assumes that reality exists tangibly and externally and that the suitable way to gather data is to observe and capture experiences directly. This study, specifically, conducted measurements by capturing quantifiable data using a survey approach (Bell et al., 2019). The research approach was deductive, relying on existing theory to deduce decisions and conclusions, followed by a rigorous analysis of new data (Saunders et al., 2009), as explained in section 5.4.2. The literature review proposed several hypotheses concerning the relationships between the main constructs of the study, namely green market orientation, green management values, green internal practices, and green performance. Subsequently, quantitative measures were used to explore the relationships among the constructs as presented in the hypotheses, per the example of previous studies (Abdulsamad et al., 2021; Fatoki, 2019b; Green et al., 2015; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020). The chosen methodology is motivated in section 5.4.3. The research is furthermore descriptive and explanatory (Rahi, 2017; Saunders & Lewis, 2018), as explained in section 5.4.4. The research strategy - a non-experimental survey - is discussed in more detail in section 5.4.5. The time horizon was cross-sectional as the study and related findings present a snapshot in time, as discussed in section 5.4.6. A quick summary of the research design is displayed in **Table 5.2**.

Table 5.2 – Research design summary

Research design element	Choices made	Explanation of choices
Philosophical assumptions	Positivism	Section 5.4.1
Research approach	Deductive	Section 5.4.2
Methodological choice	Quantitative	Section 5.4.3
Research objectives	Descripto-explanatory	Section 5.4.4
Research strategy	Survey questionnaire	Section 5.4.5
Research timing	Cross-sectional	Section 5.4.6

Note. An overview of the research design showing the research design element and the choices made in this study. Own work.

The following sections present details about the research design, explaining the choices made concerning each design element.

5.4.1 PHILOSOPHICAL ASSUMPTIONS

Based on the research questions posed, the testing of associations/relationships was required between the study's main constructs (green market orientation, green

management values, and green internal practices) as independent variables, and green performance as the dependent variable, signifying a positivist approach (Antwi & Kasim, 2015; Wahyuni, 2012). Having a realist orientation, positivism considers “the notion of God’s view or an independently existing reality, which can be described as it really is” (Slevitch, 2011, p. 76), adopting the view that only authentic knowledge gained through observations, including measurement, is trustworthy.

Epistemological assumptions are significant in research as they allow the researcher to answer the question of how the research should be conducted. From an objective stance, the epistemological view gains knowledge of the world, which in this study, was achieved through measurements that were intended to make sense of specific phenomena, and by statistically analysing the data. This study measured the constructs using slightly modified questions derived from established measurement scales found in existing literature, that were assimilated into a structured questionnaire. Positivism was, therefore, the chosen research philosophy.

Axiology, in research, underscores the importance of values and ethics in the research process (Saunders & Lewis, 2018), ensuring that the data is collected and maintained independently and objectively, in a value-free manner. In this research endeavour, data was objectively gathered using a structured measurement instrument, per a positivist philosophy.

The study’s hypotheses (presented in Chapter 4) were stated quantitatively, indicating that functional relationships can be derived between the selected independent and dependent variables (Chua, 2019; Park et al., 2020). Existing literature on this topic, suggested quantitative methodologies for further research (Green et al., 2015; Li et al., 2018; C. H. Wang, 2020), such as exploring the established relationship between market orientation and performance (Abdulsamad et al., 2021; Jiang et al., 2020), and the established relationship between green market orientation and performance (Fatoki, 2019b; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020) in the context of an emerging economy, focusing on a business sector that has not yet been attended to before, furthermore supporting the appropriateness of positivist research philosophy.

5.4.2 RESEARCH APPROACH

Theories are evaluated in terms of internal consistency, logic, organisation, clarity, and readability, and are often assessed in terms of their novelty, contribution, and current interest (Van Maanen et al., 2007). Three levels of theory exist – inductive, deductive and abductive (Saunders et al., 2016). Whilst an inductive approach begins with

specific observations to phenomena and formulating propositions which can be investigated thereby developing theory; a deductive approach starts with explaining the theory and testing the relationships between the variables to answer the research questions posed; and an abductive approach incorporates both approaches (Saunders et al., 2016). Abduction swings from induction to deduction and can be useful if one has rich information in one area of the research and little or no information in another area of the research. Although market orientation is rich in information, green market orientation is a novel concept, and therefore an abductive approach could be deemed appropriate for use. However, this research study followed a deductive approach. The literature presented in Chapter 3, indicates that the topics of *market orientation*, *green internal practices*, *green management values*, and *green performance* have attracted considerable attention in scholarly research over time, culminating in a rather extensive body of work. Green market orientation, however, is a novel concept (Ngo, 2022b) being an extension of market orientation interpreted from an environmental perspective (C. H. Wang, 2020), constituting intermediate theory, which brings new constructs into play, proposing new relationships between established constructs and new constructs (Edmondson & McManus, 2007).

For both mature and intermediate theories, testable hypotheses are established through rational arguments derived from previous literature that inherently utilise statistical analyses to support new theoretical proposals (Edmondson & McManus, 2007). This is characteristic of a deductive approach used to establish a new theory after rigorous statistical testing and evaluation (Park et al., 2020; Rahi, 2017).

5.4.3 METHODOLOGICAL CHOICE

Previous studies on the main constructs in this study - businesses' market orientation and green market orientation - were predominantly quantitative (Fatoki, 2019b; Li et al., 2018; Ngo, 2022b; Tjahjadi et al., 2020; C. H. Wang, 2020) in this study, hypotheses based on an extensive literature review, are posed in Chapter 4. The hypotheses sought to statistically test the relationships between the selected independent- and the relevant dependent variable. Deductive reasoning was then used to conclude that a proposition is true or false (Antwi & Kasim, 2015), and to describe and discuss the findings (Rahi, 2017).

Implementing a mono-method, primary data was generated for quantitative analysis. This enabled the researcher to establish the nature and extent of the causal relationships between the selected variables and to determine the subsequent

moderated-mediation effects of green management values as well as green internal practices on the relationship between green market orientation and green performance.

5.4.4 RESEARCH OBJECTIVES

This study investigated green market orientation as a phenomenon, in a new light, from an environmental perspective per the definition by C.H. Wang (2020). Descriptive research obtains information on existing phenomena (Rahi, 2017). Because green market orientation is a novel concept, this study is rather explanatory, in that it explains a problem in terms of causal associations (Rahi, 2017), hence, furthering descriptive research (Saunders & Lewis, 2018). The nature of the investigation per the research questions of the study (presented in section 1.4) is, therefore, exploratory, and explanatory. Following a hypothetico-deductive model, the objective of the study was to deduce generalisable associations that would permit prediction and management, based on data gathered from a cautiously recruited sample (Chua, 2019; Park et al., 2020). **Table 5.3** captures the researcher's choices.

Table 5.3 – The categorisation of the research purpose

<i>Research Purpose</i>	<i>Definition</i>	<i>Defence</i>
<i>Descriptive</i>	This type of study describes the situation, events, or real-life scenario and displays an accurate profile of these events (Saunders & Lewis, 2018). Therefore, the description will be a precursor to the explanation later.	This research study needed to describe the influence of green market orientation, green management values, and green internal practices on sustainable performance based on quantitative data.
<i>Explanatory</i>	Causal relationships between variables are statistically investigated to further explain the relationships between selected variables specified in the hypotheses. The descriptive part of the research is hence expanded by looking for an explanation behind the occurrence (Saunders & Lewis, 2018).	This research study focused on the relationships between selected variables, aiming to test the hypotheses that assumed a link between selected variables, based on existing literature.

Note. An overview of the categorisation of the research purpose. Own work.

5.4.5 RESEARCH STRATEGY

The research strategy is a chosen practice of accumulating and understanding data with a clear objective (Rahi, 2017) to answer specific research questions. Being a quantitative study, following a positivist philosophy, and a deductive research approach, this research opted for a survey strategy whereby data was gathered through a pre-designed structured questionnaire (Bhattacharjee, 2012). The questionnaire was distributed both digitally and manually to selected people, namely senior

executives/managers, and owners of F&B SMMEs who were the main group of interest in this study considering their ability to complete the online survey based on their experience in the F&B sector. The online survey offered the quickest and easiest way to recruit busy people who could complete the survey in their own time, when convenient to them. The manual survey offered an opportunity for F&B SMMEs who had no access to the internet and who could complete the survey by being interviewed. A total of 491 responses were received, with 376 questionnaires being fully completed.

5.4.6 RESEARCH TIMING

This study is cross-sectional, as data was gathered from multiple cases at a single point in time to reflect a currently relevant situation (Bhattacharjee, 2012). Admittedly, former studies (Abdulsamad et al., 2021; Green et al., 2015; Tjahjadi et al., 2020; C. H. Wang, 2020) have advocated for longitudinal studies in the future, which was impossible given the time constraints faced in a doctoral programme. Also, owner-managers of SMMEs are very occupied and the cross-sectional type of investigation required a once-off commitment, reducing the risk of respondents quitting along the way.

5.5 MEASUREMENT INSTRUMENT DESIGN

A well-constructed survey questionnaire enhanced consistency in response and easy administration. The survey was hosted through Google Forms, which is an online survey tool, that requires every respondent to answer the same questions in the same order. Admittedly, any online survey, response characteristics, demographics, and individual technological responses will likely influence the design, use and implementation of a questionnaire (Andrews et al., 2003), therefore, the item development, questionnaire design, and measurement scales are discussed in the subsequent sections.

5.5.1 OPERATIONALISATION OF CONSTRUCTS

Each construct in the study had to be measured with well-designed, understandable questions in the survey questionnaire, including an array of items, which needed to be of high-quality to yield sufficient information (Ames & Luecht, 2018). Items also had to be brief and specific to facilitate fair, valid, and reliable assessment (Ames & Luecht, 2018). The process of assessment or measurement of a construct is referred to as operationalisation, whereby criteria for assigning numbers are specified for the items to quantify the information logically and scientifically (Churchill Jr., 1979) implying that abstract concepts are converted into measurable observations. Item development

entailed two steps, firstly specifying the domain of the construct, and thereafter generating items to capture a specific domain, for example, green market orientation, which required scrutiny of existing literature (Churchill Jr., 1979; Rahi, 2017). The recommendations of Diamantopoulos et al., (2012) for a multi-item scale were used due to the greater predictive validity, that outperforms a single-item scale.

This research study generated items from previous studies that had implemented multi-item scales, to assess the constructs of *green market orientation* and its components (*green customer orientation*, *green competitor orientation*, and *green inter-functional coordination*); *green management values*; *green internal practices*; and *green performance*. Using the toolkit from Svensson (2018), the pre-test and pilot studies (as explained in section 5.3.5), helped to further refine and adjust the wording and sentence structure to prevent bias. The operationalisation of the constructs is displayed in **Appendix D**. The item development for each of the constructs is discussed next.

5.5.1.1 ITEM DEVELOPMENT FOR GREEN MARKET ORIENTATION

The scale for green market orientation was drawn from C. H. Wang (2020). Being a multidimensional construct, each of the components was measured using the scale by Narver and Slater (1990) that was later adapted and justified by C.H. Wang (2020) into the novel construct of *green market orientation* that incorporates the environmental concept. The revised construct considers aspects such as environmentally friendly products, information about the environment, and issues about the environment, which were not acknowledged in previous studies (C. H. Wang, 2020). This study followed the recommendations of C.H. Wang (2020) that deconstructed green market orientation into three constructs that specified four items each, initially, namely 1) *green customer orientation* (Wang, 2020); 2) *green competitor orientation*; and 3) *green inter-functional coordination* (Li et al., 2018; C. H. Wang, 2020). Slight changes were made after consulting literature (Jansson et al., 2017) to enhance the measurement of the components of *green market orientation*, including an additional item to *green customer orientation*, and the construct of *green competitor orientation* to capture shifts in the market. For *green inter-functional coordination*, the four items by C.H. Wang (2020) were used to measure this construct. The operationalisation of green market orientation and its components are displayed in **Table 5.4**.

Table 5.4 - Operationalisation of green market orientation

Construct	Green Customer Orientation		Source
<u>Definition:</u> Green customer orientation states that it is “the sufficient understanding of one’s target buyers to be able to create superior value for them continuously (Narver & Slater, 1990)	GCuO 1	<i>Our business continuously seeks to increase the environmental value that we provide to our customers</i>	(Jansson et al., 2017; Li et al., 2018; Narver & Slater, 1990; Ngo, 2022b; C. H. Wang, 2020)
	GCuO 2	<i>We periodically revise our environmentally friendly products in accordance with our customers’ needs</i>	
	GCuO 3	<i>We supply our customers with environmental protection information to keep them informed</i>	
	GCuO 4	<i>Our competitive advantage is that we understand our customers’ concerns about the protection of the environment</i>	
	GCuO 5	<i>We are fast to detect changes in our customers’ preferences concerning environmental issues</i>	
Construct	Green Competitor Orientation		Source
<u>Definition:</u> Green competitor orientation describes a firm’s consideration of a current and potential competitor’s short-term strengths and weaknesses and long-term capabilities and strategies (Narver & Slater, 1990)	GCoO 1	<i>In our organization, personnel share information on competitors’ environmental strategies with customers</i>	(Jansson et al., 2017; Li et al., 2018; Narver & Slater, 1990; Ngo, 2022b; C. H. Wang, 2020)
	GCoO 2	<i>We respond quickly to competitors’ environmental strategies</i>	
	GCoO 3	<i>Top managers discuss the strengths and weaknesses of competitors’ environmental strategies</i>	
	GCoO 4	<i>When managers have information on competitors’ environmental strategies, they promptly share it with others in the business</i>	
	GCoO 5	<i>We are fast to detect fundamental shifts in our market concerning environmental issues</i>	
Construct	Green Inter-functional Coordination		Source
<u>Definition:</u> Green inter-functional coordination is defined as the aptitude for synchronized application of resources across business functions in generating value for the customer (Jiang et al., 2020; C. H. Wang, 2020)	GIfC 1	<i>Any environmental regulation information that becomes available is distributed throughout our entire business</i>	(Narver & Slater, 1990; Ngo, 2022b; C. H. Wang, 2020)
	GIfC 2	<i>We share environmental information with other departments in our business</i>	
	GIfC 3	<i>All departments are equipped to satisfy customers’ demands for environmentally friendly products</i>	
	GIfC 4	<i>Information that becomes available from existing and potential competitors on how to protect the environment is distributed throughout the business</i>	

Note. The item development for green market orientation. Own work.

5.5.1.2 ITEM DEVELOPMENT FOR GREEN MANAGEMENT VALUES

The scale for green management values was a subsection of items drawn from the New Ecological Paradigm (NEP) scale by Dunlap et al., (2000), which is a measure of acceptance of an environmentally friendly worldview (Jansson et al., 2017), and which is considered reliable across many cultures (Dunlap, 2008). The original scale by Dunlap et al., (2000) contains 15 items, but this study only retained five items that were justified as acceptable in a short version by Jansson et al., (2017). The operationalisation of green management values is presented in **Table 5.5**.

Table 5.5 - Operationalisation of green management values

Construct	Green Management Values		Source
<u>Definition:</u> Green management values are the personal values of owner-managers which appear to play a more enhanced role in motivating pro-environmental behaviours (Ahmić et al., 2016; Lawrence et al., 2006)	GMV 1	<i>Humans do not have the right to modify the natural environment to suit their needs</i>	(Dunlap et al., 2000; Jansson et al., 2017)
	GMV 2	<i>The balance of nature is not strong enough to cope with the impacts of modern industrial nations</i>	
	GMV 3	<i>The earth does not have enough natural resources even if we learn how to develop them</i>	
	GMV 4	<i>Human ingenuity will not prevent us from making the earth unliveable</i>	
	GMV 5	<i>If things continue on their present course, we will soon experience a major ecological catastrophe</i>	

Note. The item development for green management values. Own work.

5.5.1.3 ITEM DEVELOPMENT FOR GREEN INTERNAL PRACTICES

The green internal practices measurement scale was drawn from several studies ranging from sustainable sourcing (Carter et al., 2000; Curkovic et al., 2000; Zhu et al., 2007); to operational (business) practices (Jansson et al., 2017; Li et al., 2018); waste management (Carter et al., 2000; Jansson et al., 2017; Yu et al., 2017); and environmental management practices (Li et al., 2018; Montabon et al., 2007) totalling 18 items. The types of sustainable or green practices are discussed in previous literature (Cassells & Lewis, 2011). The operationalisation of green internal practices is displayed in **Table 5.6**.

Table 5.6 - Operationalisation of green internal practices

Construct	Green Internal Practices - Policies		Source
Definition: Green internal practices are implemented by firms to comply with the increasing requirements from consumers and to lessen the negative impacts of their manufacturing processes on the environment (Tjahjadi et al., 2020)	GIP 1	<i>Our policy is to curb electricity usage to the minimum</i>	(Carter et al., 2000; Curkovic et al., 2000; Jansson et al., 2017; Li et al., 2018; Montabon et al., 2007; Zhu et al., 2007)
	GIP 2	<i>Our policy is to curb water usage to the minimum</i>	
	GIP 3	<i>Our policy is to curb fuel usage to the minimum</i>	
	GIP 4	<i>Our policy is to curb stationery usage to the minimum</i>	
	GIP 5	<i>Our policy is to optimise the usage of our time in the business</i>	
	GIP 6	<i>Our policy is to recycle office supplies</i>	
	GIP 7	<i>Our policy is to recycle food and canteen waste</i>	
	GIP 8	<i>Our policy is to recycle other waste (packaging materials, etc.)</i>	
Construct	Green Internal Practices - Sourcing		Source
	GIP 9	<i>We implement supplier development and vendor rating programmes that promote sustainable production and consumption</i>	(Carter et al., 2000; Curkovic et al., 2000; Jansson et al., 2017; Li et al., 2018; Montabon et al., 2007; Zhu et al., 2007)
	GIP 10	<i>We ask our suppliers to commit to waste reduction goals in their organisations</i>	
	GIP 11	<i>We ask our suppliers to participate in the design of products for recycling or reuse</i>	
	GIP 12	<i>We conduct audits on our suppliers concerning their sustainability practices regularly</i>	
	GIP 13	<i>We ensure our products are sourced from sustainable or organic means</i>	
Construct	Green Internal Practices - Business		Source
	GIP 14	<i>We completely control the environmental impact of our products and processes</i>	(Carter et al., 2000; Curkovic et al., 2000; Jansson et al., 2017; Li et al., 2018; Montabon et al., 2007; Zhu et al., 2007)
	GIP 15	<i>We have a comprehensive approach to setting environmental targets</i>	
	GIP 16	<i>We have a detailed manner of achieving environmental targets</i>	
	GIP 17	<i>We have a detailed method to demonstrate that environmental targets have been met</i>	
	GIP 18	<i>We have established environmental initiatives and allocated resources including funds for environmental programmes and projects</i>	

Note. The item development for green internal practices. Own work.

5.5.1.4 ITEM DEVELOPMENT FOR GREEN PERFORMANCE

The measurement scale for green performance was drawn from C.H. Wang (2020). The primary measures of green performance comprised eight (8) items, which were adapted from the scales of Montabon et al., (2007), and Yu et al., (2017). The scales from Yu et al., (2017) were taken from ISO 14 000 standard (C. H. Wang, 2020).

Green performance is a multidimensional construct consisting of economic, social, and environmental performance (Fatoki, 2019b; C. H. Wang, 2020). This study did not deconstruct *green performance* into its components, rather treating it as a composite construct although retaining all the measurement items for every component, totalling 35 measurement items as done in previous studies (Fatoki, 2019b; Li et al., 2018; Paulraj, 2011; C. H. Wang, 2020). The operationalisation of green performance is displayed in **Table 5.7**.

Table 5.7 - Operationalisation of green performance

Construct	Green Performance	Source	
<p>Definition: Green performance denotes the intention of the business to reach its financial objectives, surpass its social outlooks for environmental accountabilities, and alleviate ecological challenges caused by its production activities (Jacobs et al., 2010; C. H. Wang, 2020)</p>	GP 1	<i>Compared to our largest competitor our profitability is very good.</i>	(Fatoki, 2019b; Li et al., 2018; Montabon et al., 2007; Paulraj, 2011; C. H. Wang, 2020; Yu et al., 2017)
	GP 2	<i>Our firm conforms to requirements of community relations</i>	
	GP 3	<i>Our firm has achieved a decrease in the consumption of hazardous/harmful /toxic material</i>	
	GP 4	<i>Our firm has achieved a decrease in the frequency of environmental accidents</i>	
	GP 5	<i>Our firm has achieved a reduction in environmental impacts and risks to the general public</i>	
	GP 6	<i>There is a decrease in expenses related to materials purchased in our business</i>	
	GP 7	<i>Our firm has achieved improved efficiency of raw materials</i>	
	GP 8	<i>Our firm has been growing over the last five years</i>	
	GP 9	<i>Our firm has increased its contribution to the local community for social issues</i>	
	GP 10	<i>Our firm has increased its overall reputation in respect of products and services</i>	
	GP 11	<i>Our firm has increased its product portfolio over the last five years</i>	
	GP 12	<i>Our firm has increased its recycling practices of materials</i>	
	GP 13	<i>There is an improvement in overall stakeholder welfare</i>	
	GP 14	<i>Our firm has reduced the cost of environmental compliance</i>	
	GP 15	<i>Overall our environmental performance has improved over the past five years</i>	
	GP 16	<i>There is a decrease in expenses related to energy consumption in our business</i>	
	GP 17	<i>We have regularly achieved targets imposed on energy conservation, recycling, and/or waste reductions</i>	
	GP 18	<i>There is a decrease in the expenses related to waste discharge in our business</i>	
	GP 19	<i>There is improved awareness and protection of the claims and rights of people in the community served</i>	
	GP 20	<i>We conform to requirements of indicators providing information on the local, regional, or national condition of the environment</i>	
	GP 21	<i>There is an improvement in community health and safety</i>	

Construct	Green Performance		Source
<p>Definition: Green performance denotes the intention of the business to reach its financial objectives, surpass its social outlooks for environmental accountabilities, and alleviate ecological challenges caused by its production activities (Jacobs et al., 2010; C. H. Wang, 2020)</p>	GP 22	<i>There is an increase in energy saved due to conservation and efficiency improvements in our firm</i>	(Fatoki, 2019b; Li et al., 2018; Montabon et al., 2007; Paulraj, 2011; C. H. Wang, 2020; Yu et al., 2017)
	GP 23	<i>We have achieved an improvement in the return on investment</i>	
	GP 24	<i>There is increased employee satisfaction within our firm</i>	
	GP 25	<i>Our firm has achieved a decrease in the consumption of water in our facilities</i>	
	GP 26	<i>There is increased customer satisfaction with our products and services</i>	
	GP 27	<i>We conform to expectations of the implementation of environmental policies and programmes</i>	
	GP 28	<i>We conform to requirements of inputs of energy and there is a reduction in energy usage in our firm</i>	
	GP 29	<i>Our firm has achieved a reduction in the number of staff turnover</i>	
	GP 30	<i>We conform to requirements of outputs of air emissions and there is a reduction in air emission in our firm</i>	
	GP 31	<i>We conform to the requirements of outputs of wastewater and there is a reduction in waste (water and/or solid) in our firm</i>	
	GP 32	<i>We generally have higher profit margins on our goods/services compared to our main competitors.</i>	
	GP 33	<i>There is an improvement in the occupational health and safety of our employees</i>	
	GP 34	<i>We have achieved an improvement in earnings per share</i>	
	GP 35	<i>We have achieved important environmental certifications (e.g., ISO 14 031, ISO 14 000)</i>	

Note. The item development for green performance. Items coloured in **red** measured the economic/financial performance; those coloured **green** measured the social performance; and items coloured in **black** measured the environmental performance. Own work.

In **Table 5.7**, the items were mixed in the questionnaire purposefully so that respondents would find it difficult to link items associated with the same measurement.

5.5.2 STRUCTURE OF THE QUESTIONS

In quantitative research questionnaires, closed-ended questions are preferable (Hair et al., 2016), and could either be dichotomous or multichotomous. Furthermore, multi-item scales are regarded better than single-item scales, in terms of predictive validity, and because multi-item measures are more consistent over time (Diamantopoulos et al., 2012).

The questionnaire was thoroughly contemplated to ensure that it would measure the relevant constructs aptly, also ensuring that it would be understandable and not too long so that it becomes discouraging (Hair et al., 2014). It was compiled from various

existing sources. The questionnaire used by C. H. Wang (2020) served as a base for modifying and creating a new questionnaire acknowledging scales used by Narver and Slater (1990) and Li et al., (2018) (as discussed in section 5.3.1). The following sub-sections discuss the scales of measurement, structure of the questionnaire, pre-test of the questionnaire, pilot study, and finalisation of the questionnaire.

5.5.3 SCALES OF MEASUREMENT

It is imperative to strictly define the variables that are studied when doing quantitative research. This was done according to the existing literature presented in Chapter 3. Every construct had to be defined, ensuring that the definition of every construct and the envisaged measurements were aligned (Bhattacharjee, 2012). The researcher consulted previous studies and existing scales as indicated before, to maximise the validity and reliability of the study. Admittedly, the scales used were tested in previous studies, although in different contexts. Constructs were properly operationalised to reduce bias and enhance the reliability of the measurements.

The final questionnaire comprised 72 items, which were slightly adapted in terms of language and wording to better suit the context of this study. All reverse-coded items were changed to prevent confusion. The scales in the questionnaire were of a nominal or interval nature, specifically five increment interval Likert-type scales were used to measure all the constructs. Options ranged from “1 = strongly disagree, to 5 = strongly agree” (Ngo, 2022b; C. H. Wang, 2020), representing a multi-item scale, which is better than a single-item scale as it helps to average out faults and specificities that are inherent in a single-item scale (Diamantopoulos et al., 2012).

5.5.4 LAYOUT OF THE QUESTIONNAIRE

The questionnaire is distinguished into seven sections (A-F). These sections included the Introduction, Section A – General Business Information, Section B to E – focusing on the various constructs, and Section F – General Questions. Further discussion on the different sections follows.

5.5.4.1 INTRODUCTION

The introduction started with the **informed consent** section (refer to **Appendix E**), which invites the participant to participate in the survey. It announced the topic of the research, specifying the purpose of the research, the benefits of conducting the study, as well as the ethical statements that ensured anonymous participation, and the assurance that only aggregate data would be reported. Participants were also informed

that they could withdraw at any stage without penalty if they decided to do so during the survey. The respondents were informed that if they clicked “Yes” they were consenting to participate in the questionnaire.

The next section listed the industry types and sectors participants were to choose from. They were advised that businesses that fell under the F&B manufacturing and service industries qualified to be included. Responses to the question in the introductory letter unequivocally excluded interested individuals who did not qualify for inclusion, as they were unable to access the link to the survey. Those, who qualified, were provided a choice to participate in the questionnaire, or to click “No” and a link to exit the survey. Willing respondents who had clicked “Yes”, proceeded to section A.

5.5.4.2 SECTION A – GENERAL BUSINESS INFORMATION

This section contained **background questions** on the company and personal information of the respondent to draw a profile of the sample. The questions included firm characteristics, namely business size, business age, business customers, and location of the business (i.e., the province in which they were located). Former studies (Borah et al., 2023; Borazon et al., 2022; Dogbe et al., 2020; Jiang et al., 2020; Li et al., 2018) have found that firm characteristics impacted firm-level analysis.

5.5.4.3 SECTION B – GREEN MARKET ORIENTATION

This section presented questions about the **company’s strategic focus**, specifically **green market orientation**, and its components i.e., **green customer orientation**, **green competitor orientation**, and **green inter-functional coordination**, presenting 14 items in total. Each component was introduced with instructions, a definition, and the relevant sub-sections. Green customer orientation and green competitor orientation contained 5 items each, whilst green inter-functional coordination contained 4 items.

5.5.4.4 SECTION C – GREEN INTERNAL PRACTICES

Questions in this section focused on **green internal practices** of the respondent’s company containing 18 questions related to business practices, sourcing or supplier practices, consumption practices, and waste management practices. Consumption and waste practices were covered by one section containing 8 items, whilst supplier practices were explored in terms of 5 items, and business practices utilizing 5 items.

5.5.4.5 SECTION D – GREEN MANAGEMENT VALUES

This section presented questions about the **green management values** of the company, presenting 5 items in total.

5.5.4.6 SECTION E – GREEN PERFORMANCE

The section about **green performance**, and its components (economic/financial performance, social performance, and environmental performance), presented 35 items. Economic/finance performance was covered by 9 items, social performance by 10 items, and environmental performance by 16 items.

5.5.4.7 SECTION F – PERSONAL INFORMATION

The final section of the questionnaire presented **general demographic questions** about respondents' gender, age, education level, position, and duration in their current position. The questionnaire concluded by thanking the respondents for participating in the survey.

The summary presented in **Table 5.8**, indicates that the questionnaire reflected on four main constructs, of which green market orientation was further extrapolated into three components (green customer orientation, green competitor orientation, and green inter-functional coordination), measuring seven constructs through 72 items in total.

Table 5.8 - Construct measurement

No.	Construct	Components	No. of items
1	Green Market Orientation	Green customer orientation	5
		Green competitor orientation	5
		Green inter-functional coordination	4
2	Green Management Values		5
3	Green Internal Practices		18
4	Green Performance		35
	Total		72

Note. The table shows the operationalisation of the constructs, sub-constructs, and sub-constructs involved in the study and the number of questions linked to each in the questionnaire. Own work.

5.5.5 PILOTING OF QUESTIONNAIRE

To validate the measurement instrument and to ensure its suitability, a pre-test and a pilot test were conducted (Mohiuddin Babu, 2018) to ensure that reliable and valid data were generated, as well as to detect any problems that could jeopardise the quality of the data. The questionnaire was distributed in the same way intended for the final round to ensure consistency, and to clarify the suitability of the wording of the scales and instructions.

5.5.5.1 PRE-TESTING OF THE QUESTIONNAIRE

The initial test ($n = 3$) was completed by the supervisor of the study, and the database owners (who were supposed to distribute the questionnaire) to assess the content of the invitation letter, introduction, suitability of the wording of the questions, and wording of instructions. Recommendations for improvement included that the letter of intent be included in the Google Forms introduction section, and rephrasing sentences in the introduction to improve the flow when reading it. Changes were made accordingly whereafter the questionnaire was distributed for the pre-test.

The pre-test ($N = 10$) was completed by full-time and part-time students enrolled in the MBA and MPhil programmes at the Gordon Institute for Business Science. This selection was intentional because the researcher felt that they would be rather pedantic and spot potential issues. The participating students were also asked to comment on their experience of completing the questionnaire, the understandability of the questions, and the length and time required for completion of the questionnaire. They shared their advice for improvement of the questionnaire with the researcher.

Comments included that the questions were intuitive, the wording was great, and the layout was "easy to follow and coherent". They, however, suggested that the increment "neutral" in the Likert-type scale be changed to "uncertain". Having made the changes, the questionnaire was sent out for the formal pilot test.

5.5.5.2 PILOT TEST

The pilot test involved the senior-level managers of multi-national enterprises operating in the F&B service industry to gain insight from a large enterprise perspective, and to use participants from the F&B industry that is being studied. The questionnaire was sent to 35 senior managers working as Group Sustainability/Environmental Managers who were assumed to have relevant experience with environmental and sustainability issues in the F&B industry. Despite asking the willing respondents to answer the questions and review the questions in terms of their industry, most opted out because the questionnaire referred to SMMEs. Those who completed and reviewed the questionnaire ($n = 3$), made no suggestions for change or recommendations for improvement.

5.5.5.3 FINALISATION OF THE QUESTIONNAIRE

Feedback from both the pre-test and pilot studies was used to finalise the questionnaire. The informed consent section was added to the front of the

questionnaire as advised, and the answers provided were linked to the relevant sections in the questionnaire (i.e., if "Yes" then Go to section 3 of the questionnaire, if "No" then exit or submit the questionnaire). The questionnaire was then finalised (refer to **Appendix F**). This copy was submitted together with the methodology chapter for ethics approval to the academic institution.

After ethics approval was granted (refer to **Appendix G**), the researcher checked the final layout of the questionnaire. An invitation letter (cover to the email) was drawn up (refer to **Appendix H**) to accompany the questionnaire. The invitation letter explained the purpose of the research, pre-requisites for participation, time required for completion of the questionnaire, providing the link to the online questionnaire, also asked if a Microsoft Word document was preferred rather than the electronic version that could be emailed to be printed if needed.

5.6 THE SAMPLING DESIGN PROCESS

The following section discusses the target population, the level and unit of analysis, the sampling frame, and how the sample size was determined.

5.6.1 TARGET POPULATION

The target population considers who is included in the sample considering the objectives of the research and possible geographical limitations (J. Daniel, 2012). This research study was interested in F&B SMMEs in South Africa as the target population because they have not yet been included in similar research studies (Jansson et al., 2017; L. C. Leonidou et al., 2017), despite their importance in economies in the world (European Commission, 2015). Previous studies that have focused on the primary constructs of this study involved SMMEs in Vietnam's logistic industries (Ngo, 2022a, 2022b); the F&B sector in Yemen (Abdulsamad et al., 2021); Taiwan's high-tech industries (C. H. Wang, 2020); micro, small, and medium-sized (MSMEs) in Java Indonesia (Tjahjadi et al., 2020); the tourism and hospitality sectors in South Africa (Fatoki, 2019b); manufacturing firms worldwide through the Global Manufacturing Research Group (GMRG) (Li et al., 2018); SMMEs in Sweden (Jansson et al., 2017); and US manufacturing organisations (Green et al., 2015).

From a South African perspective, SMMEs have shown a willingness to implement environmental management systems and to display eco-friendly standards (Knight et al., 2019; Struwig & Lillah, 2017). As discussed in Chapter 2, SMMEs in South Africa include formal and informal traders - according to the SEDA classification system (SEDA, 2021). However, for this study, only formal traders were targeted. Although

distributed across South Africa, SMMEs are mostly concentrated in three of the nine provinces, namely Gauteng, Kwa-Zulu Natal, and Western Cape, with the commercial hubs being Johannesburg, Durban, and Cape Town respectively. The distribution of SMMEs in other provinces is confined to bigger towns. The distribution of all SMMEs across South Africa is visually depicted in **Figure 5.3**.

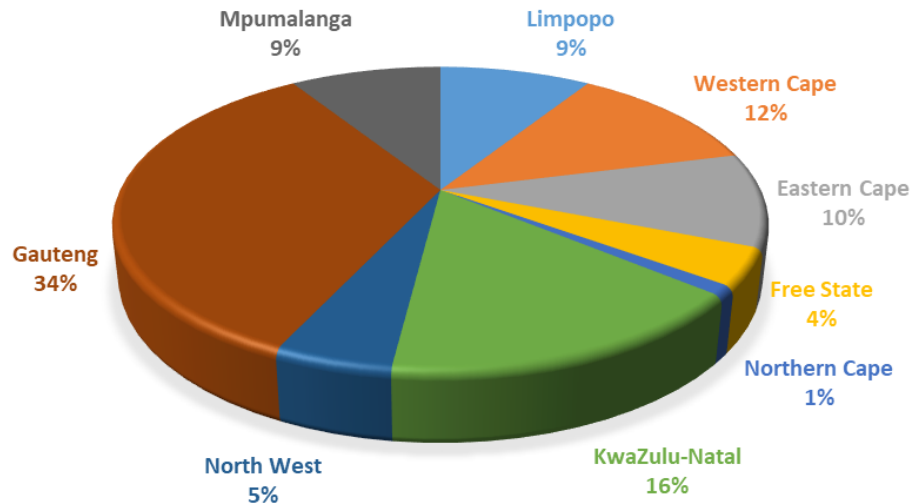


Figure 5.3 – SMMEs by province

Note. An overview of the number of SMMEs in each province in terms of percentage. From The SMME Quarterly update: 1st quarter 2021 by the Small Enterprise Development Agency (SEDA), 2021 (<http://www.seda.org.za/Publications/Publications/SMME%20Quarterly%202021%20Q1%20September.pdf>) Copyright 2021. Reprinted with permission.

As discussed in Chapter 2, SMMEs in most countries make up an integral part of the countries’ economies. With over 60% of the country’s GDP being provided by SMMEs (Ndlovu & Makgetla, 2017), SMMEs in South Africa play an important role from an economic point of view. **Figure 5.4** displays the GDP contribution per province.

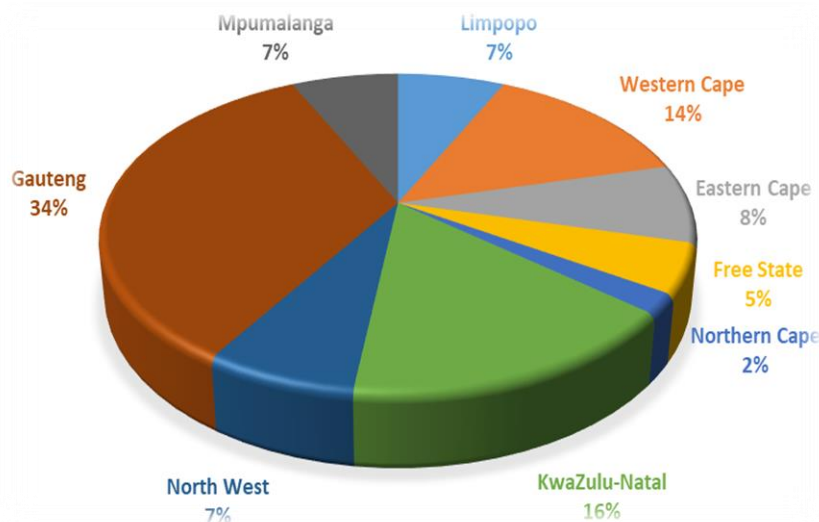


Figure 5.4 – Provincial contributions to the SA GDP

Note. An overview of the number of SMMEs in each province in terms of percentage. From The SMME Quarterly update: 1st quarter 2021 by the Small Enterprise Development Agency (SEDA), 2021 (<http://www.seda.org.za/Publications/Publications/SMME%20Quarterly%202021%20Q1%20September.pdf>) Copyright 2021. Reprinted with permission.

In terms of green initiatives, the three main provinces displaying 60% of the total green initiatives include KZN (74), Western Cape (73), and Gauteng (69) (PAGE & Department of Environmental Affairs, 2017). Refer to **Figure 5.5**. The other provinces account for the remaining 40%. Whilst KZN is the second largest contributor of SMMEs, it is the leading province with the highest number of green initiatives, which predominately arise from the agricultural, energy, and waste sectors (PAGE & Department of Environmental Affairs, 2017). The Western Cape is the third largest contributor in terms of SMMEs but is the second leading province in terms of green initiatives, which come mainly from the energy and agricultural sectors (PAGE & Department of Environmental Affairs, 2017). Gauteng is the largest contributor of SMMEs and the third highest in terms of green initiatives, which stem from the energy, transport, and waste sectors (PAGE & Department of Environmental Affairs, 2017).



* Some initiatives are implemented across provinces so the number will not add to 357

Figure 5.5 – Green economy initiatives across South Africa’s provinces

Note. Green economy initiatives have been taken across the provinces. From Green economy inventory for South Africa: An overview by PAGE and the Department of Environmental Affairs, 2017 (https://un-page.org/files/public/green_economy_inventory_for_south_africa.pdf). Copyright 2017. Reprinted with permission.

5.6.2 LEVEL AND UNIT OF ANALYSIS

The unit of analysis indicates what kind of data is collected, and from whom in more specific terms (Bhattacharjee, 2012). Previous studies recommended that future studies should involve other sectors as most scholars had previously focused on the manufacturing sector already (Green et al., 2015; C. H. Wang, 2020). Focusing on SMMEs in the F&B sector, this study followed scholars’ recommendations for the sake of the expansion of existing theory that is mainly based on a manufacturing and services perspective.

The survey was dispersed to individual SMME owners/senior managers in the F&B sector in all the provinces of South Africa. Bhattacharjee (2012) recommended

focusing on individuals as the unit of analysis, which this study identified as the SMME owner/senior executive/senior manager of businesses in a specific industry (F&B) that included hotels, restaurants, bed and breakfast establishments, food services, fast food outlets, catering services, and food manufacturing plants.

5.6.3 SAMPLING FRAME

The sampling frame, which is a directory of where respondents are selected from (Quinlan et al., 2019), and its usage, was limited within the SMME context as there was no accurate list and contact details available of all small businesses in South Africa. As SMMEs operate in both the formal and informal sectors, some lists may be incomplete not indicating contact details. With the introduction of the Protection of Personal Information (POPI) Act of 2013 (Protection of Personal Information (POPI) Act, 2013, 2013; South African Government, 2019), the names and contact details of organisations' owners and employees cannot be readily distributed or accessed, which complicated the sampling process. From experience, a generic invitation that is not addressed to a specific person is seldom taken seriously.

5.6.4 SAMPLING METHOD OR TECHNIQUE

Sampling involves the selection of a smaller, effectual subset of the overall target population (Etikan et al., 2016), anticipating that they would be able to adequately answer the survey questions. Admitting that probability sampling would produce reliable data, allowing the findings of a study to be applied to the overall population, it is not always possible to apply. The alternative, non-probability sampling methods are subjective (Etikan et al., 2016), as the chance of each unit being selected is not known (Rahi, 2017). For practical reasons, this research study opted for a purposive non-probability sampling method because the sampling frame was not available and because details of the SMMEs were not readily or easily available due to the POPI act of South Africa.

Purposive sampling, otherwise referred to as judgement sampling, was considered more practical given the constraints. Respondents were selected based on their characteristics, such as occupying a managerial position in the F&B industry sector. Because the researcher selected the sample based on personal judgement of appropriateness, the process is considered subjective, with a high participant selection bias (Saunders et al., 2009). With purposive sampling, in this study, respondents were selected deliberately with the sole aim of gathering notable information that could not be acquired from other selections (Taherdoost, 2016). Compared to alternatives, this was a more affordable option to pursue, and convenient. To avoid research (sample)

bias, a large sample size was envisaged. Because multiple methods of data collection were done utilizing both online (digital) and physical (written) surveys, SMMEs in the F&B sector were purposively recruited/invited to participate through Google Forms, WhatsApp, and physical engagements. A respondent was only allowed to complete a survey once, even when owning more than one business that qualified for inclusion in the survey.

5.6.5 DETERMINING THE SAMPLE SIZE

To draw valid conclusions and to support or reject hypotheses, data gathered through a survey should be inclusive and representative (Baruch, 1999), and involve an applicable sample size (Memon et al., 2020). Factors considered to determine an applicable sample size (Daniel, 2012a) included the **objective of the study**, **ethical considerations**, and **proposed data analysis** to ensure data accuracy. The sample size is highly relevant considering the envisaged statistical procedures such as exploratory factor analysis (EFA) (Osborne & Costello, 2004). According to Anderson et al., (2017) , "When the goal of a study is to determine the existence or direction of an effect, the appropriate sample size for a given level of power depends on the size of the effect" (p. 1547). Using the sample effect size - a collective approach that is often used - scholars refer to **previous studies' sample sizes** to determine the effect in future studies (Anderson et al., 2017). Reviewing previous studies and taking the lead from Anderson et al., (2017), **Table 5.9** depicts the sample sizes of previous studies that implemented similar statistical procedures.

Table 5.9 – Previous studies' sample size

Stats	No.	Survey items	Sample size/item	Authors
	259	42	6.17	(Borah et al., 2023)
SEM	207	59	3.51	(Borazon et al., 2022)
SEM	391	38	10.29	(Ngo, 2022b)
SEM	459	23	19.96	(Abdulsamad et al., 2021)
SEM	237	34	6.97	(Jiang et al., 2020)
SEM	175	30	5.83	(Tjahjadi et al., 2020)
SEM	248	27	9.19	(C. H. Wang, 2020)
SEM	192	20	9.60	(Fatoki, 2019b)
SEM	435	26	16.73	(Mohiuddin Babu, 2018)
SEM	429	20	21.45	(Li et al., 2018)
	247	27	9.15	(Liao, 2018)
	450	31	14.52	(Jansson et al., 2017)
SEM	158	27	5.85	(Chen et al., 2015)
SEM	225	39	5.77	(Green et al., 2015)
AVE	290	31	10.48	

Note. An overview of the various sample sizes from previous studies. Own work.

The sample size is also subject to the **number of items** entered in the study. Hair et al., (2019) suggest that the complexity of the model is taken into consideration and that a 10-15 ratio (respondents) per item is used. Smaller sample-to-item ratios, such as 5-to -1, have also been suggested (Memon et al., 2020). Among those scholars advocating for smaller ratios, Barrett and Kline (1981) argue that smaller ratios do not affect factor stability and that the minimum number of observations to get a clear, recognisable factor pattern is 50. Suhr (2006) concurs with the smaller ratio but differs in the number of observations required, increasing it to more than 100 observations. (MacCallum et al., 1999) state that under certain conditions, a small sample size may be adequate. The rough rating scale for adequate sample size indicates that 100 – poor; 200 – fair; 300 – good; 500 – very good; 1000 or more – excellent (MacCallum et al., 1999)

This research study distinguished six constructs, involving 72 items. Following the above-mentioned guidelines of a 5-to-1 ratio, a sample size of 360 to 720 was required. This study, therefore, aimed for a minimum of 360 responses, using the sampling plan shown in **Table 5.10**.

Table 5.10 – Sampling plan for this study

Target population	F&B SMMEs
Sampling units	F&B SMMEs specifically hotels, restaurants, fast food outlets, bed and breakfast establishments, catering services, and food manufacturing facilities
Coverage	All nine (9) provinces throughout South Africa
Time	2022-2023
Sampling method	Purposive sampling – judgement
Sample size (min)	360

Note. A summary of the sample plan for this study. Own work.

5.7 DESIGN OF THE DATA COLLECTION PROCESS

Data collection entailed three distinct steps, commencing with the identification of the target population (Section 5.6.1) and the unit of analysis (Section 5.6.2), followed by the sampling process (Section 5.6.4) and data collection as discussed below. The design of the data collection process involved the launch, the survey instructions and options, and the types and sources of data collected that involved several avenues due to slow response, are discussed next.

5.7.1 THE LAUNCH

Primary data (Rahi, 2017), for this study, were collected employing a structured questionnaire. To acquire a good sample size and to ensure heterogeneity, data collection, using the structured questionnaire, required online (digital) as well as manual (physical, hard copy) data collection. The use of questionnaire surveys provided access to a large geographical area, i.e., South Africa as a whole. Online surveys are more affordable than alternatives and easy to complete when convenient to the respondent (Hair et al., 2019).

Previous studies have used various data collection methods including the use of databases and fieldworkers. Li et al. (2018) collected data through the Global Manufacturing Research Group (GMRG), which is a multinational group focused on the global improvement of manufacturing practices. C. HI Wang (2020) collected data from the Commonwealth dataset, which collects data from high-tech firms that generally discharge higher than average environmental pollution and who were more likely to implement environmental management practices. Studies conducted with SMMEs (e.g., Tjahjadi et al., 2020) collected data from the database of the Office of Cooperatives and SMMEs, employing a quota sampling method. Other studies involving SMMEs, for example, Ngo (2022a) used private agents' databases to distribute surveys to SMEs in transportation services, courier express services, and other logistic services. Borah et al., (2023) selected manufacturing firms from the Ghana Investment Promotion Centre (GIP) database and used printed questionnaires, which were administered by trained field assistants.

Data collection started in May 2023 after ethics approval. The initial online survey was hosted through the online platform Google Forms® for self-completion by willing individuals who met the pre-requisites for participation as specified by the researcher in the invitation for participation. The link to the online survey formed part of the email addressed to the potential respondents, although only accessible to those who qualified for participation. Online surveys provided fast access to respondents across South Africa (Evans & Mathur, 2005; Ilieva & Healey, 2002), although many were hesitant to click on the link in the email for security reasons, which complicated the process. To address the low response rate, which is typical for online surveys, several steps were taken as discussed in the subsequent sections.

5.7.2 SURVEY INSTRUCTIONS AND OPTIONS

Each invitation for participation in the survey included a formal invitation letter, stating the purpose of the study. No personal information was requested, ensuring

confidentiality and anonymity. Respondents were given the option to withdraw from the study at any point, requesting them to indicate the industry they worked in, to ensure that only eligible respondents participated in the study. Those not qualifying were denied access to the questionnaire. The rest continued and were thanked for their participation in the end.

The distribution of questionnaires was increased to account for non-responses (including out-of-office, absence, leave, etc.). Follow-up emails with a further two or three emails two weeks after the initial contact, were sent out, restating the purpose of the research. Millar and Dillman (2011) concur with the increase in invitations to improve responsiveness, advising that follow-up correspondence should be sent early and more frequently. Due to the COVID-19 pandemic, people were more accustomed to conducting business online. The F&B sector, which was hit hard by the pandemic, was trying to recover and whilst some people did not check their emails regularly, or did not attend to unfamiliar correspondence, this was the initial route taken to gather data. The low response rate for online surveys was also noted in the study by Ngo (2022b). Despite follow-up emails that were sent first biweekly, then weekly, the response rate did not increase. It became clear that respondents doubted emails that contained links and being in the F&B industry, managers of businesses were time pressured, struggling to keep their businesses afloat due to the pandemic's impact. Follow-up invitations were sent out with a Microsoft Word document attached, and the contact details were made more visible. The researcher also sent out WhatsApp reminders and called the SMMEs where telephone numbers had been provided. By December 2022, n = 151 completed online questionnaires were recorded that included contacts through data bases.

5.7.3 TYPES AND SOURCES OF DATA COLLECTED

5.7.3.1 DATABASES AS A SOURCE OF CONTACT

Various databases or lists of SMMEs were consulted to recruit respondents, starting with electronic versions of the questionnaire, and progressing to other collection methods. Databases used included the Companies Intellectual Property Commission (CIPC) database and Interactive Direct database. As stated in section 5.5.1.2 above, previous studies collected data through various collection methods. The choice of databases in this study is explained next.

Companies Intellectual Property Commission (CIPC) database: This database lists all available businesses that are registered, which CIPC has permission to use. SMMEs are encouraged to register with CIPC to transact with the government and with

the formal sector, to obtain certain types of government support, and to receive benefits, especially concerning lower tax benefits. This list of SMMEs is the most updated list of registered formal SMMEs in South Africa and the diverse selection of individuals from the various sectors is considered to increase the likelihood of obtaining responses from SMME owners and senior executives, who exhibit environmentally friendly behaviours. The information in the database had to be obtained by written permission, although free of charge. Refer to **Appendix I** for the approval letter. From the CIPC database, the cleaning process allowed for filtering by firm types, whether the firm is active or not, which was filtered out of the list. The cleaning process included filtering by sector for SMMEs within the F&B sector. However, in cleaning up the database and filtering for F&B SMMEs, it was found that many of these SMMEs had stopped operations due to the COVID-19 pandemic.

The Interactive Direct database: This database lists leading South African businesspeople from 58,830 different companies. The database distinguishes the type of industry; type of management; level of management; the size of the company; geographical region; gender; ethnic group; JSE listed or subsidiary of JSE listed company; and whether the company is foreign or locally owned. The information in the database had to be obtained through written permission and is a paid service. Refer to **Appendix J** for the approval letter. The Interactive Direct database had already been cleaned up by the company and ongoing maintenance of the database was provided. The database owner provided a filtered database for F&B companies in South Africa. However, many of these companies were multinational enterprises (MNEs) and could not be included in this study.

5.7.3.2 MICROSOFT WORD OPTION

When sending out the invitation letter to potential respondents in the Interactive Direct database, some indicated that they could not access the Google Forms link and requested a Microsoft Word document. This format was sent out to those who requested it to manually complete the questions and then scan in the completed questionnaires. Respondents who completed the Microsoft Word document (n = 28) emailed their responses back to the researcher. The data was then transferred into the Microsoft Excel collection sheet.

5.7.3.3 UNIVERSITY ASSOCIATIONS TO EXPAND THE SAMPLE

Borah et al., (2023) selected manufacturing firms from the Ghana Investment Promotion Centre (GIP) database and used printed questionnaires, which were administered by trained field assistants to expand their sample size. Accordingly, the

Department of Consumer and Food Science at the University of Pretoria helped with data collection involving students in the food and hospitality study programme to assist with data collection as part of a compulsory research methodology elective. The Department of Consumer and Food Science was ideal because they had built up connections with F&B SMMEs that were involved in their training. Students approached establishments throughout South Africa when they went home for a holiday break. Evidence of honest completion by the F&B establishments was gained by using respondents' email addresses so that supervisors and lecturers could perform random spot checks to verify that the managers had indeed completed the questionnaires themselves. Students were informed that if a problem arose, a student's entire batch would be discarded, resulting in penalty points for them. This served to verify the truthful completion of the survey questionnaire in electronic, or hard copy format. Two lecturers at the university signed off the responses after checking them. These were, therefore, self-administered questionnaires (Bell et al., 2019; Saunders et al., 2019), captured in Google Forms. The total completed responses received was $n = 100$.

5.7.3.4 MARKETING CONSULTANTS TARGETING UNDERREPRESENTED AREAS

A marketing consultant agency, Merlinee Consulting, was appointed to conduct data collection using trained fieldworkers to conduct structured interviewer-assisted data collection. They interviewed F&B SMMEs in KwaZulu Natal, Mpumalanga, and Limpopo – underrepresented areas in the sample – that the company had access to. A target of 200 completed questionnaires was given to the consulting group and each fieldworker was given a target of 50 SMMEs to interview over one month. The manager of Merlinee Consulting checked completed questionnaires to ensure that they were valid and useful, and saved them to a common dropbox folder. Fieldworkers were trained not to prompt or help respondents to complete the questionnaire other than explaining the instructions. A total of $n = 199$ questionnaires were collected for analysis.

5.8 ANALYSING THE COLLECTED DATA

The combination of data gathering methods produced $n = 491$ responses that exceeded the minimum sample size of 360 anticipated.

To answer the research problem and associated research questions, data analysis commenced by examining the data. This was time-consuming, but crucial in terms of the quality of the data (Hair et al., 2020). Data was examined for completeness and

validity. The following section discusses the data analysis, explains the data screening process, presents the descriptive statistics, followed by the preliminary data analysis and distribution, as well as the assurance of reliability and validity. A discussion on the preparation for multiple regression follows with relevant analytical procedures to test compatibility. To test the study's replications and hypotheses, a 95% confidence level (p-values below 0.05) was applied as an indication of statistical significance. These discussions are presented next.

5.8.1 DATA SCREENING AND PREPARATION

Data screening and preparation is imperative to check for errors (Pallant, 2020), screening it to circumvent any contraventions that could jeopardise the quality of the research (H. Han et al., 2010). Firstly, the final sample size (N = 491) exceeded the minimum required amount (see Section 5.4.4), confirming the adequacy and size of the data set. Data obtained from the online survey questionnaires were downloaded from Google Forms into Microsoft Excel.csv format. For the interviewer-administered questionnaires, the manually completed questionnaires were captured into Microsoft Excel by the researcher. The data capturing and checking process was meant to ascertain the comprehensiveness of information; to identify and assess missing data, as well as to confirm consistency and to identify and edit outlier values (R. Kumar, 2011; Pallant, 2020). Due to the design of the questionnaire that did not permit someone to continue unless every question was fully completed, no missing data was detected in the online Google Forms version of the survey. With the deployment of trained field workers, the printed hard copy questionnaires, there was no guarantee that all the questionnaires would be completed in full (Desimone et al., 2015), explaining the missing data in that batch.

The screening process entailed various steps, namely.

- **Step 1** involved removing respondents who did not want to participate in the study and responded "no" online, of which 21 respondents opted out, leaving a total of 470 responses after the first screening.
- **Step 2** involved removing respondents who did not fall into the SMME category. All businesses with more than 250 employees, which are considered large businesses, were removed from the dataset, which cut 46 respondents leaving 424 responses.
- **Step 3** involved removing missing data. All incomplete data sets (all 48 from hard copy questionnaires), where missing data exceeded 10%, were deleted per the recommendations of Hair et al. (2020) The final sample size was still adequate, (N = 376).

A summary of the screening process that resulted in the exclusion of responses is presented in **Table 5.11**.

Table 5.11 - Summary of the screening process

<i>Screening steps</i>	No. of questionnaires removed	Remaining dataset
<i>Start value</i>	-	491
<i>Step 1: Respondent participation</i>	21	470
<i>Step 2: Business size</i>	46	424
<i>Step 3: Incomplete questionnaire</i>	48	376
Remaining total	-	376

Note. The responses obtained from the screening process. Own work.

After the editing process, the data was coded for data analysis and imported into the software. R. Kumar (2011) recommends establishing a frame of analysis, and choice of suitable software tools. Accordingly, IBM SPSS version 28.0 and AMOS version 28.0 were chosen. The imported data were labelled for further analysis. The five-point Likert scales of the questionnaire were captured as numerical values. Hereafter, descriptive statistics and the distribution of data were completed as a first step before conducting advanced statistical analyses. Descriptive statistics are discussed in the following section.

5.8.2 DESCRIPTIVE STATISTICS

Descriptive statistics are used to summarise a set of observations to convey the biggest amount of information as simply as possible (Mishra et al., 2019), to identify the location, spread and shape of the data, and to provide a broad overview of the profile of the variables (Wegner, 2016). The descriptive analysis conveyed the profile and characteristics of the data set, as well as simple frequencies needed to describe any significant phenomena (Mishra et al., 2019). Descriptive statistics enables the researcher to summarise sizeable quantitative data sets while making use of measures of central tendency such as average mean, median, and mode for all variables. Furthermore, measures of dispersion including standard deviation illustrated the spread of data (Mishra et al., 2019).

Before conducting more advanced statistical tests (Saunders & Lewis, 2018), parametric statistical techniques were used, to investigate the normal distribution of the data (Pallant, 2016). Various statistical methods i.e., regression, correlation, *t*-tests, and analysis of variance (ANOVA), used for data analysis, make normality assumptions

that are a prerequisite in parametric testing (Mishra et al., 2019). There are two ways in which distribution can deviate from normal, and this can be due to a lack of symmetry (referred to as skew), and pointiness (referred to as kurtosis) (Field, 2018; Pallant, 2016). Skewness and kurtosis were determined using SPSS, and all variables were subjected to these evaluations. For the distribution to be normal, the skewness value should be between -1.5 and +1.5, whilst for kurtosis the values should be between -7 and +7 (Pallant, 2020). Positive results indicate that the data is skewed to the right, while negative results indicate that the data is skewed to the left (Pallant, 2020). The most common methods used to test normality, are the Shapiro-Wilk test, and Kolmogorov-Smirnov test (Mishra et al., 2019). The latter is suitable for larger sample sizes (Mishra et al., 2019), as relevant to this study.

5.8.3 FACTOR ANALYSIS

Extremely interrelated variables are grouped with sets of observed variables sharing common variance-covariance features, to jointly express a construct (Hair et al., 2019). Factor analysis, which is the summation and data reduction of information (Hair et al., 2020) confirms the subset of observed variables, which defines the constructs and is done from an exploratory or confirmatory perspective (Hair et al., 2019). To appreciate the structure of a set of variables, exploratory factor analysis (EFA) was used to evaluate hidden constructs and create a manageable size of data (Field, 2018; Hair et al., 2020) simplifying the data (Hair et al., 2020). EFA explains the interrelatedness of the apparent variables (Matsunaga, 2010). Because the measurement instrument was adapted from several studies, as stated in section 5.3, a factor analysis was required. EFA evaluated all the pairwise relationships between individual variables seeking to extract latent factors from the measured variables (Osborne, 2014). EFA was used to reduce related variables before proceeding with multiple regression (Pallant, 2020).

EFA was run in SPSS and was used to evaluate the independent variables (GCuO, GCoO, GIfC, and GMV), the mediator variable (GIP), and the dependent variable (GP) separately. Combining them in a single-factor analysis and using the outcome factors to spot dependence relationships was not suitable (Hair et al., 2020). The researcher needed to decide which estimation method to use, the number of factors to retain, the rotation method to use, and the method for calculating the scores (de Winter & Dodou, 2012). Three main steps were involved in the EFA as discussed below.

5.8.3.1 ASSESSING THE SUITABILITY OF THE DATA FOR FACTOR ANALYSIS

In assessing the suitability of the data, two main concerns need to be taken into consideration. The first concern was the sample size (Pallant, 2020), which in this study was 376 valid cases, and according to Tabachnick et al., (2019) was above the suggested limit of 300 samples. The second concern was the strength of the relationship among the items which was determined by the correlation matrix. Values between 0 and 1 are obtained and those closer to 1 indicate a higher correlation with values greater than 0.3 indicating that factor analysis can be conducted (Pallant, 2020). This study evaluated the correlation matrix and coefficients greater than 0.3 were reviewed. If correlations fall below this value, factor analysis may not be suitable (Pallant, 2020). Additionally, to assess the factorability of the data, two further measures were generated namely the Kaiser-Meyer-Olkin (KMO) and the Bartlett's Test of Sphericity measure the sample adequacy (Hair et al., 2020; Pallant, 2020). To determine sampling adequacy, the Kaiser-Meyer-Olkin (KMO) test was conducted, where a minimum value of 0.6 was required for KMO to conduct factor analysis (Pallant, 2020). Any values below this were omitted. Furthermore, Bartlett's test of sphericity was conducted to confirm redundancy between the variables, with values less than 0.05 being acceptable (Pallant, 2020). Failure of these tests would risk the reliability and validity of the data and would result in a review of the sampling and data-gathering methods (Pallant, 2020).

5.8.3.2 EXTRACTING THE FACTORS

The automatic estimation method choice for EFA in SPSS is principal component analysis (PCA). This study used principal axis factoring (PAF) due to the non-normality of the data and because PCA does not rely on the distributional assumptions (Coughlin, 2013; Fabrigar et al., 1999; Osborne, 2014). Moreover, it avoids the inflation of estimates of variance accounted for (Costello & Osborne, 2005) and is the most likely extraction method for Likert scale data. Using Kaiser's criterion, only components with Eigenvalues of 1 or more were used to explain the total variance (Costello & Osborne, 2005; Osborne, 2014; Pallant, 2016). Furthermore, a scree plot was established to identify the factors that contribute the most to explaining the variance of the data (Costello & Osborne, 2005; Osborne, 2014; Pallant, 2020).

5.8.3.3 ROTATING AND INTERPRETING FACTORS

From the conceptual framework established in Chapter 4, three (3) levels of analysis were done in this study. First-order analysis was conducted on the initial group of items and second-order analysis was conducted on the factors obtained from this first-

order analysis. The first-order analysis applied Varimax rotation, which endeavours to lower the number of variables that have high loadings on each factor (Pallant, 2020), and to increase the variance within a factor (Osborne, 2014). This process simplified the factor structure using oblique rotations allowing for angles that are not 90° to be correlated (Osborne, 2014). The second-order analysis used Direct Oblimin rotation, which permitted the factors to correlate better (Osborne, 2014; Pallant, 2020).

5.8.3.4 SUMMARY OF FACTOR ANALYSIS

A summary of the tests that were conducted in this study is displayed in **Table 5.12**.

Table 5.12 - Summary of factor analysis test

Analysis	Test	Level	Reference
Correlation Matrix	Correlation between each of the independent variables	Greater than 0.3	(Pallant, 2020)
Factorability Tests	KMO Barlett's test of sphericity	Minimum of 0.6 p <0.05	(Hair et al., 2019, 2020; Pallant, 2020)
Factor Analysis	Principle Axis Factoring	A standard approach for data that is not normal	(Costello & Osborne, 2005; Osborne, 2014)
	Extraction	Guided by Kaiser's criterion, scree plot, and factor rotation	(Hair et al., 2020; Pallant, 2020)
		Both Varimax and Direct Oblimin rotation was used to explore the factors	(Hair et al., 2019, 2020; Pallant, 2020)

Note. The tests for factor analysis summarized. Own work.

5.8.4 ASSURANCE OF RELIABILITY AND VALIDITY

In any research study, to stand up to rigorous evaluation, reliability and validity need to be addressed. Both measures of reliability and validity should be acceptable as a scale may be reliable but not valid. This research study tested for both. The outcomes are discussed next.

5.8.4.1 RELIABILITY

For quantitative studies, the stability of a measure and its repeatability is important. In determining whether an approach or measure is reliable or not, internal reliability, stability, and inter-rater reliability need to be considered. Hair et al., (2019) refer to reliability as the trustworthiness of the results and conclusions, specifically whether the investigation would yield similar outcomes if a similar study applied the same tactics that would reflect consistency in the scale. Internal reliability indicates how consistently

the research measurement instrument can replicate the same results for the variables when repeated measures of those variables are done (Hilken et al., 2017), examining associations between scale items to ensure that the scale items measure the same attribute (Hair et al., 2019). According to Gabriel et al.,(2019), this validation indicates that the measurement instrument is stable, consistent, and dependable. When designing the measurement instrument, this study used unambiguous terminology that was easy to understand and read so that all who completed it would not be uncertain or confused.

The measurement instrument was tested during the pilot phase and no issues arose with the wording or understanding of the measurement instrument. Because multiple sources of data were obtained, each of these sources was tested to affirm the reliability of the data. The internal reliability of the measurement instrument and the internal consistency of items were tested using Cronbach's alpha tests (Bagozzi & Yi, 2012; Neneh & Van Zyl, 2017). Values of 0.70 or greater were acceptable for composite reliability (Bagozzi & Yi, 2012; Struwig & Lillah, 2017), as well as for individual reliability standardized loadings. It was decided that values as low as 0.50 may still be satisfactory for the overall model (Bagozzi & Yi, 2012). This study applied the rule of a minimum level of 0.70 as an indication of reliability.

5.8.4.2 VALIDITY

The most important criterion of any research is validity, which relates to the integrity of the conclusions of the research (Bell et al., 2019). It refers to whether an indicator or set of indicators that are devised to gauge a concept actually measures that concept.

Construct validity focuses on whether a measure determines what is anticipated to be captured (Bagozzi & Yi, 2012). Because this research used an online and offline survey, it was important to assess the measurement level of the scale items (Hair et al., 2016). This study, therefore, tested for construct validity using exploratory factor analysis.

5.8.5 PREPARATION FOR MULTIPLE REGRESSION

Based on the assurance of reliability and validity, further analysis was done in preparation for multiple regression analysis. To affirm the sample adequacy for the study and to check for any biases, tests needed to be conducted. Because green market orientation is a multidimensional construct, multicollinearity checks were done, as discussed below.

5.8.5.1 CHECKING FOR BIASES

This research study considered non-response bias and common method bias. Non-response bias is relevant only when respondents do not complete the survey (C. H. Wang, 2020). Only fully completed questionnaires were considered for analysis and inclusion in the final sample. Therefore, non-response bias did not apply in this study. The design of the electronic survey forced respondents to answer each question before moving on to the next. Furthermore, bias was reduced by keeping the details of all the respondents confidential so that they could not be identified. Also, the target population was specified in terms of selected criteria. Being a quantitative study, the large sample size facilitated sample adequacy.

5.8.5.2 CHECKING FOR MULTICOLLINEARITY

Multicollinearity may exist when the predictor (independent) variables are correlated (C. H. Wang, 2020), indicated by a correlation coefficient (r) of 0.7 and above (Pallant, 2020). Multiple regression analysis for moderation was run to conduct collinearity diagnostics. The Tolerance and Variance Inflation Factor (VIP) were reviewed. According to Pallant (2020) this indicates how much the variability of the specified independent variable is not explained by the other independent variables and is calculated by the formula $1 - R^2$ for each variable with a low value (i.e., less than 0.10) indicating the possibility of multicollinearity. The VIP value is the inverse of the tolerance with values above 10 indicating a concern for multicollinearity.

5.8.6 HYPOTHESIS TESTING

According to Hair et al., (2020, p. 353) “data becomes knowledge only after analysis has confirmed that a set of proposed relationships can be used to improve business decision-making”. In quantitative research, the types of conclusions are determined by evaluating the hypothesized relationships. In this study, the choice of statistical technique depended on the number of variables and the scale of measurement (Hair et al., 2020). Considering the number of variables, multivariate statistical methods were used. With the single dependent variable, dependence techniques were used, further confirming the use of the multivariate statistical method (Hair et al., 2020). The hypotheses proposed linear relationships between the variables, and therefore multiple regression analysis was done, which allowed testing for both moderating and mediating variables simultaneously (Hayes, 2018; Muhammad et al., 2020). Regression analysis is used to evaluate a relationship between many variables measuring the strength of these relationships (Wegner, 2016). The objective of this study was to investigate the linear relationships between GCuO, GCoO, GIfC, GMV, GIP, and GP.

Regression analysis, therefore, was employed to evaluate the relationships between the various independent variables and the dependent variable.

5.8.6.1 SIMPLE LINEAR REGRESSION

Simple linear regression was done for H1 to H3 where a single variable was tested against another single variable (Hair et al., 2020; Wegner, 2016). The regression coefficient informs the strength of the relationship between the independent variable X and the dependent variable Y (Hair et al., 2020). A positive linear relationship is denoted by a positive coefficient β value.

The method of least squares was applied to direct the regression analysis concerning the most suitable straight-line equation, reducing the sum of the squared deviations of all the data points from the line (Creswell, 2014; Wegner, 2016). The magnitude by R^2 calibrated the predictive accuracy of the model, indicating the significance of the overall model (Pallant, 2020), and providing insight into the significance of the linear relationship.

A scatter plot of the data provided a graphical representation of the relationship between the two variables (Hair et al., 2020; Pallant, 2020; Wegner, 2016), while the strength and nature of the relationship between the two variables were indicated by the pattern of the plotted data (Wegner, 2016).

5.8.6.2 MULTIPLE REGRESSION ANALYSIS

The study also investigated the moderating and mediating effects of GMV and GIP respectively, on the relationships of GCuO, GCoO, GIfC, and GP. Requiring multiple regression analysis, moderation and mediation analysis were used to examine these relationships, examining the strength of the relationship; whether the relationship is positive or negative, and what the best way is to describe it. (Hair et al., 2020). The following steps were followed for the hypotheses:

- **Step 1** – examining the overall regression model for significance. A significant F statistic indicates a <0.05 probability that the results are due to chance (Hair et al., 2020).
- **Step 2** – evaluating the multiple coefficients of determination (R^2) to assess its size (Hair et al., 2020), to indicate the amount of variation in the dependent variable associated with all the independent variables when considered together. Ranging from 0.0 to 1.0, a large R^2 shows that the straight line works well, while a small R^2 reflects the opposite. Furthermore, a larger R^2 indicates a stronger relationship between the dependent variable and independent variables (Hair et al., 2020).

This strength in the relationship is illustrated by the beta (β) coefficient for the variable.

- **Step 3** – assessing the statistical significance of the independent variables. The beta (β) coefficient values for the independent variables were assessed, removing those that were not significant (Hair et al., 2020).
- **Step 4** – re-evaluating all independent variables for significance and reviewing the beta (β) coefficients to assess the relative impact of the individual independent variables (Hair et al., 2020).

5.8.6.3 MODERATION ANALYSIS

The moderating variable can either strengthen or weaken the relationship, and this occurs when a variable changes the relationship between the independent and dependent variables (Hair et al., 2020). Moreover, a moderating variable provides insight into developing and refining conceptual models and can determine the size of the effect on the relationship (Hayes & Rockwood, 2017). According to Hayes (2013), the association between the two variables is moderated when the strength depends on a third variable Z.

In this study, three sets of moderation analyses were run. 1) The moderating effect of *green management values* on *green customer orientation* and *green internal practices*. 2) The moderating effect of *green management values* on *green competitor orientation* and *green internal practices*. 3) The moderating effect of *green management values* on *green inter-functional coordination* on *green internal practices*.

Although moderation analysis can be run as per the recommendations of Hayes (2018), with all data being mean-centred using the macro plugin, PROCESS, this study used the regression analysis method to determine moderation. This implied using the assumptions that outliers needed to be identified and removed, that there needed to be a significant linear relationship between the independent and dependent variables, and lastly that the results needed to be examined for multicollinearity. It was also advised to depict the results graphically (Hayes & Rockwood, 2017; Preacher & Hayes, 2004), and therefore visual representation of the results was done as shown in **Appendix M**.

5.8.6.4 MEDIATION ANALYSIS

For mediation, this study hypothesized that *green internal practices* mediate the relationship between *green customer orientation*, *green competitor orientation*, *green inter-functional coordination*, and *green performance*. This study included a mediating construct, namely *green internal practices*, with the purpose of testing theories to

understand the causal relationship (Baron & Kenny, 1986; Memon et al., 2018; Preacher & Hayes, 2004) between *green market orientation* and its sub-constructs, *green internal practices*, and *green performance*. For mediation to be considered, the following conditions need to be met:

- the dependent variable is significantly influenced by the independent variable.
- the mediating variable must be significantly influenced by the independent variable.
- the dependent variable must be significantly influenced by the mediating variable.
- when adding the independent and mediating variables to predict the dependent variable, the predictive power of the independent variable on the dependent variable should not be significant or zero (Borazon et al., 2022).

Full mediation is considered if all the above conditions are met. If, however, only the first three are met, partial mediation is considered (Borazon et al., 2022).

With a multidimensional variable, the single effect was not relevant (Hayes & Preacher, 2014) and therefore, all three constructs of green market orientation were tested individually. In this study, **firstly**, the direct effect of *green customer orientation*, *green competitor orientation*, and *green inter-functional coordination* on *green performance* was examined. **Secondly**, the direct effect of *green customer orientation*, *green competitor orientation*, and *green inter-functional coordination* on *green internal practices* was examined. **Thirdly**, the direct effect of *green internal practices* on *green performance* was examined. **Fourthly**, the moderating effect of *green management values* on the relationship between *green customer orientation*, *green competitor orientation*, and *green inter-functional coordination* and *green performance* is examined. **Lastly**, the mediating effect of *green internal practices* on *green customer orientation*, *green competitor orientation*, *green inter-functional coordination*, and *green performance* was examined. This study used the PROCESS macro in SPSS to determine mediation.

5.9 RESEARCH ETHICAL CONSIDERATIONS

Before starting with data collection, an application for ethical clearance was submitted to the Doctoral Research Ethics Committee (REC) at GIBS, together with the research proposal for approval.

In this research, ethics, and moral considerations, as well as the liability of the researcher were considered from a social science perspective (Edwards & Mauthner, 2012) throughout the entire research process: to prevent plagiarism and to retain honesty (Rousseau et al., 2018; Smith, 2018); doing risk assessment (Aven, 2016;

Thompson, 2012); attending to study site selection (Broesch et al., 2020); respecting the community involved (Broesch et al., 2020; Cunliffe & Alcadipani, 2016); gaining informed consent for data collection and inquiry (Cunliffe & Alcadipani, 2016); respecting privacy and retaining confidentiality (Berg, 2016; Lewandowsky et al., 2019); carefully checking the research design and relevant methods (Broesch et al., 2020); cautiously dealing with data collection, data handling and reporting (Berg, 2016; Miles et al., 2014); avoiding mistakes and negligence (Berg, 2016); constantly working with the supervisor as mentor (Berg, 2016); and following the academic institution's guidelines (Berg, 2016).

To explain: An invitation email was sent out to selected F&B SMMEs stating the purpose of the study, and the approximate time required to complete the questionnaire, explaining that participation was voluntary. Both the researcher and supervisor details were provided to respondents in the case of concerns or if additional questions related to the study emerged. The email explained that the survey had to be completed using a Google Forms link, which first took respondents to the informed consent section to indicate their willingness to be part of the study. Eligibility questions were asked to determine in which industry the respondents were involved in. Only respondents who clicked "Yes" and were involved in the F&B industry could proceed with the questionnaire. The others were thanked for their time and exited the survey.

Online respondents were assured that they could halt and exit any time during the survey, which ensured that participants who completed the survey were willing to do so of their own accord. Respondents who completed the survey in interview format were also allowed to skip questions if they were not comfortable answering them in the presence of the invigilator, which ensured that participants who continued answering the survey questions did so voluntarily.

Completed questionnaires were downloaded from the Google Forms database data into Microsoft Excel, while the manual interview surveys were scanned and saved in Google Drive. Data files only contained a respondent's responses with no personal details. All raw data and all information had multiple copies stored on the researcher's personal computer hard drive, on Google Drive® in the Cloud, and on CDs. The research supervisor also had copies of the work in progress. Furthermore, following the academic institution's guidelines, the collected data is to be stored without identifiers for a period of ten (10) years.

Quantitative research, according to Berg (2016), will benefit greatly if an additional person is consulted to review the design, methodology, and statistical analysis.

Sophisticated statistical analysis requires additional consideration in terms of ensuring construct validity and addressing potential threats to it (Berg, 2016). It is, thus, not uncommon for a statistician to be employed for data analyses or to assist with the reliability of the results (Creswell, 2009). This research study employed the guidance of the Doctoral Research Team (DRT), Prof Manoj Chiba, and Dr Frank Magwegwe to review the research methodology section, as well as the statistical methods, tests, and analyses that were conducted. Furthermore, a statistician was appointed to run the analyses for the researcher. Refer to **Appendix K**. However, the researcher did the interpretation of the results on their own. All changes and corrections made were totally the responsibility of the researcher, who takes the responsibility for possible mistakes.

5.10 LIMITATIONS TO THE RESEARCH

Obtaining the database from CIPC was difficult despite the established networks that the researcher had built over the past few years. The POPI Act brought serious restrictions concerning the accessibility of the full database because email addresses, names, and so forth were no longer accessible. With persuasion, the database was made available without disclosing personal information, which complicated the contact process. The process commenced before the approval of the research proposal by the GIBS Research Quality Committee (RQC) and took longer than was expected due to management changes, as well as CIPC internal approval processes.

The most pressing challenge was restaurant owner managers' slow response to invitations: they were reluctant to pay attention to the research invitation due to time pressure, long working schedules, the volume of emails received daily, and the nature of work in the service industry where customers come first. Biweekly follow-up emails did not bear much fruit either. The online response rate, therefore, was low and slow.

Thereafter, the research company, Merlinee Consulting, was appointed to use trained field workers to conduct structured interviews with respondents. Recruiting in different provinces posed challenges in that the questionnaire had to be completed in English and field workers had to translate some of the constructs that Zulu-, Pedi-, and Xhosa-speaking respondents were not acquainted with.

Load shedding provided a further challenge for those who were willing to complete the online questionnaire, limiting the time to complete the survey. This is why trained field workers and students from the University of Pretoria, who captured responses on their tablets in interview format were perhaps more successful in terms of time.

Although other studies (Borah et al., 2023; Green et al., 2015; Ngo, 2022b; C. H. Wang, 2020) have called for longitudinal studies, this study had to adopt a cross-sectional approach because it formed part of an academic endeavour that had to be completed within a specific time frame.

5.11 CHAPTER SUMMARY

Previous environmental studies and studies concerning business strategy (Borah et al., 2023; Borazon et al., 2022; Ngo, 2022b; C. H. Wang, 2020) have favoured a quantitative methodological approach to studying green market orientation and green practices. This study, therefore, designed the research using a positivist approach, which assumes that reality exists tangibly and externally. The most appropriate way of gathering the data in terms of this philosophy was to capture experiences directly. The research approach was deductive in nature and a quantitative research design was chosen. The methodology was scrutinised to ensure reliable and valid findings, allowing for academic rigour and practical relevance. It also conformed to acceptable research practice in the field of management. The sample and sampling were time-consuming but produced a sample size that facilitated generalisable findings across the F&B SMME sector (Banks et al., 2016).

Using a survey questionnaire as the research strategy, the measurement instrument was crafted from former studies. Each construct was measured with well-designed questions. The operationalisation of each of the constructs entailed multi-item scales and these were pre-tested and piloted before data gathering commenced to address potential problems. Non-probability purposive sampling was used to distribute the questionnaires across the country, some of which were distributed electronically to be completed online, hard copy printed versions, and completed in interview format, relying on databases, university connections, and market research consultants to assist.

Data analysis included general descriptive analysis and reliability testing. Furthermore, using multiple regression to test the proposed relationships specified in the hypotheses. The study attempted to substantiate the relationships between *green market orientation and its components of green customer orientation, green competitor orientation, green inter-functional coordination; green management values; green internal practices; and green performance* in F&B SMMEs in South Africa. Quality control criteria were implemented, and guidelines for ethical conduct were honoured throughout the research process. The following chapter presents the research results.

CHAPTER 6: RESEARCH RESULTS

“All the proof of the pudding is in the eating”.

- (William Camden Quotes, n.d.)

6.1 CHAPTER INTRODUCTION

The old English proverb by William Camden in 1605 referred to the fact that one cannot correctly conclude how successful something is, unless it has been tried, tested, and the results revealed. Similarly, the key results for this study were analysed after organising and summarising the survey data gathered among F&B SMMEs in South Africa.

Chapter 5 explicated the study's research design and methodology, which was based on a positivist paradigm, which assumes that reality exists tangibly and externally and that the most apt way of collecting data was through observations being captured through experiences directly. Using a survey questionnaire crafted from established literature and the operationalisation of the constructs implied the use of multi-item scales. Non-probability purposive sampling was used for the target population of F&B SMMEs in South Africa, collecting a total of 491 questionnaires that were later reduced to 376 for analysis after withdrawing incomplete and non-compliant questionnaires. Statistical analysis entailed descriptive analysis, including reliability testing and multiple regression analysis to establish relationships through the variables.

This chapter presents the results of the statistical analysis per the research questions and hypotheses, summarised in Chapter 4. It starts by discussing the respondents' profile. The validity of the constructs and the reliability of the instrument are then examined, followed by the outcomes of the multiple regression.

To facilitate easy reading of the findings in the chapter, all the **results tables** were copied and placed into **Appendix L**, and all the **results figures** were copied and placed into **Appendix M**. **Figure 6.1** displays the order of the presentation of the research results in this chapter.

Main Headings	Sub Headings
6.1 Chapter introduction	
6.2 Characteristics of Data	6.2.1 Business Characteristics
	6.2.2 Profile of the Respondents
	6.2.3 Descriptive Statistics of Items
	6.2.4 Distribution and Normality of the Data
6.3 Instrument Validity Analysis	6.3.1 Independent Variable Validity Results
	6.3.2 Moderator Variable Validity Results
	6.3.3 Dependent Variable Validity Results
6.4 Instrument Reliability Analysis	6.4.1 Independent Variable Reliability Results
	6.4.2 Moderator Variable Reliability Results
	6.4.3 Dependent Variable Reliability Results
6.5 Descriptive Analysis of the Scales	
6.6 Multiple Regression Analysis	6.6.1 Analysis of Direct Relationships
	6.6.2 Analysis of Moderation Effects
	6.6.3 Analysis of Mediation Effects
6.7 Chapter Summary	

Figure 6.1 – Structure of Chapter 6

Note: An overview of the structure and layout of the chapter. Own work.

6.2 CHARACTERISTICS OF DATA

The data provided an idea of the characteristics of the business, the profile of the respondents, and the characteristics of the items for each of the constructs, which are discussed next.

6.2.1 BUSINESS CHARACTERISTICS

This study investigated SMMEs in the F&B sector and distinguished between SMMEs involved in manufacturing, and those involved in the service sector for the sake of the description of the profile of the sample. Previous studies that have investigated green market orientation (Ngo, 2022b; C. H. Wang, 2020) and market orientation (Green et al., 2015; Jansson et al., 2017) were conducted from a manufacturing perspective only leaving a paucity of studies within the service industry. Of the 376 valid questionnaires, the proportion of SMMEs in the service industry was 86.7%, with most respondents (44.7%) involved in small businesses with between 10 and 49 employees. Most of these have been in operation for between 10 and 20 years (47.1%) with a customer base largely made up of consumers and/or households (77.1%). As the target was to obtain responses from the three largest provinces (Gauteng, KwaZulu Natal, and

Western Cape) in terms of green initiatives, most respondents came from Gauteng (31.9%), followed by KwaZulu Natal (25.0%), and then Western Cape (13.6%). The respondent's characteristics are displayed in **Table L 1**.

6.2.2 PROFILE OF THE RESPONDENTS

Of the 376 valid questionnaires completed, males accounted for 50.3% and many of the respondents fell into the 30-39 years age group (31.6%). Most of the respondents were business owners (33.5%), having served in the companies between 1 and 4 years (41.1%). The education level of the majority was Grade 12/Matric (48.6%). The respondent's personal characteristics are displayed in **Table L 2**.

6.2.3 DESCRIPTIVE STATISTICS OF ITEMS

Descriptive statistics were reviewed for the items and included the measures of central tendency and measures of dispersion. Within the measures of central tendency, the mean, median, minimum, maximum, and mode were calculated. For the measures of dispersion, the standard deviation was calculated. Using the frequencies, each item was subjected to these tests. Using the questionnaire sections, a breakdown for each item in each section is presented next.

6.2.3.1 SECTION B – BUSINESS STRATEGY OF YOUR BUSINESS

The results for the descriptive statistics for business strategy are displayed in **Table L3** with the breakdown being displayed in **Table L4**.

Green Customer Orientation (GCuO): The GCuO construct comprised of five (5) items – namely questions B8.1, B8.2, B8.3, B8.4, and B8.5 – and were evaluated on a five-point Likert scale. The respondents agreed with the statement B8.1 the most (54.3%)(Mean = 4.02; SD = 0.91): “Our business continuously seeks to increase the environmental value that we provide to our customers” Conversely, the respondents disagreed with the statement B8.3 the most (9.0%) (Mean = 3.66; SD = 1.071): “We supply our customers with environmental protection information to keep them informed”. The total mean and standard deviation values for green customer orientation were 3.839 and 0.885 respectively indicating that the respondents neither agreed nor disagreed with the statements pertaining to green customer orientation construct.

Green Competitor Orientation (GCoO): The GCoO construct comprised of five (5) items – namely questions B9.1, B9.2, B9.3, B9.4, and B9.5 – and were evaluated on a five-point Likert scale. The respondents agreed with the statement B9.5 the most

(49.7%) (Mean = 3.68; SD = 1.068): "We are fast to detect fundamental shifts in our market concerning environmental issues". Conversely, the respondents disagreed with the statement B9.1 the most (23.1%) (Mean = 3.17; SD = 1.214): "In our organisation, personnel share information on competitor's environmental strategies with customers". The total mean and standard deviation values for green competitor orientation were 3.453 and 1.014 respectively, which demonstrates that the respondents in general neither agreed nor disagreed with the statements related to green competitor orientation construct.

Green Inter-functional Coordination (GIfC): The GIfC construct comprised of four (4) items – namely questions B10.1, B10.2, B10.3, and B10.4 – and were evaluated on a five-point Likert scale. The respondents agreed with two of the statement B10.1 (43.4%) (Mean = 3.59; SD = 1.137): "Any environmental regulation information that becomes available is distributed throughout our entire business" and statement B10.3 (12.5%)(Mean = 3.59; SD = 1.128): "All departments are equipped to satisfy customers' demands for environmentally friendly products", the most. Conversely, the respondents disagreed with statement B10. 4 the most (Mean = 3.50; SD = 1.171): "Information that becomes available from existing and potential competitors on how to protect the environment is distributed throughout the business". The total mean and standard deviation for green inter-functional coordination were 3.566 and 1.081 respectively, which indicated that the respondents in general were neither agreed nor disagreed with the statements related to green inter-functional coordination.

6.2.3.2 SECTION C – GREEN PRACTICES OF YOUR BUSINESS

This section reviewed the business green practices and their implementation and is broken down into consumption policies, waste policies, internal supplier practices, and internal business practices. The descriptive results are presented in **Table L5**, and the breakdown of responses are displayed in **Table L6**.

Consumption Policies (CP): The CP construct comprises of six (6) items – namely questions C11.1, C11.2, C11.3, C11.4, C11.5, and C11.6 – and were evaluated on a five-point Likert scale. The respondents strongly agreed with the statement C11.1 the most (46.8%) (mean = 4.34; SD = 0.783): "Our policy is to curb electricity usage to the minimum". Conversely, the respondents disagreed with statement C11.6 the most (9.3%) (mean = 3.92; SD = 1.084): "Our policy is to recycle office supplies". The total mean and standard deviation for environmental policies were 4.189 and 0.740 respectively which indicated that the respondents, in general, were agreeing with the statements related to consumption policies.

Waste Policies (WP): The WP construct comprises of two (2) items – namely questions C11.7 and C11.8 – and were evaluated on a five-point Likert scale. The respondents strongly agreed with the statement C11.8 the most (37.8%) (mean – 3.65; SD – 1.410): “Our policy is to recycle other waste (packaging materials, etc.)”. Conversely, the respondents strongly disagreed with statement C11.7 the most (16.2%) (mean – 3.48; SD – 1.423): “Our policy is to recycle food and canteen waste”. The total mean and standard deviation for waste policies were 3.567 and 1.360 respectively, indicating that the respondents, in general, were neither agreeing nor disagreeing with the statements related to waste policies.

Internal Supplier Practices (ISP): The ISP construct is made up of five (5) items – namely questions C12.1, C12.2, C12.3, C12.4, and C12.5 – and were evaluated on a five-point Likert scale. The respondents agreed with statement C12.5 the most (35.1%) (mean – 3.28; SD – 1.364): “We ensure our products are sourced from sustainable or organic means”. Conversely, the respondents disagreed with statement C12.4 the most (30.6%) (mean – 2.64; SD – 1.336): “We conduct audits on our suppliers concerning their sustainability practices on a regular basis”. The total mean and standard deviation were 2.98 and 1.120 respectively, which indicates that the respondents, in general, were disagreeing with the statements related to internal supplier practices.

Internal Business Practices (IBP): The IBP construct is made up of five (5) items – namely questions C13.1, C13.2, C13.3, C13.4, and C13.5 – and were evaluated on a five-point Likert scale. The respondents agreed with the statement C13.2 the most (38.6%) (mean – 3.13; SD – 1.264): “We have a comprehensive approach to setting environmental targets”. Conversely, the respondents disagreed with statement C13.1 the most (26.6%) (mean – 2.83; SD – 1.315): “We completely control the environmental impact of our products and processes”. The total mean and standard deviation were 3.006 and 1.185 respectively, indicating that the respondents, in general, were neither agreeing or disagreeing with the statements related to internal business practices.

6.2.3.3 SECTION D – ENVIRONMENTALLY FRIENDLY VALUES OF YOUR BUSINESS

This section concerned respondents’ personal attitudes towards sustainability. The results are displayed in **Table L7**. All the questions attracted “agree” responses. The breakdown in response levels to the items is displayed in **Table L8**.

The green management values construct was made up of five (5) items – namely questions D14.1, D14.2, D14.3, D14.4, and D14.5 – and were evaluated on a five-point Likert scale. The respondents agreed with the statement D14.5 the most (39.9%) (mean – 3.89; SD – 1.122): “If things continue on their present course, we will soon experience a major ecological catastrophe”. Conversely, the respondents disagreed with statement D14.1 (23.9%) (mean – 3.12; SD – 1.364): “Humans do not have the right to modify the natural environment to suit their needs”. The total mean and standard deviation were 3.374 and 1.013 respectively, which indicates that the respondents, in general, neither agree nor disagree with the statements related to green management values.

6.2.3.4 SECTION E – SUSTAINABLE PERFORMANCE OF YOUR BUSINESS

This section concerned the sustainable/green performance of businesses. The entire scale was used. And the results are displayed in **Table L9**, in descending order, while the breakdown of the items is displayed in **Table L10**.

The green performance (GP) construct consisted of 35 items and was evaluated on a five-point Likert scale. The respondents agreed with the statement E15.2 the most (58.5%) (mean – 3.95; SD – 0.833): “Our firm conforms to requirements of community relations”. Conversely, the respondents disagreed with the statement E15.1 the most (17.6%) (mean – 3.18; SD – 1.142): “Compared to our largest competitor our profitability is very good”. This statement also had the highest uncertain responses (31.4%). The highest mean score was 4.11 for statements E15.10 and E15.26, with standard deviations of 0.754 and 0.770 respectively.

6.2.4 DISTRIBUTION AND NORMALITY OF THE DATA

Data obtained from a questionnaire survey using a Likert scale is prone to having non-normal data distribution as the data is ordinal in nature. Skewness and kurtosis, in this regard, were determined using SPSS, and all items were subjected to these tests. The results for skewness, referring to symmetry and for kurtosis, referring to the peakedness of distribution for each item in the questionnaire, are displayed next.

6.2.4.1 SECTION B – BUSINESS STRATEGY OF YOUR BUSINESS

Normal distribution is shown by values of skewness being between -1.5 and +1.5, and for kurtosis being between -7 and +7 (Pallant, 2020). Positive results show data is skewed to the right whilst negative results show data is skewed to the left. The results for skewness and kurtosis for this section is shown in **Table L11**. Results indicated that

the data is negatively skewed for all the items. The Kolmogorov-Smirnov and Shapiro-Wilk results are shown in **Table L12**. The results for the test for normality showed that the Kolmogorov-Smirnov test was significant for all the items, which was indicated by *p-value* less than 0.05 (5%), indicating that the results are not normally distributed.

6.2.4.2 SECTION C – GREEN PRACTICES OF YOUR BUSINESS

The results for skewness and kurtosis for this section is shown in **Table L13**, which indicate that the data is negatively skewed for most of the items. Four of the items are positive i.e., C12.2, C12.4, C13.1, C13.5. The values are considered as not normally distributed for C11.1, C11.2, C11.5, for skewness.

The Kolmogorov-Smirnov and Shapiro-Wilk results are shown in **Table L14**. The results for the test for normality per the Kolmogorov-Smirnov test was significant for all the items with a *p-value* being less than 0.05 (5%) indicating that the results are not normally distributed.

6.2.4.3 SECTION D – ENVIRONMENTALLY FRIENDLY VALUES OF YOUR BUSINESS

The results for skewness and kurtosis for this section is shown in **Table L15**. All the items are negatively skewed. The Kolmogorov-Smirnov and Shapiro-Wilk results are shown in **Table L16**.

The results for the test for normality, the Kolmogorov-Smirnov test, was significant for all the items with a *p-value* less than 0.05 (5%). This indicates that the results are not normally distributed.

6.2.4.4 SECTION E – SUSTAINABLE PERFORMANCE OF YOUR BUSINESS

The results for skewness and kurtosis for this section are shown in **Table L17**. The data was negatively skewed and within the advisable values. The Kolmogorov-Smirnov and Shapiro-Wilk results are shown in **Table L18**.

The test for normality showed that the Kolmogorov-Smirnov test was significant for all the items with a *p-value* less than 0.05 (5%). This indicates that the results are not normally distributed.

6.3 INSTRUMENT VALIDITY ANALYSIS

Before any comprehensive tests were performed on the data, the validity of the instrument was checked to verify the questions and the items, using exploratory factor analysis (EFA). EFA was conducted as the measurement instrument was adapted from a combination of existing instruments. Several tests needed to be completed including the Kaiser-Meyer-Olkin (KMO) and Bartlett's test for sphericity was outlined in Chapter 5 section 5.6.3. The independent variables were tested separately from the mediator variable and dependent variable per the recommendation of Hair et al. (2020), indicating that EFA could be used to analyse independent and dependent variables separately. Therefore, the section analysis to be discussed next (Section 6.3.1) was split into three parts distinguishing the independent variables (GCuO, GCoO, GfC, and GMV), the moderator variable (GIP), and the dependent variable (GP).

6.3.1 INDEPENDENT VARIABLES VALIDITY RESULTS

The independent variables namely GCuO, GCoO, GfC, and GMV, were factor analysed together. The results distinguished first-order and second-order analysis.

6.3.1.1 FIRST-ORDER ANALYSIS RESULTS

The first-order analysis involved taking the group of items and running factor analysis on them to identify the underlying factors. A correlation matrix was obtained as the first part of the analysis and is displayed in **Table L19**. Values greater than 0.3 indicate correlation, and the results shows that little correlation existed between green management values and business strategy items as shown in the orange section, indicating that factor analysis could be conducted.

The results for sample adequacy measurement i.e., the KMO and Bartlett's test of sphericity are displayed in **Table L20**. The KMO value is 0.913, which is above the 0.6 minimum value and Bartlett's test of sphericity is significant ($p < 0.05$). This supports the factorability of the correlation matrix. The anti-image matrices indicate the correlations. In a good factor model, the off-diagonal elements are small. The measures of sampling adequacy (MSA) are shown diagonally, anticipating minimum values of 0.6 (Pallant, 2020). Values below 0.6 had to be removed. The results are displayed in **Table L21**. The anti-image matrix showed MSA values ranging from 0.750 to 0.970, which were all above 0.6 and, therefore, no items needed to be omitted.

The communality is the proportion of common variance found in a particular variable and is a useful measure for predicting the value of a variable. The communality for the

independent variables is displayed in **Table L22**. The communality values at extraction needed to be greater than 0.3 (Pallant, 2020). The results shows that values ranged from 0.391 to 0.872, hence exceeding the minimum required level, and indicating that there is at least 30% common variance shared among the items. From **Tables 6.19 – 6.22**, it is evident that the instrument was valid, that the results could be trusted, and that factor analysis could be conducted.

To determine the number of factors that were extracted, the total variance explained was reviewed. All extracted items with Eigenvalues greater than one were taken as factors (Hair et al., 2019; Pallant, 2020). The total variance explained for the independent variables in this study is displayed in **Table L23**. Four factors were extracted based on Eigenvalues greater than one (factor 1 – 9.313; factor 2 – 2.817; factor 3 – 1.377; and factor 4 – 1.257), explaining 77.7% of the total variance before extraction and 71.9% of the total variance after extraction. The Scree plot for the extracted values is displayed in **Figure M 1**. From the rotation, the items are grouped according to factors and the highest loadings for the variable on any factor (Hair et al., 2019). The factor loadings for the independent variables are displayed in **Table L24**.

Four factors were identified:

- **Factor 1** grouping included items B8.4, B8.1, B8.5, B8.2, and B8.3 reflecting the theoretical variable **green customer orientation (GCuO)**.
- **Factor 2** groupings included items B9.4, B9.2, B9.1, B9.3, and B9.5 reflecting the theoretical variable **green competitor orientation (GCoO)**.
- **Factor 3** groupings included items B10.1, B10.2, B10.3, and B10.4 reflecting the theoretical variable **green inter-functional coordination (GIfC)**.
- **Factor 4** groupings included items D14.3, D14.2, D14.1, D14.4, and D14.5 reflecting the theoretical variable **green management values (GMV)**.

Table 6.1 summarises the first-order analysis results.

Table 6.1 - Independent variables first-order factor loadings

Items No.	Factor 1	Factor 2	Factor 3	Factor 4	Communality
Factor 1: Green Customer Orientation					
B8.4	0.785				0.797
B8.1	0.784				0.776
B8.5	0.770				0.758
B8.2	0.759				0.719
B8.3	0.738				0.705
Factor 2: Green Competitor Orientation					
B9.4		0.773			0.767
B9.2		0.772			0.785
B9.1		0.771			0.686
B9.3		0.77			0.782
B9.5		0.653			0.750
Factor 3: Green Inter-functional Coordination					
B10.1			0.818		0.856
B10.2			0.802		0.872
B10.3			0.785		0.855
B10.4			0.738		0.814
Factor 4: Green Management Values					
D14.3				0.799	0.651
D14.2				0.746	0.620
D14.1				0.715	0.550
D14.4				0.712	0.531
D14.5				0.578	0.391
Total Variance Explained					
Eigenvalues	3.849	3.671	3.261	2.882	
Percent of variance	20.257	19.323	17.162	15.170	
Cumulative percent of variance	20.257	39.581	56.743	71.913	

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 5 iterations.

Note: An overview of the independent variables first-order results. Own work.

6.3.1.2 SECOND-ORDER ANALYSIS RESULTS

The second-order analysis involved taking the four factors from the first-order analysis and running factor analysis on them to determine which group together. From the theory, it was expected that the three factors (GCuO, GCoO, and GlfC) would group together, and GMV would group on its own. A correlation matrix with the factors from the first-order analysis was run and is displayed in **Table L25**. Factors 1,2, and 3 loaded together very well (values >0.3). This is in line with the theoretical grouping of the variable green market orientation (GMO). As anticipated, Factor 4, which reflects the theoretical variable GMV (value <0.3) was separate and did not correlate with the others.

The results for sample adequacy measurement i.e., the KMO and Bartlett's test of sphericity are displayed in **Table L26** showing that the KMO value of 0.737 exceeds the minimum of 0.6. Bartlett's test of sphericity is significant with a p-value less than 0.05. The measures of sampling adequacy (MSA) are shown diagonally, anticipating minimum values of 0.6 (Pallant, 2020). None of the values were <0.6, and therefore, all items were retained. The results are depicted in **Table L27**.

The communality for the independent variables is displayed in **Table L28**. The values range from 0.130 to 0.690 indicating that three factors (GCuO, GCoO, and GIfC) measure one construct, which theoretically, represents the components of the encompassing construct GMO. The GMV value (0.130) fell below the minimum of 0.3, hence did not correlate with the other three factors. Theoretically, GMV is a separate variable and measures something different to the other three factors.

The total variance explained for the independent variables in this study is displayed in **Table L29**. From the results, one factor was extracted (Eigenvalue >1). The factor value was 2.475 and explained 61.9% of the variance as there was only one factor. The Scree plot for the extracted values is displayed in **Figure M 2**. In the Scree plot, one factor lay above the flattening or stabilisation of the curve. The factor loadings for the independent variables are displayed in **Table L30**, showing that all the items loaded under one factor (GMO-GMV). **Table 6.2** summarises the second-order analysis results.

Table 6.2 - Independent variables second-order factor loadings

Items No.	Factor 1	Communality
Factor 1: GMO-GMV		
Factor 3: Green Inter-functional Coordination	0.831	0.603
Factor 2: Green Competitor Orientation	0.814	0.663
Factor 1: Green Customer Orientation	0.777	0.690
Factor 4: Green Management Values	0.360	0.130
Total Variance Explained		
Eigenvalues	2.087	
Percent of variance	52.171	
Cumulative percent of variance	52.171	

Extraction Method: Principal Axis Factoring.

Rotation Method: Direct Oblimin

a. 1 factors extracted. 7 iterations required.

Note: An overview of the independent variables second-order results. Own work.

6.3.2 MEDIATOR VARIABLE VALIDITY RESULTS

The mediator variable, GIP, was analysed separately because it acts as both a dependent variable when tested with the independent variables, and as an

independent variable when tested with the dependent variable according to the conceptual model. The results discussed next, distinguish first-order analysis and second-order analysis.

6.3.2.1 FIRST-ORDER ANALYSIS RESULTS

The first-order analysis involved taking the group of items and running factor analysis on them to identify the factors. A correlation matrix was obtained as the first step, which is displayed in **Table L31**. Most of the values in the correlation matrix were greater than 0.3 indicating correlation. Factor analysis was then conducted.

The results for sample adequacy measurement i.e., the KMO and Bartlett's test of sphericity are displayed in **Table L32**. The KMO value of 0.921 exceeded the 0.6 minimum. Bartlett's test of sphericity is significant with a p-value <0.05. The measures of sampling adequacy (MSA) are shown diagonally, with minimum values of 0.6 as the norm (Pallant, 2020). None of the values were smaller. Therefore, all the items were retained. The results for measures of sampling adequacy for the second-order analysis are depicted in **Table L33**.

The communality represents the proportion of common variance found in a particular variable and is a useful measure for predicting the value of a variable. The communality for the independent variables is displayed in **Table L34**, which shows values ranging from 0.516 to 0.936. Hence all exceeded the minimum required level, indicating more than 30% common variance shared among the items.

From the above **Tables L6.31 – L6.34**, it is evident that the instrument was valid, that the results could be trusted, and that factor analysis can be conducted. To determine the number of factors that were extracted, the total variance explained needed to be reviewed. All extracted items with Eigenvalues >1 were taken as factors (Hair et al., 2019; Pallant, 2020). Accordingly, four factors were extracted as displayed in **Table L35**. These four factor loadings (factor 1 – 9.278; factor 2 – 3.100; factor 3 – 1.202; and factor 4 – 1.018) explain 81.1% of the total variance before extraction and 76.8% of the total variance after extraction. The Scree plot for the extracted values is displayed in **Figure M3**. From the rotation, the items are grouped according to factors and the highest loadings for the variable on any factor (Hair et al., 2019). The factor loadings for the independent variables are displayed in **Table L36**.

The four factors were:

- **Factor 1** grouping included items C11.1, C11.2, C11.3, C11.4, C11.5, and C11.6 reflecting part of the theoretical variable **Environmental Policies**.
- **Factor 2** groupings included items C13.3, C13.4, C13.2, C13.5, and C13.4 reflecting the theoretical variable of **Internal Business Practices**.
- **Factor 3** groupings included items C12.2, C12.1, C12.3, C12.4, and C12.5 reflecting the theoretical variable **Internal Supplier Practices**.
- **Factor 4** groupings included items C11.7 and C11.8 reflecting the other part of the theoretical variable **Environmental Policies**.

Table 6.3 summarises the first-order analysis results.

Table 6.3 - Mediator variable first-order factor loadings

Items No.	Factor 1	Factor 2	Factor 3	Factor 4	Communality
Factor 1: Environmental Policies					
C11.1	0.909				0.840
C11.2	0.894				0.821
C11.3	0.851				0.748
C11.4	0.750				0.667
C11.5	0.651				0.516
C11.6	0.577				0.542
Factor 2: Internal Business Practices					
C13.3		0.870			0.936
C13.4		0.855			0.918
C13.2		0.842			0.890
C13.5		0.747			0.787
C13.1		0.592			0.589
Factor 3: Internal Supplier Practices					
C12.2			0.867		0.910
C12.1			0.841		0.853
C12.3			0.768		0.779
C12.4			0.709		0.716
C12.5			0.601		0.627
Factor 4: Environmental Policies					
C11.7				0.848	0.872
C11.8				0.805	0.809
Total Variance Explained					
Eigenvalues	4.087	4.064	3.839	1.832	
Percent of variance	22.705	22.576	21.328	10.176	
Cumulative percent of variance	22.705	45.280	66.608	76.784	

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 5 iterations.

Note: An overview of the mediator variables first-order results. Own work.

6.3.2.2 SECOND-ORDER ANALYSIS RESULTS

The second-order analysis involved taking the four factors from the first-order analysis and running factor analysis to determine which of these factors group together. From the theory, it is expected that the three factors would group together. A correlation matrix with the factors from the first-order analysis was run and is displayed in **Table L37**. All items loaded together well (values >0.3) but differed from the theoretical grouping of the variable green internal practices (GIP).

Factor 1 – Consumption Policies (CoP) and **Factor 2 – Waste Policies (WsP)** theoretically formed part of the environmental policies component.

Factor 3 – Internal Supplier Practices (ISP) and **Factor 4 – Internal Business Practices (IBP)** reflected the theoretical grouping.

The results for sample adequacy measurement i.e., the KMO and Bartlett's test of sphericity are displayed in **Table L38**. The KMO value of 0.707 exceeded the 0.6 minimum. Bartlett's test of sphericity is significant with a p-value less than 0.05.

The measures of sampling adequacy (MSA) are shown diagonally, with minimum values of 0.6 anticipated (Pallant, 2020). All the values were above 0.6 and therefore, no items were removed. The results for measures of sampling adequacy for the second-order analysis are depicted in **Table L39**, while the communality for the mediator variable is displayed in **Table L40**. Values range from 0.307 to 0.702, hence measuring one variable. The total variance explained for the mediator variables is displayed in **Table L41**.

Only one factor was extracted with an Eigenvalue greater than one. The factor value was 2.517 and explained 62.9% of the variance in the data. The Scree plot for the extracted values is displayed in **Figure M4**. The results for the factor matrix are displayed in **Table L42**. All four factors correlate well (values >0.3) and loaded onto one factor, theoretically labelled as **Green Internal Practices (GIP)**.

Table 6.4 summarises the second-order analysis results.

Table 6.4 - Mediator variable second-order factor loadings

Items No.	Factor 1	Communality
Factor 1: Green Internal Practices		
Factor 1: Consumption Policies	0.554	0.307
Factor 2: Waste Policies	0.623	0.389
Factor 3: Internal Supplier Practices	0.827	0.684
Factor 4: Internal Business Practices	0.838	0.702
Total Variance Explained		
Eigenvalues	2.081	
Percent of variance	52.033	
Cumulative percent of variance	52.033	

Extraction Method: Principal Axis Factoring.

Rotation Method: Direct Oblimin

a. 1 factors extracted. 7 iterations required.

Note: An overview of the mediator variables second-order results. Own work.

6.3.3 DEPENDENT VARIABLE VALIDITY RESULTS

The dependent variable, GP, was factor analysed separately. The results discussed next are broken down into first-order analysis and second-order analysis.

6.3.3.1 FIRST-ORDER ANALYSIS RESULTS

The first-order analysis involved EFA on the items to identify coherent factors. Hereby, item E15.1 with a weak loading was removed. The rerun without this item and the correlation matrix is displayed in **Table L43**, indicating that most of the values in the correlation matrix were greater than 0.3, and due to their correlation values between the items factor analysis could be conducted.

The results for sample adequacy measurement i.e., the KMO and Bartlett's test of sphericity are displayed in **Table L44**. Hereby, the KMO value of 0.957 exceeded the minimum of 0.6. Bartlett's test of sphericity is significant with a p-value less than 0.05. The measures of sampling adequacy (MSA) for the first-order analysis are shown (diagonally) in **Table L45**, anticipating minimum values of 0.6 (Pallant, 2020). The anti-image matrix shows that the MSA values range from 0.940 to 0.989, exceeding the minimum of 0.6. Therefore, no items were removed.

The communality is the proportion of common variance found in a particular variable and is a useful measure for predicting the value of a variable. The communality for the dependent variable is displayed in **Table L46**. The values range from 0.487 to 0.774 which is above the minimum required level, indicating more than 30% common variance shared among the items.

From **Tables L6.43 – L6.46**, it is evident that the instrument was valid, the results could be trusted, and factor analysis could be conducted.

To determine the number of factors that were extracted, the total variance explained was reviewed, accepting those with Eigenvalues >1 as factors (Hair et al., 2019; Pallant, 2020). The total variance explained for the independent variables in this study is displayed in **Table L47**.

Four factors were extracted with factor loadings (factor 1 – 18.376; factor 2 – 2.145; factor 3 – 1.464; and factor 4 – 1.272) explaining 68.4% of the total variance before extraction and 64.4% of the total variance after extraction.

The Scree plot for the extracted values is displayed in **Figure M5**. From the rotation, the items were grouped per the factors and items with the highest loadings (Hair et al., 2019), are displayed in **Table L48**.

Four factors were distinguished:

- **Factor 1** grouping included items E15.17, E15.15, E15.18, E15.14, E15.16, E15.28, E15.30, E15.22, E15.27, E15.31, E15.12, and E15.6.
- **Factor 2** groupings included items E15.10, E15.8, E15.11, E15.9, E15.4, E15.13, E15.5, E15.3, E15.2, E15.7, and E15.33.
- **Factor 3** groupings included items E15.34, E15.23, E15.32, E15.29, E15.26, E15.24, E15.35, and E15.25.
- **Factor 4** groupings included items E15.21, E15.20, and E15.19.

These factors differed from the theoretical factors, complicating the labelling process. **Table 6.5** summarises the first-order analysis results.

Table 6.5 - Dependent variable first-order factor loadings

Items No.	Factor 1	Factor 2	Factor 3	Factor 4	Communality
Factor 1:					
E15.17	0.735				0.677
E15.15	0.713				0.745
E15.18	0.708				0.658
E15.14	0.704				0.680
E15.16	0.657				0.565
E15.28	0.626				0.671
E15.30	0.619				0.672
E15.22	0.545				0.684
E15.27	0.534				0.670
E15.31	0.529				0.618
E15.12	0.500				0.567
E15.6	0.453				0.475
Factor 2:					
E15.10		0.788			0.755
E15.8		0.718			0.640
E15.11		0.707			0.611
E15.9		0.652			0.625
E15.4		0.579			0.706
E15.13		0.564			0.619
E15.5		0.555			0.760
E15.3		0.535			0.732
E15.2		0.526			0.519
E15.7		0.515			0.559
E15.33		0.442			0.652
Factor 3:					
E15.34			0.642		0.641
E15.23			0.580		0.653
E15.32			0.559		0.651
E15.29			0.513		0.490
E15.26			0.508		0.637
E15.24			0.506		0.700
E15.35			0.479		0.487
E15.25			0.441		0.581
Factor 4:					
E15.21				0.662	0.774
E15.20				0.637	0.716
E15.19				0.615	0.698
Total Variance Explained					
Eigenvalues	6.991	6.231	4.460	4.203	
Percent of variance	20.562	18.328	13.117	12.363	
Cumulative percent of variance	20.562	38.890	52.007	64.369	

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 5 iterations.

Note: An overview of the dependent variable first-order results. Own work.

6.3.3.2 SECOND-ORDER ANALYSIS RESULTS

The second-order analysis involved taking the four factors from the first-order analysis and running factor analysis to determine which factors group together. From the theory, it was expected that the three factors would group together. A correlation matrix with the factors from the first-order analysis was run and is displayed in **Table L49**. All the items loaded well, with factor loadings greater than 0.3, although different to the theoretical grouping of the variable green performance (GP). None of the factors in this analysis corresponded with the theoretical factors.

The results for sample adequacy measurement i.e., the KMO and Bartlett's test of sphericity are displayed in **Table L50**. The KMO value of 0.858 exceeded the minimum of 0.6. Bartlett's test of sphericity is significant with a p-value less than 0.05. The measures of sampling adequacy (MSA) are shown diagonally in **Table L51**, anticipating minimum values of 0.6 (Pallant, 2020). No values were lower, and therefore, no items were removed. The communality for the dependent variable results is displayed in **Table L52**. The values range from 0.659 to 0.824, hence all the items measured one variable. The total variance explained for the dependent variables is displayed in **Table L53**.

Only one factor was extracted based on an Eigenvalue greater than one. The factor value was 3.268 and explained 81.7% of the variance in the data. The Scree plot for the extracted values is displayed in **Figure M6**. The results for the factor matrix show that all four factors are correlated and group very well as a single factor – **Green Performance** (GP). **Table 6.6** summarises the dependent variable second-order analysis results.

Table 6.6 - Dependent variable second-order factor loading

Items No.	Factor 1	Communality
Factor 1: Green Performance		
Factor 1:	0.908	0.824
Factor 3:	0.901	0.813
Factor 2:	0.856	0.733
Factor 4:	0.812	0.659
Total Variance Explained		
Eigenvalues	3.029	
Percent of variance	75.729	
Cumulative percent of variance	75.729	

Extraction Method: Principal Axis Factoring.

Rotation Method: Direct Oblimin

a. 1 factors extracted. 7 iterations required.

Note: An overview of the dependent variable second-order results. Own work.

6.4 INSTRUMENT RELIABILITY ANALYSIS

The reliability of the instrument was tested for both theoretical and empirical factors, using Cronbach's alpha as the norm. Each construct was tested, and details are presented in the three sections following, namely independent variables, mediator variables, and dependent variable.

6.4.1 INDEPENDENT VARIABLE'S RELIABILITY RESULTS

The Cronbach's alpha was run for the empirical factors obtained from the factor analysis using both first order and second-order factors. The theoretical factors from theory were also run for reliability. The results for the reliabilities on the independent variables are displayed in **Table 6.7**.

Table 6.7 – Reliabilities for independent variables

<i>Variable</i>	<i>No. of Items</i>	<i>Empirical Results</i>	<i>Theoretical Results</i>
<i>First order - Factor 1 (GCuO)*</i>	5	0.932	(0.932)
<i>First order - Factor 2 (GCoO)*</i>	5	0.933	(0.933)
<i>First order - Factor 3 (GlFC*)</i>	4	0.957	(0.957)
<i>First order - Factor (GMV*)</i>	5	0.847	(0.847)
<i>Second order - Factor 1 (GMO+GMV*)</i>	19	0.931	
<i>GMO</i>	14		(0.954)

*Items in brackets denote the theoretical variables

Note. The results of the reliability for the independent variables. Own work.

Results for the first-order factors (GCuO, GCoO, GlFC, and GMV) were the same for the empirical and the theoretical factors, exceeding 0.6. The second-order factors (GMO+GMV) were also reliable, based on a value of 0.931. The value for the theoretical GMO was also reliable based on a value of 0.954. It was decided to use the theoretical factors for the regression analysis.

6.4.2 MEDIATOR VARIABLE'S RELIABILITY RESULTS

The Cronbach's alpha was run for the empirical factors for both first- and second order factors. Results for the reliabilities on the mediator variables are displayed in **Table 6.8**.

Table 6.8 – Reliability for the mediator variables

<i>Variable</i>	<i>No. of Items</i>	<i>Empirical Results</i>	<i>Theoretical Results</i>
<i>First order – Factor 1 (EnP)*</i>	8		(0.886)
<i>First order – Factor 1 (CoP)*</i>	6	0.911	
<i>First order – Factor 2 (IBP)*</i>	5	0.953	(0.953)
<i>First order – Factor 3 (ISP)*</i>	5	0.940	(0.940)
<i>First order – Factor 4 (WsP)*</i>	2	0.916	
<i>Second order – Factor 1 (GIP)*</i>	18	0.943	(0.943)

*Items in brackets denote the theoretical variables

Note. The results of the reliability of the mediator variables. Own work.

The first-order factors (IBP and ISP), both empirical and theoretical, were all reliable as values were >0.6. The theoretical factor (EnP) was split into two empirical factors that were both reliable as values were >0.6. The second-order factor (GIP) was also reliable for both theoretical and empirical factors with a value of 0.943. The theoretical value of EnP was also reliable indicated by a value of 0.886. The decision was made to use the empirical factors for the regression analysis because the newly divided factor made sense in terms of content.

6.4.3 DEPENDENT VARIABLE RELIABILITY RESULTS

The Cronbach's alpha was run for the empirical factors, again for first- and second order factors. One item, E15.1, was removed due to a weak loading and the reliability test was repeated excluding this item. The reliability of the theoretical factors, namely green economic performance (GFP), green social performance (GSP), and green environmental performance (GEP) were tested. The results for the reliabilities on the dependent variables are displayed in **Table 6.9**.

Table 6.9 – Reliability for the dependent variable

<i>Variable</i>	<i>No. of Items</i>	<i>Empirical Results</i>	<i>Theoretical Results</i>
<i>First order – Factor 1</i>	12	0.946	
<i>First order - Factor 2</i>	11	0.937	
<i>First order - Factor 3</i>	8	0.907	
<i>First order - Factor 4</i>	3	0.930	
<i>Second order – Factor 1 (-E15.1)*</i>	34	0.973	
<i>First order – Factor 1 (GFP)+</i>	9		(0.879)
<i>First order – Factor 2 (GSP)+</i>	10		(0.928)
<i>First order – Factor 3 (GEP)+</i>	16		(0.951)
<i>Second order – Factor 1 (GP)+</i>	35		(0.973)

*Second order factor was without E15.1 due to weak loading

+Items in brackets denote the theoretical variables.

Note. The results of the reliability of the dependent variable. Own work.

The Cronbach's alpha values for the first-order factors ranged from 0.907 to 0.946 showing that they were all reliable. The results for the second-order empirical factors with one deleted item (E15.1) produced an acceptable reliability score of 0.973. The theoretical factors, GFP, GSP, and GEP were all reliable as their Cronbach's alpha values ranged from 0.879 to 0.951. The second-order factor GP was also reliable based on a reliability value of 0.973, which exceeded the minimum of 0.6. Although the empirical factors were reliable, the factor content was vastly different from existing literature, and therefore, the theoretical factors were used for the regression analysis.

6.5 DESCRIPTIVE ANALYSIS OF THE SCALES

Descriptive statistics were used to summarise the data set. Broken down into two parts, namely measures of central tendency (mean, median, and mode) and measures of spread or variability (standard deviation, variance, minimum and maximum variables). The analyses were run after the validity and reliability testing of the scales and factor analysis. The results are presented in **Table L54**.

The factors for the independent variables (GCuO, GCoO, GlfC, and GMV) were used as is from previous studies (Jansson et al., 2017; C. H. Wang, 2020), as they were reliable judged by the Cronbach Alpha measures, and were better aligned with the research questions.

Results in **Table L55** indicate a gender perspective. The summary of the means of the major constructs are displayed in **Figure M7**. Both **Table L55** and **Figure M7** present the overall means for males, females, and those who preferred not to disclose separately.

6.6 MULTIPLE REGRESSION ANALYSIS

The results are presented per hypothesis, firstly checking for linearity using the scatter plots. If a relationship exists between the two variables, the direction of the relationship is important, in terms of being positive or negative (Hair et al., 2020). Then the strength of association, i.e., Pearson's Correlation Coefficient, is reported, followed by the results for the regression analysis. Regression analysis served to test a relationship at a significance level of $p < 0.05$, denoted by Sig. in the regression tables. The R^2 statistic is presented for each analysis, with the coefficients and significance of the dependence relationship. The sections distinguish the analysis of direct-, mediator-, and moderator relationships.

6.6.1 ANALYSIS OF DIRECT RELATIONSHIPS

The results are reported per hypothesis, and every overarching hypothesis was split into the related dimensions identified through factor analysis. The study proposed that:

H1: Green market orientation is directly and positively related to green performance among F&B SMMEs in South Africa.

H1a: Green customer orientation is directly and positively related to green performance among F&B SMMEs in South Africa (Section 6.6.1.1)

H1b: Green competitor orientation is directly and positively related to green performance among F&B SMMEs in South Africa (Section 6.6.1.2)

H1c: Green inter-functional coordination is directly and positively related to green performance among F&B SMMEs in South Africa (Section 6.6.1.3)

H2: F&B SMMEs in South Africa with a green market orientation are more likely to implement green internal practices.

H2a: Green customer orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa (Section 6.6.1.4)

H2b: Green competitor orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa (Section 6.6.1.5)

H2c: Green inter-functional coordination is positively related to the implementation of green internal practices by F&B SMMEs in South Africa (Section 6.6.1.6)

H3: The implementation of green internal practices is directly and positively related to green performance among F&B SMMEs in South Africa

Refer to Section 6.6.1.7.

6.6.1.1 THE INFLUENCE OF GCuO ON GP (H1A)

Green market orientation was split into three dimensions, the first being green customer orientation, proposing *H1a: Green customer orientation is directly and positively related to green performance of F&B SMMEs in South Africa.*

Linear regression analysis was used to test if GCuO positively influences GP. The scatter plot checks linearity, and Pearson's bivariate correlation coefficient (r) indicates the strength of association between the two variables (Campbell & Machin, 1999). **Figure M8** reveal the results showing that a linear line seems probable, indicating a positive relationship between GCuO and GP. The equation for the relationship was $GP = 1.94 + 0.48 \text{ GCuO}$.

When using Pearson's Correlation Coefficient, a perfect positive linear relationship is represented by a value of +1, indicating that as one variable increases in value, the other also increases in a linear manner (Campbell & Machin, 1999; Hair et al., 2020). Conversely, a value of -1 would indicate a perfect negative linear relationship with one variable increasing and the other decreasing in a linear manner. Ratner (2009) explains that a value of 0 indicates no linear relationship between the variables. **Table 6.10** provides the rules of thumb about the strength of association (Hair et al., 2020).

Table 6.10 – Rules about correlation coefficient sizes

<i>Coefficient range</i>	<i>Strength of association</i>
$\pm (0.91 - 1.00)$	Very strong
$\pm (0.71 - 0.90)$	High
$\pm (0.41 - 0.70)$	Moderate
$\pm (0.21 - 0.40)$	Small but definite relationship
$\pm (0.10 - 0.20)$	Small but may be meaningful
$\pm (0.00 - 0.10)$	Unlikely to be a meaningful relationship

Note. The correlation coefficient sizes. Own work.

The Pearson's Correlation Coefficient for the linear relationship between GCuO and GP is shown in

Table L56. The strength of the association between GCuO and GP is 0.603 indicating a positive, moderate association.

The output of the regression is reported in **Table L57**. A significant regression equation was found ($F = 213.460, p < 0.001$) with an R^2 of 0.363. The correlation coefficient (r) of 0.603 indicates that GCuO moderately correlates with GP. The adjusted R-square indicates that GCuO explains 36.2% of the variability of GP. The regression coefficient is significant, with a p-value of less than 0.001. Therefore, **H1a is supported**:

H1a: *Green customer orientation is directly and positively related to green performance of F&B SMMEs in South Africa.*

6.6.1.2 THE INFLUENCE OF GCOO ON GP (H1B)

The second dimension of green market orientation is green competitor orientation, proposing **H1b: *Green competitor orientation is directly and positively related to green performance of F&B SMMEs in South Africa.***

Linear regression analysis was used to test if GCoO positively influences GP. The scatter plot, which checks linearity, is displayed in **Figure M9**, suggesting a positive relationship between GCoO and GP. The equation for the relationship is $GP = 2.32 + 0.42 \text{ GCoO}$.

The Pearson's Correlation Coefficient (r) between GCoO and GP is summarised in **Table L58**. The strength of the association between GCoO and GP is 0.607 indicating a moderate association.

The output of the regression is displayed in **Table L59**. A significant regression equation was found ($F = 218.408, p < 0.001$) with an R^2 of 0.369. The correlation coefficient (r) of 0.607 indicates that GCoO is moderately correlated to GP. The adjusted R-square indicates that GCoO explains 36.7% of the variability of GP. The regression coefficient is significant, with a p-value of less than 0.001. Therefore, **H1b is supported**.

*H1b: **Green competitor orientation** is directly and positively related to **green performance** of F&B SMMEs in South Africa.*

6.6.1.3 THE INFLUENCE OF GIfC ON GP (H1c)

The third dimension of green market orientation is green competitor orientation, proposing *H1c: **Green inter-functional coordination** is directly and positively related to **green performance** of F&B SMMEs in South Africa.*

Linear regression analysis was used to test if GIfC positively influences GP. The scatter plot, which checks linearity, is displayed in **Figure M10**. From this, a linear line seems probable indicating a positive relationship between GIfC and GP. The equation was identified as $GP = 2.38 + 0.39 \text{ GIfC}$.

The Pearson's Correlation Coefficient (r) between GIfC and GP is shown in **Table L60**. The strength of the association between GIfC and GP is 0.605 indicating a moderate association.

The output of the regression is displayed in **Table L61**. A significant regression equation was found ($F = 216.003, p < 0.001$) with an R^2 of 0.366. The correlation coefficient (r) of 0.605 indicates that GIfC is moderately correlated to GP. The adjusted R-square indicates that GIfC explains 36.4% of the variability of GP. The regression

coefficient is significant, with a p-value of less than 0.001. Therefore, **H1c is supported:**

*H1c: **Green inter-functional coordination** is directly and positively related to **green performance** of F&B SMMEs in South Africa.*

6.6.1.4 THE INFLUENCE OF GCuO ON GIP (H2A)

The second overarching hypothesis considered the direct relationship between green market orientation and the implementation of green internal practices. As green market orientation was split into three, the first-dimension green customer orientation produced *H2a: **Green customer orientation** is positively related to the implementation of **green internal practices** by F&B SMMEs in South Africa.*

This hypothesis considered the relationship between GCuO and GIP. Linear regression analysis tested whether GCuO positively influences GIP. The scatter plot, exploring linearity, is displayed in **Figure M11**, suggesting a positive relationship between GCuO and GIP. The equation was identified as $GP = 1.14 + 0.60 \text{ GCuO}$.

The Pearson's Correlation Coefficient (r) between GCuO and GIP is reported in **Table L62**. The strength of the association between GIC and GP is 0.622 indicating a moderate association.

The output of the regression is displayed in **Table L63**. A significant regression equation was found ($F = 235.607$, $p < 0.001$) with an R^2 of 0.386. The correlation coefficient (r) of 0.622 indicates that GCuO is moderately correlated to GIP. The adjusted R-square indicates that GCuO explains 38.5% of the variability of GIP. The regression coefficient is significant, with a p-value of less than 0.001. Therefore, **H2a is supported:**

*H2a: **Green customer orientation** is positively related to the implementation of **green internal practices** by F&B SMMEs in South Africa.*

6.6.1.5 THE INFLUENCE OF GCoO ON GIP (H2B)

The second-dimension green competitor orientation produced *H2b: **Green competitor orientation** is positively related to the implementation of **green internal practices** by F&B SMMEs in South Africa.*

Linear regression was used to test the relationship between GCoO and GIP. The scatter plot used to indicate linearity, is displayed in **Figure M12**, showing a positive relationship between GCoO and GIP. The equation was identified as $GP = 1.74 + 0.50 \text{ GCoO}$.

The Pearson's Correlation Coefficient (r) between GCoO and GIP is shown in **Table L64**. The strength of the association between GCoO and GP is 0.586, indicating a moderate association.

The output of the regression is displayed in **Table L65**. A significant regression equation was found ($F = 195.951, p < 0.001$) with an R^2 of 0.344. The correlation coefficient (r) of 0.5866 indicates that GCoO is moderately correlated to GIP. The adjusted R-square indicates that GCoO explains 34.4% of the variability of GIP. The regression coefficient is significant, with a p-value of less than 0.001. Therefore, **H2b is supported**.

*H2b: **Green competitor orientation** is positively related to the implementation of **green internal practices** by F&B SMMES in South Africa.*

6.6.1.6 THE INFLUENCE OF GIfC ON GIP (H2c)

The third-dimension green inter-functional coordination produced *H2c: **Green inter-functional coordination** is positively related to the implementation of **green internal practices** by F&B SMMES in South Africa.*

Linear regression analysis was used to test if GIfC positively influences GIP. The scatter plot, which checks linearity, is displayed in **Figure M13**. The linear line suggested a positive relationship between GIfC and GIP. The equation was found for the relationship and was identified as $GP = 1.35 + 0.59 \text{ GIfC}$.

The results of Pearson's Correlation Coefficient (r) between GIfC and GIP is shown in **Table L66**. The strength of the association between GIfC and GP was 0.743 and is deemed as high association.

The output of the regression is displayed in **Table L67**. A significant regression equation was found ($F = 152.238, p < 0.001$) with an R^2 of 0.553. The correlation coefficient (r) of 0.743 indicates that GIfC is strongly correlated to GIP. The adjusted R-square indicates that GIfC explains 55.1% of the variability of GIP. The regression

coefficient is significant, with a p-value of less than 0.001. Therefore, **the proposed hypothesis is supported.**

*H2c: **Green inter-functional coordination** is positively related to the implementation of **green internal practices** by F&B SMMES in South Africa.*

6.6.1.7 THE INFLUENCE OF GIP ON GP (H3)

The third hypothesis considered the direct relationship between the implementation of green internal practices and green performance, which produced *H3: The implementation of **green internal practices** is directly and positively related to **green performance** among F&B SMMES in South Africa.*

Linear regression analysis was used to test whether GIP positively influences GP. The scatter plot used to check linearity, is displayed in **Figure M14** showing a positive relationship between GIP and GP. The equation was identified as $GP = 1.83 + 0.56 \text{ GIfC}$.

The results of Pearson's Correlation Coefficient (r) between GIP and GP are shown in **Table L68**. The strength of the association between GIP and GP was 0.743 and is deemed as high association.

The output of the regression is displayed in **Table L69**. A significant regression equation was found ($F = 336.415, p < 0.001$) with an R^2 of 0.474. The correlation coefficient (r) of 0.688 indicates that GIP is strongly correlated to GP. The adjusted R-square indicates that GIP explains 47.2% of the variability of GP. The regression coefficient is significant, with a p-value of less than 0.001. **The proposed hypothesis is therefore, supported, namely:**

*H3: The implementation of **green internal practices** is directly and positively related to **green performance** among F&B SMMES in South Africa.*

6.6.1.8 SUMMARY OF RESULTS FOR DIRECT EFFECTS

The study hypothesised that concerning F&B SMMES in South Africa, GCuO, GCoO, GIfC, and GIP are positively related to GP. The regression analysis showed a significant relationship between GCuO, GCoO, GIfC, respectively, and GIP. Thus, the hypotheses of the research, **H1 (a, b, c), H2 (a, b, c), and H3 were all supported.** The summary of the results is visually displayed in **Figure M15**.

R-A theory argues that firm resources are leveraged to provide for competitive advantage resulting in superior financial performance (S. D. Hunt, 2018; S. D. Hunt & Morgan, 2005, 1995). The results identify that GMO and its components of GCuO, GCoO, and GIfC are all considered as resources (P6), specifically informational resources. This is also applicable for GIP i.e. it being an informational resource (P6). Furthermore, the results reveal that GMO and its components of GCuO, GCoO, and GIfC not only have a direct impact on the business performance which leads to superior financial performance but has a direct impact on sustainable/green performance (P7). Similarly, GMO and its components of GCuO, GCoO, and GIfC have a direct impact on green internal practices (P7). GIP as an informational resource has a direct impact on business performance which leads to superior financial performance but has a direct impact on sustainable/green performance (P7).

6.6.2 ANALYSIS OF MODERATING EFFECTS

This section indicates whether GMV has a moderating effect on the relationships between GCuO, GCoO, GIfC, respectively and GIP. The results are reported per hypothesis, and every overarching hypothesis was split into the related dimensions identified through factor analysis. The study proposed that:

H4: The relationship between green market orientation and the implementation of green internal practices is moderated by the green management values of SMMEs in South Africa

*H4a: The relationship between **green customer orientation** and the implementation of **green internal practices** is moderated by the **green management values** of SMMEs in South Africa (Section 6.6.2.1)*

*H4b: The relationship between **green competitor orientation** and the implementation of **green internal practices** is moderated by the **green management values** of SMMEs in South Africa (Section 6.6.2.2)*

*H4c: The relationship between **green inter-functional coordination** and the implementation of **green internal practices** is moderated by the **green management values** of SMMEs in South Africa (Section 6.6.2.3)*

Moderation is displayed by a significant interaction between variables and in interpreting the results for moderation, the interaction (int_1) identifies the interaction effect. The moderator has an effect of either strengthening the relationships between the independent variable and the dependent variable or weakening the relationship. The moderation analysis for this study did not use the PROCESS macro but did regression analysis to determine moderation. Testing moderation in this way requires

that the independent and moderator variables be mean centered to avoid multicollinearity issues, improving the interpretation of the results. Several assumptions are made during the regression analysis including:

- 1) The data needed to be checked for **outliers** and removing them.
- 2) There needed to be a significant **linear relationship** between the independent variables and dependent variable; and
- 3) The results needed to be examined for **multicollinearity** (Pallant, 2020; Tabachnick et al., 2019).

The moderation effect on the components of GMO is discussed next.

6.6.2.1 THE MODERATING EFFECT OF GMV ON THE RELATIONSHIP BETWEEN GCuO AND GIP (H4A)

The first dimension of green market orientation is green customer orientation proposing *H4a: The relationship between **green customer orientation** and the implementation of **green internal practices** is moderated by **green management values** in F&B SMMEs in South Africa.*

This study hypothesised that GMV has a moderating effect on the relationship between GCuO and GIP requiring the standardized residuals to be between -3.3 and 3.3. The maximum value of 4.506 indicated the presence of outlier values. Refer to **Table L70**. The regression analysis assumptions were then examined.

Assumption 1: The data was examined for any outliers, which had to be removed. The histogram in **Figure M16** distinguishes three outlier values, which were removed. Thereafter, regression analysis was repeated and the histogram in **Figure M17** confirms that there were no more outliers, hence the data complied with the first assumption.

Assumption 2: The Pearson's correlation results were reviewed to determine the interaction between all the variables i.e., GCuO, GMV, and GIP. The results are displayed in **Table L71** indicating that all the variables were significantly strong to moderately, positively correlated ($p\text{-value} = 0.000$). A linear relationship was evident between the two main effects (GCuO and GMV) and the dependent variable (GIP). The interaction results between GCuO and GIP was 0.668, and between GMV and GIP was 0.517.

For the moderation regression analysis, the two models needed to be shown. Model 1 investigated the two main effects first. Model 2 includes the interaction variable. Refer to **Table L72**. To determine a possible moderation effect, the results from the regression analysis was examined, and the results are displayed in **Table L73**.

According to Model 1, the two main effects of *green customer orientation* and *green management values* are significant in predicting *green internal practices*. A significant regression equation was found ($F = 252.756, p < 0.000$) with an R^2 of 0.577 and a R^2 increase to 0.577 from zero. The correlation coefficients (r) of 0.668 and 0.517 indicates that GCuO and GMV respectively are strongly correlated to GIP. Thus, there is a linear relationship between the independent variables and the dependent variable complying with the second assumption. The adjusted R^2 indicates that GCuO and GMV explain 57.5% of the variability of GIP. The regression coefficient is significant, with a p -value of 0.000. The standardized coefficients beta in the coefficients section, indicated that the value of GCuO, which is 0.575, is the larger predictor of GIP, and is significant with a p -value of 0.000.

According to Model 2, the two main effects of *green customer orientation* and *green management values* and the inclusion of the interaction item are also significant in predicting *green internal practices*. A significant regression equation was found ($F = 173.654, p < 0.001$) with an increase in the R^2 from 0.577 to 0.585, which is a R^2 change of 0.008. The regression coefficient is significant, with a p -value of 0.008, which is less than 0.05. The standardized coefficients beta in the coefficients section indicated that the value of GCuO, 0.604, is the larger predictor of GIP, and is significant with a p -value of 0.000. The interaction factor is positive indicating that *green management values* strengthen the relationship between *green customer orientation* and *green internal practices*. The higher the *green customer orientation* the stronger the effect of *green management values* on *green internal practices*. **Figure M18** displays the interaction between GCuO and GMV on GP. The lines represent the below average (blue line) and above average (red line) green management values of the SMMEs. Initially, the lines are close by, but the gap increases between above and below average *green management values* as *green customer orientation* increases.

Assumption 3: The third assumption concerned the check for multicollinearity, which exists when the independent variables are highly correlated i.e., indicated when (r) is 0.7 and above (Pallant, 2020). The regression analysis provided useful collinearity diagnostics to detect multicollinearity issues. For model 1, based on the figures captured in **Table L74**, the value of the two correlation effects is 0.250, indicating that multicollinearity is unlikely (being less than 0.7) (Hair et al., 2020; Pallant, 2020).

Furthermore, considering the coefficients presented in **Table L73**, the collinearity statistics of Tolerance and Variance Inflation Factor (VIF) were reviewed. According to Pallant (2020), this examination indicates how much the variability of the specified independent variable is not explained by the other independent variable. It is calculated by the formula $1 - R^2$ for each variable with a low value, i.e., less than 0.10, indicating the possibility of multicollinearity due to multiple high correlations with other variables (Pallant, 2020). The VIF value is the inverse of the tolerance with values above 10 indicating probable multicollinearity. A tolerance value of 0.937 was reported for each of the independent variables, which exceeded 0.10, therefore, not violating the multicollinearity assumption. This is supported by the VIF value of 1.067, which was well below the cut-off figure. Given that Pearson's correlation coefficient between these two independent variables was only 0.250, this result is not surprising.

For model 2 based on the results in **Table L73**, the Tolerance and VIF values were within the limits. The tolerance value for each of the independent variables and interaction factor were 0.853 (GCuO), 0.919 (GMV), and 0.869 (interaction factor), respectively, all higher than 0.10. This is further supported by the VIF values, which were 1.172 (GCuO), 1.088 (GMV), and 1.151 (interaction factor) respectively, and well below the cut-off figure of 10. The multicollinearity diagnostics table, **Table L74**, presents the results for the independent variables and interaction factor on the dependent variable.

The condition index for the smallest Eigenvalue was evaluated anticipating a value lower than 15 to exclude issues with multicollinearity. Values above 30 signify serious multicollinearity problems (Field, 2018). The condition index values shown in **Table L74**, i.e., 1.292 for model 1 and 1.588 for model 2, were well below the cut-off value of 15, thus not violating the third assumption of multicollinearity.

Assumptions Summary: The results for all three assumptions indicated that there were outliers, which were removed; that there were significant strong, linear positive relationships between the independent variables; and that there were no multicollinearity issues in the model, hence **hypothesis H4a is supported**.

*H4a: The relationship between **green customer orientation** and the implementation of **green internal practices** is moderated by **green management values** in F&B SMMEs in South Africa.*

6.6.2.2 THE MODERATING EFFECT OF GMV ON THE RELATIONSHIP BETWEEN GCoO AND GIP (H4B)

The second dimension of green market orientation is green competitor orientation proposing *H4b: The relationship between **green competitor orientation** and the implementation of **green internal practices** is moderated by **green management values** in F&B SMMEs in South Africa.*

This study hypothesised that GMV moderates the relationship between GCoO and GIP. Considering the requirement of a value between -3.3 and 3.3 for the standardized residuals, the maximum value of 3.275 shown in

Table L75 indicated that no outlier values were present.

The three regression analysis assumptions were then examined.

Assumption 1: The data needed to be examined for outliers. **Figure M19** presents the related histogram that depicts the results. Because the standardized residuals minimum value of -2.675 and a maximum of 3.275 fell between the cut-off range of -3.3 and 3.3, all values were accepted and no outliers were detected, accomplishing assumption 1.

Assumption 2: The results of the Pearson's correlation test between the relevant variables i.e., GCoO, GMV, and GIP are displayed in **Table L76**. Accordingly, all the variables were strongly to moderately, positively correlated, and the correlations were all significant with a p-value of 0.000. A linear relationship between the two main effects (GCoO and GMV) and the dependent variable (GIP) was evident, and the interaction between GCoO and GIP was confirmed (0.586), as was the interaction between GMV and GIP (0.513).

For the moderation regression analysis, two models are presented in **Table L77**, of which model 1 examines the two main effects, while model 2 includes the interaction variable. To determine the moderating effect, the regression results presented in **Table L78** were evaluated.

Model 1 indicates that the two main effects of *green competitor orientation* and *green management values* are significant in predicting *green internal practices*. A significant regression equation was evident ($F = 179.177, p < 0.000$) with an R^2 of 0.490 and a R^2 change of 0.490 from zero. The correlation coefficients (r) of 0.586 and 0.513 indicate that GCoO and GMV respectively are strongly correlated to GIP. Therefore, a linear

relationship existed between the independent variables and the dependent variable complying with the second assumption. The adjusted R^2 indicates that GCoO and GMV explain 48.7% of the variability of GIP. The regression coefficient is significant, with a p -value of 0.000. The standardized coefficients beta in the coefficients section indicated that the value of GCoO, which is 0.491, is the larger predictor of GIP, and is significant with a p -value of 0.000.

Model 2 indicates that the two main effects of *green competitor orientation*, *green management values* and the inclusion of the interaction item are not significant in predicting *green internal practices*. A regression equation was found ($F = 119.149$, $p < 0.001$) with no increase in the R^2 . This means that including the interaction factor does not affect GCoO and GMV in predicting GIP. The regression coefficient was not significant (p -value = 0.874). The standardized coefficients beta in the coefficients section indicated that the value of GCoO, which is 0.490, is the larger predictor of GIP, and is significant with a p -value of 0.000. Therefore, GCoO and GMV do not moderate the prediction of GIP.

Assumption 3: The third assumption entailed checking for multicollinearity. For model 1, depicted in the results in **Table L76**, the value of the two effects, 0.242, suggests that multicollinearity is unlikely as the result is less than 0.7 (Hair et al., 2020; Pallant, 2020). Furthermore, from the results in **Table L78** in terms of the coefficients, the collinearity statistics of the Tolerance and Variance Inflation Factor (VIF) were reviewed. The tolerance value for each of the independent variables is 0.941 which is more than 0.10 and therefore, it does not violate the multicollinearity assumption. This is further supported by the VIF value, which is 1.062, and well below the cut-off of 10. Given that Pearson's correlation coefficient between these two independent variables was only 0.250, this result is not surprising.

For model 2, from the results in **Table L78**, the Tolerance and VIF values were within the limits, as the values for each of the independent variables and interaction factor were 0.933 (GCoO), 0.911 (GMV), and 0.949 (interaction factor), which exceeded 0.10. This is further supported by the VIF values, which were 1.072 (GCoO), 1.097 (GMV), and 1.054 (interaction factor) respectively, all well below the cut-off of 10.

The multicollinearity diagnostics table is presented as **Table L79**. The condition index for the smallest Eigenvalue was evaluated in terms of the norm – being lower than 15 – while values above 15 indicate multicollinearity issues, which are more serious when values exceed 30 (Field, 2018). The condition index values shown in **Table L80**,

namely 1.280 for model 1, and 1.417 for model 2, were way below the cut-off value of 15, hence the assumption of multicollinearity was not violated.

Assumptions Summary: The results for all three assumptions indicated that there were no outliers; that there were significant strong, linear positive relationships between the independent variables; and that there were no multicollinearity issues in the model. Furthermore, no moderating effect was found between green competitor orientation and green management values on green internal practices based on no change in R^2 and because the interactions were not statistically significant. Therefore, **hypothesis H4b is not supported**, concluding that:

*The relationship between **green competitor orientation** and the implementation of **green internal practices** is **NOT MODERATED** by **green management values** in F&B SMMEs in South Africa.*

6.6.2.3 THE MODERATING EFFECT OF GMV ON THE RELATIONSHIP BETWEEN GIfC AND GIP (H4c)

The third dimension of green market orientation is green inter-functional coordination proposing *H4c: The relationship between **green inter-functional coordination** and the implementation of **green internal practices** is moderated by **green management values** in F&B SMMEs in South Africa.*

This study hypothesised that GMV moderates the relationship between GIfC and GIP. Accordingly, the standardized residuals were required to be between -3.3 and 3.3. The calculated value of 4.366 indicated that outlier values were present (see **Table L80**). The regression analysis assumptions were then examined.

Assumption 1: The data had to be examined for outliers. The histogram shown in **Figure M20** displays one outlier value, which was removed before proceeding with regression analysis. The histogram in **Figure M21** confirms that no more outliers were present, which complied with the first assumption.

Assumption 2: Pearson's correlation results were reviewed considering all the variables i.e., GIfC, GMV, and GIP. The results are displayed in **Table L81**. Thereby, all the variables were moderately to strongly positively correlated, and were all statistically significant with a p-value of 0.000. A linear relationship was evident between the two main effects (GIfC and GMV) and the dependent variable (GIP). The

interaction measure between GIfC and GIP was 0.754 and was 0.518 between GMV and GIP.

For the moderation regression analysis, model 1 distinguishes the two main effects, while model 2 includes the interaction variable. Refer to **Table L82**. Subsequently, the regression analysis presented in **Table L83** was used to determine the moderation effect.

Model 1 indicated that the two main effects of *green inter-functional coordination* and *green management values* are significant in predicting *green internal practices*. A significant regression equation was found ($F = 312.744, p < 0.000$) with an R^2 of 0.627 and a R^2 change of 0.627 from zero. The correlation coefficients (r) of 0.754 and 0.518 indicate that GIfC and GMV respectively are strongly correlated to GIP. Thus, there is a linear relationship between the independent variables and the dependent variable complying with the second assumption. The adjusted R^2 indicates that GIfC and GMV explain 62.5% of the variability of GIP. The regression coefficient is significant, with a p -value of 0.000. The standardized coefficients beta in the coefficients section indicated that the value of GIfC, which is 0.754, is the larger predictor of GIP, and is significant with a p -value of 0.000.

Model 2 indicated that the two main effects of *green inter-functional coordination*, *green management values* and the inclusion of the interaction item are not significant in predicting *green internal practices*. The regression equation ($F = 207.936, p < 0.001$) indicated no increase in the R^2 . Therefore, including the interaction factor did not affect GIfC and GMV in predicting GIP. The regression coefficient was not significant, with a p -value of 0.987. The standardized coefficients beta in the coefficients section indicated that the value of GIfC, which is 0.754, is the larger predictor of GIP, and is significant with a p -value of 0.000. There is, therefore, no moderation effect of GIfC and GMV on predicting GIP.

Assumption 3: The third assumption concerned testing for multicollinearity. Model 1, shown in **Table L81**, indicated a correlation value of 0.392 and is less than 0.7 (Hair et al., 2020; Pallant, 2020), it excluded the issue of multicollinearity. Furthermore, the results in **Table L83** present the collinearity statistics of the Tolerance and Variance Inflation Factor (VIF), which are 0.846 (exceeding 0.10) which did not violate the multicollinearity assumption. This is supported by the VIF value, which is 1.182, and well below the cut-off of 10. Given that Pearson's correlation coefficient between these two independent variables was only 0.392, this result is not surprising.

Model 2 results depicted in **Table L83**, present the Tolerance and VIF values that were within the limits: being 0.832 (GIfC), 0.805 (GMV), and 0.902 (interaction factor), which are above 0.10. This is further supported by the VIF values, which were 1.202 (GIfC), 1.242 (GMV), and 1.108 (interaction factor), and well below the cut-off of 10. **Table L84**, the multicollinearity diagnostic table, presents the results for the independent variables and interaction factor on the dependent variable.

The condition index for the smallest Eigenvalue was then evaluated per the norm of not exceeding 15 (Field, 2018). The condition index values presented in **Table L84** namely 1.514 for model 1 and 1.695 for model 2 are way below the cut-off value of 15. Therefore, they did not violate the third assumption of multicollinearity.

Assumptions Summary: The three assumptions were tested, indicating one outlier, that was removed. There were significant strong, linear positive relationships between the independent variables; and no multicollinearity issues were detected in the model. The envisaged moderating effect of green management values in the relationship between green inter-functional coordination and green internal practices could not be confirmed as there was no change in R^2 . The p-value exceeded 0.05. Therefore, **hypothesis H4c is not supported, concluding that:**

*The relationship between **green inter-functional coordination** and the implementation of **green internal practices** is **NOT MODERATED** by **green management values** in F&B SMMEs in South Africa.*

6.6.2.4 SUMMARY OF MODERATION RESULTS

This study hypothesised that for F&B SMMEs in South Africa, GMV moderates the relationships between GCuO, GCoO, GIfC, and GIP. The regression analysis showed that *green management values* moderate the relationship between *green customer orientation* and *green internal practices* thereby supporting hypothesis H4a. However, regression analysis also showed that *green management values* did not moderate the relationship between *green competitor orientation* and *green internal practices*, nor the relationship between *green inter-functional coordination* and *green internal practices*, thereby neither supporting hypothesis H4b or H4c. The summary of the results is visually displayed in **Figure M22**.

R-A theory states that value is maximized for the firm when resource deployment provides a distinct competency and relative sustained advantage (S. D. Hunt & Morgan, 2005, 1995). It also allows for the incorporation of both internal specific resources

and environmental categories that would influence resource conversion into competitive position and ultimately financial performance (S. D. Hunt & Morgan, 2005, 1995). Green management values according to R-A theory is a human motivation (P3) and can be used as a comparative advantage leading to superior financial performance. The results show that green management values, being a human motivation (P3), incorporates GCuO, which is an informational resource (P6) moderating the relationship between GCuO and GP only. This combination of resources is rare among competitors and leads to comparative advantage (P7)

6.6.3 ANALYSIS OF MEDIATING EFFECTS

This section determined the possible mediating effect of GIP on the relationships between GCuO, GCoO, GIfC and GP. The results are reported per hypothesis, and every overarching hypothesis was split into the related dimensions identified through factor analysis. The study proposed that:

H5: The relationship between green market orientation and green performance is mediated by the implementation of green internal practices of F&B SMMEs in South Africa

*H5a: The relationship between **green customer orientation** and **green performance** is mediated by the implementation of **green internal practices** of F&B SMMEs in South Africa (Section 6.6.3.1)*

*H5b: The relationship between **green competitor orientation** and **green performance** is mediated by the implementation of **green internal practices** of F&B SMMEs in South Africa (Section 6.6.3.2)*

*H5c: The relationship between **green inter-functional coordination** and **green performance** is mediated by the implementation of **green internal practices** of F&B SMMEs in South Africa (Section 6.6.3.3)*

While moderation concerns the combined effect of two variables on an outcome, mediation alludes to a situation when the relationship between a predictor variable and an outcome variable can be explained by their relationship to a third variable, the mediator (Frazier et al., 2004; Hayes, 2013; Preacher & Hayes, 2004). If the strength of the relationship between the predictor variable and the outcome variable is reduced by including the mediator, then mediation has occurred per Hayes (2013). Statistically, if zero falls external to the confidence interval, then the indirect effect is inferred to be non-zero (Hayes, 2013).

In evaluating and reporting the results from the regression analysis, **Path c** in the model (**Figure 6.2**) is discussed first, because that indicates whether a direct relationship exists between the independent predictor variable and the dependent outcome variable (Frazier et al., 2004). Next **Path a** was interpreted, where the mediator was regressed on the predictor independent variable to create Path a (Frazier et al., 2004). Followed by **Path b and c'** being evaluated, where the outcome dependent variable was regressed on the predictor independent variable as well as the mediator (Frazier et al., 2004). Lastly, the total, direct, and indirect effects are examined for the model. This is displayed in **Figure 6.2** below and **Appendix M** as **Figure M23**.

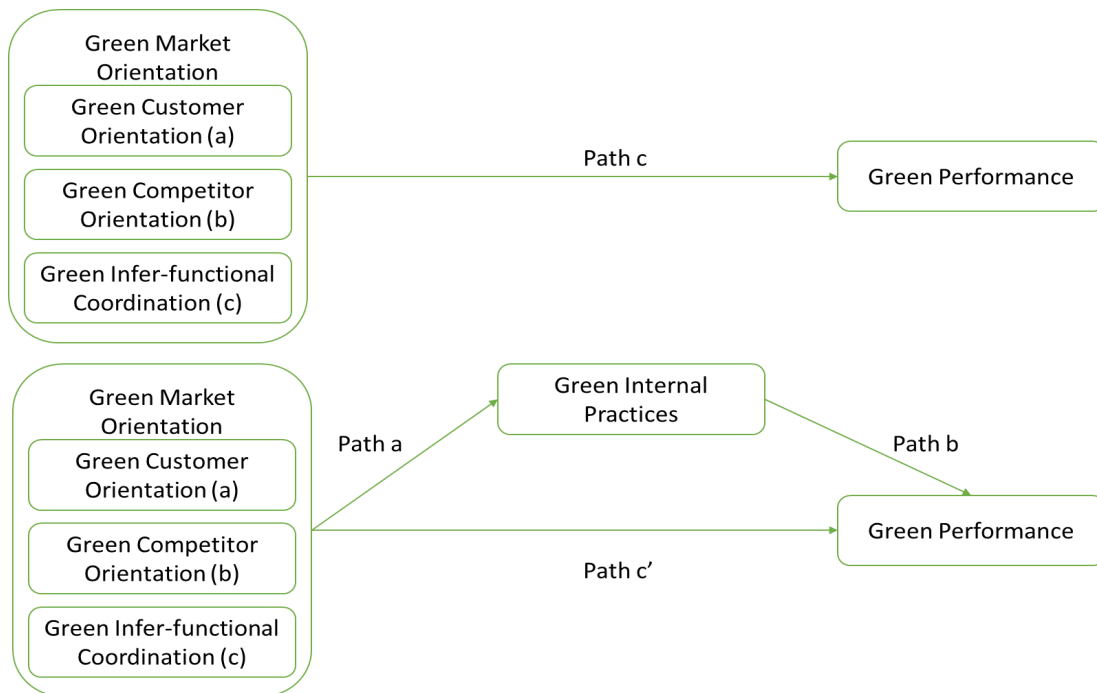


Figure 6.2 - Mediation analysis – GMO GP relationship.

Note. The mediation relationships between the independent variable and the dependent variable. Own work.

For mediation to occur, paths a, b, and c needed to be significant. To test for full or partial mediation, path c' needed to be tested, which added the mediator. The conditions were that, if this path becomes insignificant after adding the mediator, then the relationship is not significant and full mediation has occurred. If this path becomes significant after adding the mediator, then the relationship is significant and partial mediation occurs. A discussion of the results of mediation follows.

6.6.3.1 THE MEDIATING EFFECT OF GIP ON THE RELATIONSHIP BETWEEN GCuO AND GP (H5A)

This study hypothesised that: *The relationship between **green customer orientation** and **green performance** is mediated by the implementation of **green internal practices** of F&B SMMEs in South Africa.*

From **Figure 6.2**, Path a reflects the direct relationship between GCuO and GIP; path b reflects the direct relationship between GIP and GP; path C reflects the direct relationship between GCuO and GP; and path c' reflects the indirect relationship of GCuO on GP through GIP as a mediator. The results are discussed in the following section.

Path c – Outcome variable GP: Path c reflects the direct relationship between green customer orientation and green performance. The results of Pearson's Correlation Coefficient for the linear relationship between GCuO and GP are shown in

Table L56. The strength of the association between GCuO and GP is 0.603, indicating a positive, moderate association. The regression results are displayed in **Table L85**. Accordingly, GP, as an outcome variable is significant ($p = 0.0000$), indicating that 36.3% of the variance in performance is explained by GCuO. The direct effect from GCuO to GP was positive and statistically significant ($\beta = 0.4784$, $t = 14.6103$, $p = 0.000$). The strength of the association (coefficient = 0.4784) is moderate.

Path a – Outcome variable GIP: Path a reflects the direct relationship between green customer orientation and green internal practices. The results are displayed in **Table L86**. Per the results, GIP, as an outcome variable, is significant ($p = 0.0000$), and GCuO contributes 38.7% to the change. The direct effect from GCuO to GIP was positive and statistically significant ($\beta = 0.6023$, $t = 15.3495$, $p = 0.000$). The strength of the association (coefficient = 0.6023) is moderate.

Path b and c' – Outcome variable GP: Path b reflects the direct relationship between green internal practices and green performance. The results are displayed in **Table L87**. The results revealed that GP, as an outcome variable, is significant ($p = 0.0000$). The direct effect from GCuO to GP with the inclusion of the mediator (GIP) (Path c') is positive and significant ($\beta = 0.2263$, $t = 6.2502$, $p = 0.000$) indicating that SMMEs scoring higher on GCuO are more likely to implement GIP than those scoring lower. The direct effect from GIP to GP (Path b) is positive and significant ($\beta = 0.4185$, $t =$

12.2462, $p = 0.0000$), indicating that SMMEs scoring higher on GIP are more likely to achieve greater GP than those scoring lower.

Total, direct, and indirect effects of X on Y: The total, direct, and indirect relationship between green customer orientation, green internal practices and green performance was assessed. The results are displayed in **Table L88**. For the total effects of GCuO on GP, the relationship is significant ($\beta = 0.4784$, $t = 14.610$, $p = 0.0000$). The direct effect is also significant ($\beta = 0.2263$, $t = 6.250$, $p = 0.0000$). For the indirect effect, the results indicate that the impact is significant at 95% ($\beta = 0.252$, $CI = 0.1937, 0.3137$). **Figure M24** displays the strength of the direct and indirect effect of GCuO on GP.

Calculating the mediating effect: Various methods can be used to test the significance of the mediated effect (Frazier et al., 2004). To determine the percentage of mediation exerted by GIP, the mediation effect was calculated per Frazier et al., (2004). Refer to **Table L89** for the calculation of GIP as a mediator in the relationship between GCuO and GP. The score of **9.023**, exceeds 1.96, hence the mediation effect is significant. The amount of mediation by GIP on the relationship between GCuO and GP, is **52.69%**, i.e., the total effect of green customer orientation on green performance is mediated by green internal practices. The confidence estimates of the indirect effect range from 0.197 to 0.307 for the lower and upper limits respectively, excluding zero, affirming mediation.

Summary: Results indicate that GIP mediates the relationship between GCuO and GP:

- The indirect effect of GCuO on GP is significant as the *p-value* = 0.0000 and because zero did not fall between the LLCI and ULCI.
- The total effect of GCuO on GP was significant as zero did not fall between the LLCI and ULCI.
- With the inclusion of the mediator (GIP), the effect of GCuO on GP remained significant.
- The direct relationship between GCuO and GP is small (i.e., 0.2263) but a definite relationship existed, and the mediated effect with GIP was 0.252.
- GCuO exerted a significant impact on GP, and GIP exerted a significant impact on GP, hence **partial mediation** occurred.
- As all the results were positive, the mediating relationship is **complementary**.
- In conclusion, **H5a was supported**.

*The relationship between **green customer orientation** and **green performance** is mediated by the implementation of **green internal practices** of F&B SMMEs in South Africa.*

6.6.3.2 THE MEDIATING EFFECT OF GIP ON THE RELATIONSHIP BETWEEN GCoO AND GP (H5B)

This study hypothesised that GIP mediates the relationship between GCoO and GP proposing *H5b: The relationship between **green competitor orientation** and **green performance** is mediated by the implementation of **green internal practices** of F&B SMMEs in South Africa.*

From **Figure 6.2**, Path a reflects the direct relationship between GCoO and GIP; path b reflects the direct relationship between GIP and GP; path C reflects the direct relationship between GCoO and GP; and path c' reflects the indirect relationship of GCoO on GP through GIP as a mediator. The results for each are displayed and discussed next.

Path c – Outcome variable GP: Path c shows the direct relationship between green competitor orientation and green performance. The results of Pearson's Correlation Coefficient for the linear relationship between GCoO and GP are shown in **Table L58**. The strength of the association between GCoO and GP is 0.607 indicating a positive, moderate association. The regression results are displayed in **Table L90**. The results revealed that GP, as an outcome variable, is statistically significant ($p = 0.0000$). It indicates that 36.9% of the variance in performance is explained by GCoO. The direct effect from GCoO to GP was positive and statistically significant ($\beta = 0.4206$, $t = 14.7786$, $p = 0.000$). The strength of the association (coefficient = 0.4206) is moderate.

Path a – Outcome variable GIP: Path a reflects the direct relationship between green customer orientation and green internal practices. The results are displayed in **Table L91**. Accordingly, GIP, as an outcome variable, is statistically significant ($p = 0.0000$), also indicating that GCoO contributes 34.4% to the change. The direct effect from GCoO to GIP was positive and statistically significant ($\beta = 0.4958$, $t = 13.9982$, $p = 0.000$). The strength of the association (coefficient = 0.4958) is moderate.

Path b and c' – Outcome variable GP: Path b reflects the direct relationship between green internal practices and green performance. Path c' is the inclusion of the mediator variable. The results are displayed in **Table L92**. Hereby, GP, as an outcome variable, is significant ($p = 0.0000$). The direct effect from GCoO to GP with

the inclusion of the mediator (GIP) (Path c') is positive and significant ($\beta = 0.2150$, $t = 7.1355$, $p = 0.000$) indicating that SMMEs scoring higher on GCoO are more likely to implement GIP than those scoring lower. The direct effect from GIP to GP (Path b) is positive and significant ($\beta = 0.4146$, $t = 11.6344$, $p = 0.0000$), indicating that SMMEs scoring higher on GIP are more likely to report better GP than those scoring lower.

Total, direct, and indirect effects of X on Y: The total, direct, and indirect relationship between green competitor orientation, green internal practices and green performance needed were assessed. The results are displayed in **Table L93**. For the total effects of GCoO on GP, the relationship is significant ($\beta = 0.4206$, $t = 14.779$, $p = 0.0000$). The direct effect was also significant ($\beta = 0.215$, $t = 7.136$, $p = 0.0000$). For the indirect effect, the results indicated that the impact was significant at 95% ($\beta = 0.297$, CI = 0.2297, 0.3659) with zero not falling between the upper and lower limits. **Figure M25** displays the strength of the direct and indirect effect of GCoO on GP.

Calculating the mediating effect: To determine the percentage of mediation GIP, the mediation effect was calculated using the method used by Frazier et al., (2004). Refer to **Table L94** for the calculation of GIP as a mediator in the relationship between GCoO and GP.

The z-score of the mediation effect is **8.941**, which is higher than 1.96 and thus mediation is significant.

The amount of mediation that GIP exerted on the relationship between GCoO and GP is **48.87%** i.e., the total effect of green customer orientation on green performance is mediated by green internal practices.

The confidence around the estimate of the indirect effect ranged from 0.165 to 0.251 for the lower and upper limits respectively. The range excluded zero, and therefore, mediation had occurred.

Summary: The results confirmed that GIP mediates the relationship between GCoO and GP:

- The indirect effect of GCoO on GP was significant ($p = 0.0000$), and because zero did not fall between the LLCI and ULCI.
- The total effect of GCoO on GP was significant as zero did not fall between the LLCI and ULCI.
- With the inclusion of the mediator (GIP), the effect of GCoO on GP was still significant.

- The direct relationship between GCoO and GP is small (i.e., 0.2150) but there is a definite relationship, and the mediated effect with GIP is 0.297.
- GCoO exerted a significant impact on GP, and GIP exerted a significant impact on GP, **partial mediation** occurred.
- As all the results were positive, and the mediating relationship was **complementary**, therefore, **H5b was supported**:

*The relationship between **green competitor orientation** and **green performance** is mediated by the implementation of **green internal practices** of F&B SMMEs in South Africa.*

6.6.3.3 THE MEDIATING EFFECT OF GIP ON THE RELATIONSHIP BETWEEN GIfC AND GP (H5c)

This study hypothesised that GIP mediates the relationship between GIfC and GP proposing *H5c: The relationship between **green inter-functional coordination** and **green performance** is mediated by the implementation of **green internal practices** of F&B SMMEs in South Africa.*

From **Figure 6.2**, Path a reflects the direct relationship between GIfC and GIP; path b reflects the direct relationship between GIP and GP; path C reflects the direct relationship between GIfC and GP; and path C' reflects the indirect relationship of GIfC on GP through GIP as a mediator. The results for each are displayed and discussed next.

Path c – Outcome variable GP: Path c shows the direct relationship between green inter-functional coordination and green performance. The Pearson's Correlation Coefficient for the linear relationship between GIfC and GP is shown in **Table L60**. The strength of the association between GIfC and GP is 0.605 indicating a positive, moderate association. The regression results are displayed in **Table L95**. Hereby, GP, as an outcome variable, is significant ($p = 0.0000$). It indicates that 36.6% of the variance in performance is explained by GIfC. The direct effect from GIfC to GP was positive and statistically significant ($\beta = 0.3929$, $t = 14.6970$, $p = 0.000$). The strength of the association (coefficient = 0.3929) is moderate.

Path a – Outcome variable GIP: Path a reflects the direct relationship between green customer orientation and green internal practices. The results are displayed in **Table L96**. Hereby, GIP, as an outcome variable, is significant ($p = 0.0000$). It also indicates that GIfC contributes 55.3% to the change. The direct effect from GIfC to GIP was

positive and statistically significant ($\beta = 0.5892$, $t = 21.4931$, $p = 0.000$). The strength of the association (coefficient = 0.5892) is moderate.

Path b and c' – Outcome variable GP: Path b reflects the direct relationship between green internal practices and green performance. Path c' is the inclusion of the mediator variable. The results are displayed in **Table L97**. Accordingly, GP, as an outcome variable, is significant ($p = 0.0000$). The direct effect from GIfC to GP with the inclusion of the mediator (GIP) (Path c') is positive and significant ($\beta = 0.1357$, $t = 3.7925$, $p = 0.000$) indicating that SMMEs scoring higher on GIfC are more likely to implement GIP than those scoring lower. The direct effect from GIP to GP (Path b) is positive and significant ($\beta = 0.4364$, $t = 9.6666$, $p = 0.0000$) with zero not falling between the upper and lower limits, indicating that SMMEs scoring higher on GIP are more likely to report increased GP than those scoring lower.

Total, direct, and indirect effects of X on Y: The total, direct, and indirect relationship between *green competitor orientation*, *green internal practices* and *green performance* were assessed. The results are displayed in **Table L98**.

For the total effects of GIfC on GP, the relationship is significant ($\beta = 0.3929$, $t = 14.697$, $p = 0.0000$) with zero not falling between the upper and lower limits. The direct effect was also significant ($\beta = 0.1357$, $t = 3.793$, $p = 0.0002$). For the indirect effect, the results indicated that the impact was significant at 95% ($\beta = 0.2571$, CI = 0.1902, 0.3315). **Figure M26** displays the strength of the direct and indirect effect of GIfC on GP.

Calculating the mediating effect: To determine what percentage of mediation GIP exerts, the mediation effect was calculated using the method used by Frazier et al., (2004). Refer to **Table L99** for the calculation of GIP as a mediator in the relationship between GIfC and GP. The z-score of the mediation effect is **8.816**, which is higher than 1.96 and thus mediation is significant. The amount of mediation that GIP exerts on the relationship between GIfC and GP is **65.44%** i.e., the total effect of green customer orientation on green performance is mediated by green internal practices.

The confidence around the estimate of the indirect effect ranges from 0.199 to 0.314 for the lower and upper limits respectively, excluding zero, affirming mediation.

Summary: The results confirm that GIP mediates the relationship between GIfC and GP:

- The indirect effect of GfC on GP is significant as $p = 0.0000$ and because zero does not fall between the LLCI and ULCI.
- The total effect of GfC on GP was significant as zero does not fall between the LLCI and ULCI.
- With the inclusion of the mediator (GIP), the effect of GfC on GP was still significant.
- The direct relationship between GfC and GP is small (i.e., 0.1357) but there is a definite relationship, and the mediated effect with GIP is 0.251.
- GfC exerts a significant impact on GP, and GIP exerts a significant impact on GP, therefore, **partial mediation** is obtained.
- As all the results were positive, the mediating relationship is **complementary**, therefore, **H5c was supported**:

*The relationship between **green inter-functional coordination** and **green performance** is mediated by the implementation of **green internal practices** of F&B SMMEs in South Africa.*

6.6.3.4 SUMMARY OF MEDIATION RESULTS

This study hypothesised that, among F&B SMMEs in South Africa, GIP mediates the relationships between GCuO, GCoO, GfC, and GP. The regression analysis using the PROCESS macro plugin showed that the implementation of *green internal practices* mediates the relationship between *green customer orientation*, *green competitor orientation*, *green inter-functional coordination* and *green performance* thereby supporting hypotheses H5a, b, and c. The summary of the results is visually displayed in **Figure M27**.

R-A theory states that value is maximized for the firm when resource deployment provides a distinct competency and relative sustained advantage (S. D. Hunt & Morgan, 1995). It also allows for the incorporation of both internal specific resources and environmental categories that would influence resource conversion into competitive position and ultimately financial performance (S. D. Hunt, 2018; S. D. Hunt & Morgan, 1995). Green internal practices according to R-A theory is an organizational resource (P6) and can be used as a comparative advantage leading to superior financial performance. The results show that green internal practices, being an organizational resource (P6), incorporates GMO and its components of GCuO, GCoO, and GfC, which are all informational resources (P6) mediating the relationship between GMO and its components of GCuO, GCoO, and GfC and GP. This combination of resources is rare among competitors and leads to comparative advantage (P7)

6.7 CHAPTER SUMMARY

The results displayed in this chapter are based on the survey data and are summarized as follows:

- Descriptive information about the F&B SMMEs in South Africa was obtained.
- A profile of the respondents who completed the survey questionnaires for the F&B SMMEs was sketched.
- Objective 1: The results for the direct relationships provided an analysis of the behaviour of the independent and dependent variables. Regression analyses were used to test the relevant hypotheses that were all supported, showing that GCuO, GCoO, GIfC, GIP, and GP were positively related.
- Objective 2: The results for the moderating effect of GMV provided an analysis of the behaviour of the moderating variable. Regression analyses were used to test the relevant hypotheses. It was affirmed that the relationship between GCuO and GIP is moderated by GMV, although GMV did not moderate the relationships between GCoO and GIP, and GIfC and GIP.
- Objective 3: The results for the mediating effect of GIP provided an analysis of the behaviour of the mediating variable. Regression analyses served to test the relevant hypotheses. All the hypotheses were supported, showing that the relationship between GCuO, GCoO, GIfC, and GP is mediated by GIP.
- **Table 6.11** and **Table L100** in **Appendix L** summarize the results of the hypotheses.

Table 6.11 – Summary of hypotheses

No.	Research Question	Hypothesis	Finding section	Outcome
H1a	What is the relationship between green customer orientation and green performance in F&B SMMEs in South Africa?	Green customer orientation is directly and positively related to the green performance of F&B SMMEs in South Africa	6.6.1.1	Supported
H1b	What is the relationship between green competitor orientation and green performance in F&B SMMEs in South Africa?	Green competitor orientation is positively related to the green performance of SMMEs in South Africa	6.6.1.2	Supported
H1c	What is the relationship between green inter-functional coordination and green performance in F&B SMMEs in South Africa?	Green inter-functional coordination is positively related to the green performance of SMMEs in South Africa	6.6.1.3	Supported
H2a	What is the relationship between F&B SMMEs' green customer orientation and their implementation of green internal practices?	Green customer orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa	6.6.1.4	Supported

No.	Research Question	Hypothesis	Finding section	Outcome
H2b	What is the relationship between F&B SMMEs' green competitor orientation and their implementation of green internal practices?	Green competitor orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa	6.6.1.5	Supported
H2c	What is the relationship between F&B SMMEs' green inter-functional coordination and their implementation of green internal practices?	Green inter-functional coordination is positively related to the implementation of green internal practices by F&B SMMEs in South Africa	6.6.1.6	Supported
H3	What is the relationship between the implementation of green internal practices and green performance in F&B SMMEs in South Africa?	Green internal practices is positively related to the green performance of F&B SMMEs in South Africa	6.6.1.7	Supported
H4a	What is the moderating influence of green management values in the relationship between green customer orientation and the implementation of green practices in F&B SMMEs in South Africa?	The relationship between green customer orientation and the implementation of green internal practices is moderated by the green management values of SMMEs in South Africa	6.6.2.1	Supported
H4b	What is the moderating influence of green management values in the relationship between green competitor orientation and the implementation of green practices in F&B SMMEs in South Africa?	The relationship between green competitor orientation and the implementation of green internal practices is moderated by the green management values of F&B SMMEs in South Africa	6.6.2.2	Not supported
H4c	What is the moderating influence of green management values in the relationship between green inter-functional coordination and the implementation of green practices in F&B SMMEs in South Africa?	The relationship between green inter-functional coordination and the implementation of green internal practices is moderated by the green management values of F&B SMMEs in South Africa	6.6.2.3	Not supported
H5a	What is the mediating influence of the implementation of green internal practices in the relationship between green customer orientation and green performance in F&B SMMEs in South Africa?	The relationship between green customer orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa	6.6.3.1	Supported
H5b	What is the mediating influence of the implementation of green internal practices in the relationship between green competitor orientation and green performance in F&B SMMEs in South Africa?	The relationship between green competitor orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa	6.6.3.2	Supported
H5c	What is the mediating influence of the implementation of green internal practices in the relationship between green inter-functional coordination and green performance in F&B SMMEs in South Africa?	The relationship between green inter-functional coordination and green performance is mediated by the green internal practices of F&B SMMEs in South Africa	6.6.3.3	Supported

Note. Summary of the outcomes of the hypotheses. Own work.

The results presented in this chapter are further discussed in Chapter 7 in terms of existing literature, comparing the results with previous studies.

CHAPTER 7: DISCUSSION OF RESULTS

“A great dinner must include not only yummy food but good conversation”.

- (Laurie David Quotes, n.d.)

7.1 CHAPTER INTRODUCTION

American environmental activist, producer and writer Laurie Ellen David highlights the importance of good conversation to conclude a dinner. This chapter aims to do by discussing the research findings and indicating what it means for F&B SMMEs in South Africa and for the extension of the literature.

The previous chapter, Chapter 6 – Research Results, displayed the results after data analysis, giving an overview of the business characteristics of the SMMEs and the profile of the respondents who completed the study. The instrument validity was confirmed, indicating the acceptability of all the items tested. In addition, the instrument was reliable for all the items tested. The descriptive statistics showed the mean and standard deviations of the variables. Multiple regression analysis was conducted to test the hypotheses, and the results' showed that out of thirteen hypotheses, two were not supported. The results outcomes are displayed in **Table 7.1**.

Table 7.1 - Summary of the Hypotheses results

Hypothesis No.	Path	Beta (β) Coefficient	T statistic	p-value	Result outcome
H1a	GCuO→GP	0.478	14.610	0.000	Supported
H1b	GCoO→GP	0.421	14.779	0.000	Supported
H1c	GIfC→GP	0.393	14.697	0.000	Supported
H2a	GCuO→GIP	0.602	15.350	0.000	Supported
H2b	GCoO→GIP	0.496	13.998	0.000	Supported
H2c	GIfC→GIP	0.589	21.493	0.000	Supported
H3	GIP→GP	0.564	18.342	0.000	Supported
H4a	GMV ↓ GCuO→GIP	0.071	2.666	0.008	Supported
H4b	GMV ↓ GCoO→GIP	-0.004	-0.159	0.949	Not Supported
H4c	GMV ↓ GIfC→GIP	0.000	0.016	0.987	Not Supported
H5a	GCuO→GIP→GP	0.478	14.610	0.000	Supported
H5b	GCoO→GIP→GP	0.421	14.779	0.000	Supported
H5c	GIfC→GIP→GP	0.393	14.697	0.000	Supported

Note. The summary of the results of the hypotheses. Own work.

This chapter discusses the key results set out in Chapter 6 in terms of the literature presented in Chapter 3. The discussion commences by reviewing the characteristics of the data, followed by the validity and reliability of the measurement instrument scales to see how these quality control measures were inferred. This is followed by a discussion of the results of the hypotheses that were proposed for this study. The structure of the chapter is displayed in **Figure 7.1**. The chapter concludes with a summary diagram of the conceptual model.

Main Headings	Sub Headings
7.1 Chapter introduction	
7.2 Characteristics of Data	7.2.1 Business Characteristics
	7.2.2 Profile of the Respondents
	7.2.3 Descriptive Statistics of Items
	7.2.4 Distribution and Normality of the Data
7.3 Instrument Validity Analysis	7.3.1 Independent Variable Validity Results
	7.3.2 Moderator Variable Validity Results
	7.3.3 Dependent Variable Validity Results
7.4 Instrument Reliability Analysis	7.4.1 Independent Variable Reliability Results
	7.4.2 Moderator Variable Reliability Results
	7.4.3 Dependent Variable Reliability Results
7.5 Descriptive Analysis of the Scales	
7.6 Multiple Regression Analysis	7.6.1 Analysis of Direct Relationships
	7.6.2 Analysis of Moderation Effects
	7.6.3 Analysis of Mediation Effects
7.7 The Revised Conceptual Model	
7.8 Chapter Summary	

Figure 7.1 – Structure of chapter 7

Note: An overview of the structure and layout of the chapter. Own work.

7.2 CHARACTERISTICS OF DATA

The general characteristics of the data are important to know and for an understanding to be gained. The characteristics will now be discussed in terms of business and respondents, as well as the data itself.

7.2.1 BUSINESS CHARACTERISTICS

Reviewing the business characteristics as displayed in **Table L 1**, a large proportion of SMMEs were from the service industry (86.7%). As a paucity of studies existed within this industry, this study provided valuable insight concerning the business strategy, green management values, green internal practices, and green performance of F&B

SMMEs in South Africa. Furthermore, the study revealed that 44.7% of these SMMEs employed between 10 and 49 employees, which classified them as a small business (Fleur et al., 2014; Revised Schedule 1 of the National Definition of Small Enterprise in South Africa, 2019; Smit, 2012). Identified as showing more intricate business practices (Le Fleur et al., 2014) and being in operation for between 10 and 20 years (47.1%), small business from the F&B industry in South Africa were concentrated in Gauteng (31.9%), KwaZulu-Natal (25%), and Western Cape (13.6%) as expected, which indicated the three provinces that are economic centres and have larger green initiatives being employed (PAGE & DEA, 2017).

Being evaluated as a predominantly service-orientated industry, F&B SMMEs in South Africa largely catered to consumers and households (77.1%) and would thus be influenced by the shopping behaviours of their clients. With South African consumers moving towards a more sustainable and healthier environment and diet (MasterCard, 2021), F&B SMMEs must consider environmental and sustainability issues. Moreover, businesses are encouraged to behave in a more sustainable and environmentally friendly manner as customers take more and more interest in the origin of their food and the sustainability practices of the establishments, they patronise (Eat Out, 2017). Even though the COVID-19 pandemic has had a significant impact on small businesses, with many in the F&B industry going out of business (Govinden et al., 2020), those who are still operating must find innovative ways to stay in business and consider changing strategies to be greener for them to achieve greater performance.

7.2.2 PROFILE OF RESPONDENTS

Evaluating at the results from the surveys as referred to in **Table L 2**, males accounted for 50.3% of the respondents. With affirmative action and the drive by the South African government to support small businesses and empower women (The Presidency, 2019, 2020), the percentage of female-owned businesses was not that far behind and accounted for 48.7% of the respondents. Most of the respondents were in their 30s (31.6%) and the length of service indicated a work period of between 1 and 4 years (41.4%). The reason for this could possibly be linked to the COVID-19 pandemic, as well as urbanisation.

7.2.3 DESCRIPTIVE STATISTICS

Section 6.2.3 provides the results for the descriptive statistics for the items, and reviewed measures of central tendency and measures of dispersion.

7.2.3.1 BUSINESS STRATEGY OF YOUR BUSINESS

The section describes the results for each of the constructs for green market orientation (green customer orientation, green competitor orientation, and green inter-functional coordination) and the corresponding items. The results for these constructs are shown in **Table L3** and **Table L4**.

Green Customer Orientation (GCuO): was represented by questions B8.1 – B8.5. The range of mean scores for GCuO indicated that the respondents were generally positive concerning the items included in this construct (mean = 4.02 – 3.66; SD = 0.907 – 1.071). The respondents largely agreed (4) (55.3% - 51.6%) and strongly agreed (5) (29.3% - 17.7%) with the statements posed in the questionnaire. The highest response was agreed (B8.5) (55.1%) which stated, “We are fast to detect changes in our customers’ preferences concerning environmental issues”. This showed that half of the respondents were quick to identify customer preferences in relation to the environment.

Green Competitor Orientation (GCoO): was represented by questions B9.1 – B9.5. The range of mean scores for GCoO indicated that generally, the respondents were positive concerning the items included in this construct (mean = 3.68 – 3.17; SD = 1.068 – 1.214). The respondents largely agreed (4) (49.7% - 36.2%) with the statements posed in the questionnaire. The remaining percentage of respondents were split between disagree (2) (23.1% - 9.0%) and strongly agree (5) (19.4% - 12.2%). The highest response was agreed (B9.5) (49.7%), which stated, “We are fast to detect fundamental shifts in our market concerning environmental issues”. This indicated that respondents kept an eye on the market environment and picked up on changes within the marketplace.

Green Inter-functional Coordination (GIfC): was represented by questions B10.1 – B10.4. The range of mean scores for GIfC indicated that the respondents, in general, were positive concerning the items included in this construct (mean = 3.59 – 3.50; SD = 1.137 – 1.171). The respondents largely agreed (4) (43.4% - 39.9%) and strongly agreed (5) (21.5% - 19.7%) with the statements posed in the questionnaire. The highest response was agreed (B10.1) (43.3%), which stated “Any environment regulation information that becomes available is distributed throughout our entire business”. This indicated that respondents shared information with other departments and their peers when they received information.

7.2.3.2 GREEN INTERNAL PRACTICES OF YOUR BUSINESS

This section describes the results for each of the constructs for green internal practices (consumption policies, waste policies, internal supplier practices, and internal business practices) and the corresponding items. The results for these constructs are shown in **Table L5** and **Table L6**.

Consumption Policies (CoP): was represented by questions C11.1 – C11.6. The range of mean scores for CP indicated that, in general, the respondents were positive concerning the items included in this construct (mean = 4.34 – 3.92; SD = 0.783 – 1.084). The respondents largely strongly agreed (5) (46.8% – 35.4%) and agreed (4) (48.4% - 37.8%) with the statements posed in the questionnaire. The highest response was strongly agreed (C11.1) (46.8%), which stated, “Our policy is to curb electricity usage to the minimum”. With load shedding being a constant occurrence, F&B SMMES may need to find alternative sources of energy and this answer may be related. Having electricity cuts in food establishments causes havoc in terms of fridge temperatures and keeping food cold and fresh. Reviewing electricity usage and finding alternative sources allows F&B SMMEs to continue their business and helps them to ensure that their raw materials, and finished products remain fresh.

Waste Policies (WsP): was represented by questions C11.7 – C11.8. The range of mean scores for WP indicated that, in general, the respondents were positive concerning the items included in this construct (mean = 3.65 – 3.48; SD = 1.410 – 1.423). The respondents largely strongly agreed (5) (37.8% - 32.4%) and agreed (4) (27.7% - 25.8%) with the statements posed in the questionnaire. The highest response was strongly agreed (C11.8) (37.8%), which stated “Our policy is to recycle other waste (packaging materials, etc.)”. Based on this response it was evident that respondents were actively participating in recycling activities.

Internal Supplier Practices (ISP): was represented by questions C12.1 – C12.5. The range of mean scores for ISP indicated that, in general, the respondents were slightly positive concerning the items included in this construct (mean = 3.28 – 2.64; SD = 1.284 – 1.336). The respondents for this construct agreed (4) (35.1% - 28.2%) and disagreed (2) (30.6% - 29.5%) with the statements posed in the questionnaire. The highest response for agreed (C12.5) (35.1%) stated, “We ensure our products are sources from sustainable or organic means”. This indicates that respondents had shifted to changing the source of their raw materials and supplies to be from sustainable sources. Fyn Restaurant (Eat Out, 2021) is an example of an establishment that gets its raw materials and supplies from the surrounding community,

which they have assisted to become sustainable. With increase in customers questioning the source of ingredients, F&B SMMEs are looking at sustainable suppliers. Furthermore, if these F&B SMMEs are also sending their products to large customers like Woolworths, they are required to move to more sustainable and organic means (Eat Out, 2017). The highest response for disagree (C12.4) (30.6%) stated, "We conduct audits on our suppliers concerning their sustainability practices on a regular basis". As can be seen from the response, the respondents have not fully undertaken the assessment of their suppliers to verify that they are indeed operating under sustainable conditions. They may have only audited them once and have not yet established an audit programme for their facility.

Internal Business Practices (IBP): was represented by questions C13.1 – C13.5. The range of mean scores for IBP indicated that, in general, the respondents were slightly positive concerning the items included in this construct (mean = 3.13 – 2.83; SD = 1.284 – 1.315). The respondents for this construct agreed (5) (38.6% - 26.1%) and disagreed (2) (26.6% - 19.1%) with the statements posed in the questionnaire. The highest response for agreed (C13.2) (38.6%) stated, "We have a comprehensive approach to setting environmental targets". This implies that the respondents were active in setting environmental targets within their SMMEs and were monitoring these. The highest response for disagree (C13.1) (26.6%) stated, "We completely control the environmental impact of our products and processes". Especially in the F&B industry, the process from "Farm to Fork" is to be managed. For large organisations this is easier, and a lot of education, research and effort is done by these organisations to comply with this through risk assessments and so forth. For small businesses like SMMEs, this may not be possible, and they may not be able to fully control the entire value chain that they are in. The response is reflective of this fact and may be pragmatic on the SMME viewpoint.

7.2.3.3 ENVIRONMENTALLY FRIENDLY VALUES OF YOUR BUSINESS

The section describes the results for each of the constructs for green management values and the corresponding items. The results for these constructs are shown in **Table L7** and **Table L8**.

Green Management Values (GMV): was represented by questions D14.1 – D14.5. The range of mean scores for GMV indicated that the respondents, in general, were positive concerning the items included in this construct (mean = 3.89 – 3.12; SD = 1.122 – 1.364). The respondents for this construct largely agreed (4) (39.9% - 31.6%) with the statements posed in the questionnaire. The highest response was agreed

(D14.5) (39.9%), which stated, “If things continue on their present course, we will soon experience a major ecological catastrophe”. This indicates that respondents are cognisant of the environmental impacts and having agreed to all the questions, they display values which are ecologically friendly.

7.2.3.4 SUSTAINABLE PERFORMANCE OF YOUR BUSINESS

The section describes the results for each of the constructs for green performance and the corresponding items. The results for these constructs are shown in **Table L9** and **Table L10**.

Green Performance (GP): was represented by questions E15.1 – E15.35. The range of mean scores for GP indicated that the respondents were generally positive concerning the items included in this construct (mean = 4.11 – 3.18; SD = 0.754 – 1.142). The respondents for this construct to a large extent mostly agreed (4) (58.5% - 27.7%) with the statements posed in the questionnaire. The highest response for agreed (E15.2) (58.5%) stated, “Our firm conforms to requirements of community relations”. This implies that F&B SMMEs have good relations with the surrounding community. With this in mind, they would not want to harm their reputation within the community and also, they would not want to harm the community by being a source of harm environmentally for them one can assume. Respondents also were uncertain about certain questions (35.4% - 9.6%) posed in the questionnaire. The highest uncertain response, E15.32 (35.4%) was related to, “We conform to requirements of outputs of wastewater and there is a reduction in waste (water and/or solid) in our firm”. Because a large proportion of the respondents was from the service industry (86.7%) they may not have been able to adequately answer this question as it refers more to a manufacturing facility. Small businesses like SMMEs may be unable to measure the quantity of solid waste emitted from their facilities.

7.2.4 DISTRIBUTION AND NORMALITY OF THE DATA

All the data was obtained from a questionnaire survey using a Likert scale, which was prone to having data that was not normally distributed. The results for the various items are reflected in Section 6.2.4. and **Tables L11 – L18**. Normal distribution is shown by values of skewness being between -1.5 and +1.5 and for kurtosis being between -7 and +7 (Pallant, 2020). Positive results indicate data that is skewed to the right, whilst negative results indicate data that is skewed to the left. The normality test is done using the Kolmogorov-Smirnov and Shapiro-Wilk tests and a significant result is indicated by having a *p-value* of less than 0.05.

For the Business Strategy constructs, from a skewness i.e. symmetry perspective and kurtosis i.e. the peak of the distribution perspective, the data for these constructs were negative (see **Table L11**). The test for normality showed that the test was significant (see **Table L12**). This indicates that the data is not normally distributed.

For the Green Internal Practices constructs, from a skewness i.e. symmetry perspective and kurtosis i.e. the peak of the distribution perspective, the data for these constructs were negative for most of the items (see **Table L13**). Four of the items are positive (C12.2, C12.4, C13.1, and C13.5). The test for normality showed that the test was significant with a *p-value* less than 0.05 (see **Table L14**). This indicates that the data is not normally distributed.

For Environmentally Friendly Values construct, from a skewness i.e. symmetry perspective and kurtosis i.e. the peak of the distribution perspective, the data for these constructs were negative (see **Table L15**). The test for normality showed that the test was significant (see **Table L16**). This indicates that the data is not normally distributed.

For Sustainable Performance construct, from a skewness i.e. symmetry perspective and kurtosis i.e. the peak of the distribution perspective, the data for these constructs were negative (see **Table L17**). The test for normality showed that the test was significant (see **Table L18**). This indicates that the data is not normally distributed.

Having the data not normally distributed was not a problem for this study as factor analysis was conducted on the items.

7.3 INSTRUMENT VALIDITY ANALYSIS

For sound quantitative research, validity and reliability are crucial (Brown, 2015). The tests conducted for both are presented in Chapter 5, Section 5.6. The validity results, reflected in Chapter 6, Section 6.3, are discussed next.

Exploratory factor analysis (EFA), which assessed the construct validity, was used and provided valuable insight concerning the scales used, and further provided an understanding of the components of the constructs and their relationships. Tavakol and Wetzel (2020) explain that “EFA provided a snapshot of the statistical relationships of the key behaviours, attitudes, and dispositions of the constructs of interest” ((Tavakol & Wetzel, 2020, p. 247). The correlation analysis provided an understanding of the associations between the variables. Results for the independent variables, mediator variable, and dependent variable are discussed next.

7.3.1 INDEPENDENT VARIABLES VALIDITY RESULTS

Reviewing the independent variables (GCuO, GCoO, GlfC, and GMV), the results for first-order analysis complied with the correlation matrix value above 0.3 (range between 0.407 to 0.897), KMO value above 0.6 (KMO = 0.913), Bartlett's test of sphericity value $p < 0.005$ (Sig. = 0.0000), measures of sampling adequacy (MSA) value above 0.6 (range between 0.7960 to 0.970), and communalities extraction above 0.6 (range between 0.391 to 0.872). The total variance explained showed that four factors explained 71.9% of the variable after rotation. Furthermore, the rotated factor matrix loadings for the four factors were all above 0.5. The statistical significance of the factor loading confirmed construct validity and that the measurement instrument could be trusted.

7.3.2 MEDIATOR VARIABLE VALIDITY RESULTS

Reviewing the mediator variable (GIP), the results for first-order analysis complied with the correlation matrix value above 0.3 (range between 0.304 to 0.930), KMO value above 0.6 (KMO = 0.921), Bartlett's test of sphericity value $p < 0.005$ (Sig. = 0.0000), measures of sampling adequacy (MSA) value above 0.6 (range between 0.836 to 0.979), and communalities extraction above 0.6 (range between 0.516 to 0.936). The total variance explained showed that four factors explained 76.78% of the variance after rotation. In addition, the rotated factor matrix loadings for the four factors were all above 0.6. The statistical significance of the factor loading confirmed construct validity and that the measurement instrument could be trusted.

7.3.3 DEPENDENT VARIABLE VALIDITY RESULTS

Reviewing the dependent variable (GP), the results for first-order analysis complied with the correlation matrix value above 0.3 (range between 0.333 to 0.762), KMO value above 0.6 (KMO = 0.957), Bartlett's test of sphericity value $p < 0.005$ (Sig. = 0.0000), measures of sampling adequacy (MSA) value above 0.6 (range between 0.940 to 0.989), and communalities extraction above 0.6 (range between 0.487 to 0.774). The total variance explained showed that four factors explained 64.37% of the variance after rotation. Furthermore, the rotated factor matrix loadings for the four factors were all above 0.45. The statistical significance of the factor loading confirmed construct validity and that the measurement instrument could be trusted.

7.4 RELIABILITY OF INSTRUMENT

The test for reliability of the measurement instrument, Cronbach's Alpha, was used. Results showed that each of the constructs satisfied the criteria for reliability (Bagozzi & Yi, 2012; Struwig & Lillah, 2017). All constructs in this study achieved Cronbach's alpha values above 0.8 (ranging from 0.847 to 0.973) exceeding the values when compared to the outcomes of C. H. Wang (2020) (ranging from 0.0792 to 0.898) and Borazon et al., (2022) (ranging from 0.815 to 0.967). Therefore, the constructs satisfied the criteria for reliability and indicated that further analyses would be sensible (Hair et al., 2020).

The reliability results are reflected in Chapter 6, Section 6.4, and are discussed with results for the independent variables, mediator variable, and dependent variable being discussed in that order.

7.4.1 INDEPENDENT VARIABLE RELIABILITY RESULTS

Reviewing the independent variables (GCuO, GCoO, GIfC, and GMV), the results for first-order reliabilities (**Table 6.7**) shows that each of the constructs satisfy the criteria for reliability with Cronbach's alpha values above 0.8 – GCuO = 0.932, GCoO = 0.933; GIfC = 0.957, and GMV = 0.931. The second-order factors (GMO+GMV) also were reliable with Cronbach's alpha value of 0.931.

7.4.2 MEDIATOR VARIABLE RELIABILITY RESULTS

Reviewing the mediator variable (GIP), the results for first-order analysis for reliability (**Table 6.8**) shows that each of the constructs satisfy the criteria for reliability with Cronbach's alpha values above 0.8 – CoP = 0.911, WsP = 0.916, ISP = 0.940, IBP = 0.953. The second-order factor (GIP) was also reliable with Cronbach's alpha value of 0.943.

7.4.3 DEPENDENT VARIABLE RELIABILITY RESULTS

Reviewing the dependent variable (GP) empirically, the results for first-order analysis for reliability (**Table 6.9**) shows that shows that each of the factors satisfy the criteria for reliability with Cronbach's alpha values above 0.8 – Factor 1 = 0.946, Factor 2 = 0.937, Factor 3 = 0.907, Factor 4 = 0.930. Item E15.1 was deleted and provided an acceptable second-order factor (GP) with Cronbach's alpha value of 0.973. Theoretically, the dependant variable results for first-order analysis were reliable with Cronbach's alpha values above 0.8 – green financial performance (GFP) = 0.879, green social performance (GSP) = 0.928, green environmental performance (GEP) =

0.951. The second-order theoretical factor (GIP-E15.1) was also reliable with Cronbach's alpha value of 0.973. The theoretical factors were used as the empirical factor content was vastly different from existing literature.

7.5 DESCRIPTIVE ANALYSIS OF THE SCALES

The descriptive analysis was used to summarise the data set and were run for the scale after the validity and reliability testing and factor analysis (see **Table L54**).

The results for the descriptive statistics for the scales revealed that for the construct **green market orientation**, green customer orientation achieved the highest mean score (mean = 3.84; SD = 0.88), followed by green inter-functional coordination (mean = 3.57; SD = 1.08), and then by green competitor orientation (mean = 3.45; SD = 1.01). Given the context of F&B SMMEs and that most of the respondents were from the service industry, the higher mean score for green customer orientation is probably understandable. Compared to C. H. Wang (2020), the calculated means results are lower in this study for all three components.

The overall mean results and standard deviations for **green internal practices** were 3.45 and 0.857 respectively. For the construct of green internal practices, green consumption policies attracted the highest mean score (mean = 4.19; SD = 0.740), followed by green waste policies (mean = 3.57; SD = 1.36), internal business practices (mean = 3.01; SD = 1.19), and then internal supplier practices (mean = 2.96; SD = 1.20).

For **green management values** the mean score was 3.37 and the standard deviation was 0.857. Compared to the results of Jansson et al., (2017) (mean = 3.86; SD = 0.75), this study's means for green management values were lower, possibly because this study was focused on a service-orientated industry whilst the study by Jansson et al., (2017) was from the forestry sector.

For **green performance**, the mean score was 3.78 and the standard deviation was 0.702. The study by C. H. Wang (2020) reported a mean of 3.55 and a standard deviation of 0.60, which are lower than this study, possibly due to this study's focus on the service industry.

The results pertaining to gender (see **Table L55** and **Figure M7**) reveal an almost even split.

7.6 MULTIPLE REGRESSION ANALYSIS

For this study, thirteen hypotheses were tested. A summary of the hypotheses is presented in Section 4.6.1. As shown in **Table 7.1**, for this section, seven hypotheses were supported. The following sections provide further insights linking the findings to other relevant studies to contextualise or justify the findings of this study. This will be broken down to first look at direct relationships and then to look at indirect relationships in terms of moderation and mediation effects.

7.6.1 ANALYSIS OF DIRECT RELATIONSHIPS

The results are displayed in Chapter 6, Section 6.6.1 for the direct relationships. The direct relationships evaluated for the study were between GMP (including its three constructs of GCuO, GCoO, and GIfC) and GP, GMO (including its three constructs of GCuO, GCoO, and GIfC) and GIP, and GIP and GP, and are discussed in that order next.

7.6.1.1 *THE INFLUENCE OF GMO ON GP (H1)*

The importance of the relationship between GMO and green performance has been highlighted in previous studies (Borazon et al., 2022; C. H. Wang, 2020), and despite them demonstrating the importance of the relationship between GMO and green performance (Borazon et al., 2022; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020), these outcomes related to the electrics and electronics, high-tech, and manufacturing industries. Conflicting results were achieved with some studies concluding a strong, positive relationship between GMO and green performance (Borazon et al., 2022; Liu et al., 2018; C. H. Wang, 2020), whilst others differed, not supporting the direct relationship (Hult et al., 2005; Ngo, 2022b; Nwokah, 2008; Sin et al., 2003). From a R-A theory view, the importance of the relationship between market orientation and performance has been highlighted in previous studies (S. D. Hunt, 2018; S. D. Hunt & Morgan, 1995; Varadarajan, 2023).

Based on the literature, this study attempted to delve deeper into breaking GMO, distinguishing its three core components of GCuO, GCoO, and GIfC to determine the relationship between them and green performance amongst F&B SMMEs in South Africa. Furthermore, this study attempted to settle inconsistencies in literature providing insight into the role of each component. The empirical findings of this study provide important insights pertaining to both the components of GMO and their influence on sustainable or green performance. Moreover, this study considered the direct effects of each green market orientation component on sustainable or green

performance (i.e. the resource characteristics P7). In addition, this study attempted to identify GMO and its components as a resource (P6) in terms of R-A theory, and what relationships these constructs would have with performance. For this study, three hypotheses were tested concerning this relationship and all were supported. Like C. H. Wang (2020), the breakdown of green market orientation helped to clarify the GMO-performance link and this study results confirmed that the three components of GMO are determinants for sustainable/green performance. This also confirmed that GMO and in turn its components were all resources (P6) as far as R-A theory was concerned and could be categorised as relational and informational resources (P6). The direct link of GMO with sustainable/green performance shows that GMO is a beneficial informational resource which has a relative value to the firm based on its direct effect on the firm's sustainable/green performance (P7). Furthermore, a firm displaying a green market orientation would have an objective of achieving superior financial performance (P4) and having imperfect and costly information about its consumers (P5). The supported hypotheses not only confirmed this superior financial performance but the sustainable/green performance of the firm being superior. A firm having a GMO would thus have a competitive advantage over its competitors in that it advances sustainability and impacts performance not only financially, but environmentally and socially. GMO contributes to enabling the firm to produce efficiently and/or effectively a market offering that has some value for some market segment(s) (cells 2, 3, or 6 in **Figure 1.4**). Ultimately, the firm's management would be able to select GMO as a strategy (P8) to achieve a competitive advantage. The following sections postulate additional knowledge connecting the findings to other related studies to contextualise or justify the findings of this study.

The Influence of GCuO on GP (H1a): A significant positive relationship between green customer orientation and green performance was expected, as per the prior studies by C. H. Wang (2020), and Borazon et al., (2022). This was confirmed by the results, which indicated a statistically significant direct, and positive relationship between the two constructs ($\beta = 0.478$; Sig. = 0.000). **H1a is supported**, indicating that green customer orientation positively and significantly influences the green performance of F&B SMMEs in South Africa. Former research supports these results, concurring that green customer orientation positively and significantly influences green performance (Borazon et al., 2022; C. H. Wang, 2020).

While a significant positive relationship between green customer orientation and green performance in F&B SMMEs in South Africa was confirmed in this study, this finding is not new from the perspectives of high-tech (C. H. Wang, 2020) and electric and electronic industry (Borazon et al., 2022). C. H. Wang (2020) found that GCuO is a

determinant of green performance, suggesting that managers within a high-tech organisation who want to enhance green performance would benefit from developing a GMO strategy to aid these organisations in anticipating better and understanding customers' environmental concerns. A study in the F&B industry in Yemen, found that customer orientation had a significant positive influence on organizational performance (Abdulsamad et al., 2021), which concurred with other studies (Chebet et al., 2018; Mohiuddin Babu, 2018; Mubarak, 2019), reporting that customer orientation plays a larger role than the other orientations.

Green customer orientation was found to play an important role in the market orientation dynamics of the firm (J. K. Han et al., 1998; Mohiuddin Babu, 2018; Narver & Slater, 1990) as it provides a competitive advantage, which has important implications for its overall performance (Kirca et al., 2005; Tsiotsou, 2010; Ziggers & Henseler, 2016). It is crucial for any organisation's connection to its market (Deshpandé et al., 1993; Frambach et al., 2016; Kohli & Jaworski, 1990) as it is the more prominent component of GMO (Liao, 2018; C. H. Wang, 2020). Green customer orientation involves the generation of information, dissemination of the information within the firm, and taking the necessary action to respond to both the current and future needs of the customer (Jaworski & Kohli, 2017; Linder, 2019). Within the service environment, green customer orientation is vital (Q. Wang et al., 2016). The constant exchange of dialogue between customers and a business in a service environment allows customers to detect whether the business is indeed offering greater value in the service, which from a R-A theory perspective is an informational and relational resource (Bicen, 2021; S. D. Hunt & Morgan, 1995).

This finding indicates that F&B SMMEs in South Africa are attending to customer feedback and their interest in sustainability and are using this information within their businesses to respond to current and future customer needs. According to R-A theory this would be that this information for the firm (5) is imperfect and costly. Furthermore, it makes GCuO an informational resource (P6) which the firm can use to achieve the firm's objective (P4) of achieving superior financial performance. With GCuO directly impacting sustainable/green performance, into only achieves superior financial performance, but social and environmental performance as well (P7). This extends the competitive advantage in achieving sustainable/green performance. With South African consumers moving increasingly towards looking at what they eat and where their food comes from F&B SMMEs must develop a GMO strategy to aid them in better understanding and anticipating customers' environmental concerns. This was reported in Sections 3.3.3.1 and 4.2.1, explaining how green customer orientation, as an

informational resource from R-A theory, influences the outcome of a superior competitive advantage resulting in increased sustainable or green performance.

The Influence of GCoO on GP (H1b): A significant positive relationship between green customer orientation and green performance was expected, as per the studies by C. H. Wang (2020), Li et al., (2018), and Borazon et al., (2022). This was confirmed by the results, which indicated a statistically significant direct, and positive relationship between the two constructs ($\beta = 0.421$; Sig. = 0.000). **H1b is supported**, indicating that green customer orientation positively and significantly influences the green performance of F&B SMMEs in South Africa. Previous research supports these results, concurring that green customer orientation positively and significantly influences green performance (Borazon et al., 2022; C. H. Wang, 2020).

A significant positive relationship between green competitor orientation and green performance in F&B SMMEs in South Africa was confirmed in this study. This finding is not new from a high-tech (C. H. Wang, 2020) and electric and electronic industry (Borazon et al., 2022) perspective as similar results were obtained. From existing literature (Narver & Slater, 1990; G. P. Wang & Miao, 2015), competitor orientation has been linked to firm performance. As a strategic orientation and linking to the R-A theory, competitor orientation gives a competitive advantage as an informational resource, which has serious implications for the overall green performance (Kirca et al., 2005; Tsiotsou, 2010; Ziggers & Henseler, 2016). In a recent study, competitor orientation has been shown to boost benefits, when information about competitors is shared (Crick et al., 2020). By having information about the strengths and weaknesses of competitors, employees were able to critique rival organisations and their services (Crick et al., 2020).

Considering the results of this study, F&B SMMEs gaining information about their competitors' strengths and weaknesses can improve their own performance by sharing this with their customers and possibly gaining benefit by increasing customers patronage to enhance their performance as reported in previous studies (Crick et al., 2020). Contrary to studies that have found competitor orientation to exert the most important influence, this study found that green competitor orientation indeed played a significant role in the GMO-performance relationship, although slightly less so than green customer orientation. The findings suggest that F&B SMMEs management trying to enhance sustainable or green performance should develop a green competitor orientation strategy to aid them in better understanding and anticipating competitors' environmental impact. According to R-A theory information for the firm (5) is imperfect and costly. Furthermore, it makes GCoO an informational resource (P6) which the firm

can use to achieve the firm's objective (P4) of achieving superior financial performance. With GCoO directly impacting sustainable/green performance, into only achieves superior financial performance, but social and environmental performance as well (P7). This extends the competitive advantage in achieving sustainable/green performance. This was supported in Section 3.3.3.2 and 4.2.2, explaining how green competitor orientation, as an informational resource from R-A theory, influences the outcome of a superior competitive advantage resulting in increased sustainable or green performance.

The Influence of GfC on GP (H1c): A significant positive relationship between green inter-functional coordination and green performance was expected, as per the studies by Tjahjadi et al., (2020), and Borazon et al., (2022). This was confirmed by the results, which indicated a statistically significant direct, and positive relationship between the two constructs ($\beta = 0.393$; Sig. = 0.000). **H1c is supported**, indicating that green inter-functional coordination positively and significantly influences the green performance of F&B SMMEs in South Africa, which is supported by prior research (Borazon et al., 2022; Li et al., 2018; Ngo, 2022b; C. H. Wang, 2020).

While this research verified a significant positive relationship between green inter-functional coordination and green performance in F&B SMMEs in South Africa, this finding is not new from a high-tech (C. H. Wang, 2020) and electric and electronic industry (Borazon et al., 2022) perspective as similar results were obtained, supporting existing theory in an alternative context. The internal cross-functional support or inter-functional coordination creates synergy, adding strength to the competitive power that drives the business (D'Souza et al., 2015) and from a R-A theory viewpoint, establishes a position of comparative advantage (Bicen, 2021). Obtaining information from customers, this information should be processed more rapidly with various sections of the business coordinating their environmental strategies to help achieve green performance. Green inter-functional coordination, being an information resource as per R-A theory, encourages interconnectivity between departments and sections which in turn results in knowledge about customers and competitors being shared, discussed, and analysed by the various sections to create value for the consumer (Murillo Oviedo et al., 2020). Even for SMMEs, who do not necessarily have various departments, green inter-functional coordination depends on collaborative activities among people that define how well they work together in a service industry such as F&B. Cooperating and working with one another in a service industry provides better processes and flow in a restaurant as an example, which favours the business. The coordination between the waiter and the kitchen and chef is imperative to ensure a happy, recurring customer experience for the consumer. Furthermore, the integration and collaboration between

functions is not only internal within the business, but also external with suppliers. Studies have shown that integration and collaboration internally and externally of the business is required to ensure that the processes augment and stimulate organisational performance (Mentzer et al., 2008; Murillo Oviedo et al., 2020). The findings suggest that F&B SMMEs management, trying to enhance sustainable/green performance, should develop a green inter-functional coordination strategy to facilitate better understanding and anticipate competitors' environmental impact. According to R-A theory information for the firm (5) is imperfect and costly. Furthermore, it makes GIc an informational resource (P6) which the firm can use to achieve the firm's objective (P4) of achieving superior financial performance. With GIc directly impacting sustainable/green performance, into only achieves superior financial performance, but social and environmental performance as well (P7). This extends the competitive advantage in achieving sustainable/green performance. This was supported in Section 3.3.3.3 and 4.2.3, explaining how green inter-functional coordination, as an informational resource from R-A theory, influences the outcome of a superior competitive advantage resulting in increased sustainable or green performance.

7.6.1.2 INFLUENCE OF GMO ON GIP (H2)

Former studies (Borazon et al., 2022; Ngo, 2022b; Tjahjadi et al., 2020; C. H. Wang, 2020) accentuated the importance of the relationship between GMO and green internal practices. The study by Li et al., (2018) highlighted the importance of the relationship between GMO and green internal practices distinguishing supplier green monitoring as an additional variable. Furthermore, GMO was identified as leading to better green practices resulting in better environmental performance (Li, 2014). In their study, Borazon et al., (2022) found that the stronger GMO is, the greater the organisation's performance both environmentally and economically. Although previous literature had demonstrated the importance of the relationship between GMO and green innovation (Borazon et al., 2022; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020), these studies were conducted within alternative industries, and only focused on a single aspect of green internal practices. Studies that have focused on green internal practices in the restaurant industry (Arun et al., 2021; Chiu & Hsieh, 2016; Chou et al., 2012; Madanaguli et al., 2022; Perramon et al., 2014) were restricted to practices per se excluding business strategy.

Based on the literature, this study attempted to delve deeper into breaking GMO into its three core components of GCuO, GCoO, and GIc to determine the relationship between them and the implementation of green internal practices by F&B SMMEs in South Africa. Furthermore, this study attempted to settle literature inconsistencies and

provide insight into the role of each component. The empirical findings presented in this study provide important insights pertaining to both the components of GMO and their influence on the implementation of green internal practices. Moreover, this study considered the direct effects of each green market orientation on green internal practices, and all three hypotheses were supported. Li et al., (2018) reviewed green market orientation as a whole and did not break it down into its three components: reporting a positive relationship between GMO as an entity, and the implementation of green internal practices. All three components of GMO significantly and positively impact the implementation of green internal practices, supporting previous scholarly research (Borazon et al., 2022; Li et al., 2018; Ngo, 2022b). From R-A theory, GMO and its components of GCuO, GCoO, and GIfC are identified as informational resources (P6). These had a direct impact on the businesses' performance (P7). Management role (P8) allows the identification and implementation of strategy. The implementation of GIP was directly impacted by GMO and can also be seen as an organisational resource (P6). The following sections report additional information connecting the findings to other related studies to contextualise or justify the findings of this study.

The Influence of GCuO on GIP (H2a): A significant positive relationship between green customer orientation and the implementation of green internal practices was expected, as per the former studies by Li et al., (2018), C. H. Wang (2020), and Borazon et al., (2022). This was confirmed by the results, which indicated a statistically significant direct, and positive relationship between the two constructs ($\beta = 0.602$; Sig. = 0.000). **H2a is supported**, indicating that green customer orientation positively and significantly influences the green performance of F&B SMMEs in South Africa, which is supported by previous research and concurring that green customer orientation positively and significantly influences green performance (Borazon et al., 2022; Li et al., 2018; Ngo, 2022b; C. H. Wang, 2020).

The significant positive relationship between green customer orientation and the implementation of green internal practices in F&B SMMEs in South Africa supports previous studies in alternative contexts concerning the relationship between green market orientation and green innovation (C. H. Wang, 2020), green market orientation and supply chain management capability (Borazon et al., 2022), and green market orientation and green internal practices (Li et al., 2018).

Green customer orientation, being an informational resource per R-A theory, activates the sensing abilities of the firm, thereby obtaining, reviewing, and attending to information received from customers. By acting upon it, a business can address

environmental concerns such as waste or emissions and the like, and amend existing practices, converting them into green practices. This has been done in certain green restaurants in South Africa like “FYN”, that has won the world’s most sustainable restaurant award (Eat Out, 2023). From the findings, green customer orientation contributes the most in terms of the implementation of green internal practices. The findings suggest that F&B SMMEs management that implement a green customer orientation strategy are more likely to implement green internal practices. R-A theory identified the implementation of green internal practices as an organisational resource (P6). This can be seen as a comparative advantage if management identify the correct resource assortment. The direct impact of GCuO on GIP indicates the resource characteristics (P7). This was explained in Sections 3.3.3.1, 3.5 and 4.3.1, indicating how green customer orientation, as an informational resource from R-A theory, influences the outcome of a superior competitive advantage resulting in the implementation of green internal practices.

The Influence of GCoO on GIP (H2b): A significant positive relationship between green customer orientation and the implementation of green internal practices was expected, as per the studies by Li et al., (2018), C. H. Wang (2020), and Borazon et al., (2022). This was confirmed by the results, which indicated a statistically significant direct, and positive relationship between the two constructs ($\beta = 0.496$; Sig. = 0.000). **H2b is supported**, indicating that green competitor orientation positively and significantly influences the implementation of green internal practices of F&B SMMEs in South Africa. Previous supports achieved similar results, concurring that green competitor orientation positively and significantly influences the implementation of green internal practices (Borazon et al., 2022; Li et al., 2018; Ngo, 2022b; C. H. Wang, 2020).

While a significant positive relationship between green competitor orientation and the implementation of green internal practices in F&B SMMEs in South Africa was confirmed in this study, this finding was also reported from the perspective of the high-tech (C. H. Wang, 2020), manufacturing (Li et al., 2018), and electric and electronic industries (Borazon et al., 2022). It was found that, GMO is an important enabler for a business to react to competitive pressures by pursuing green practices (Li et al., 2018). Having a green competitor orientation, further enhances this reaction in sensing and analysing information about competitors using the ensued information to establish competitor strategies. Thus, having a green competitor orientation will allow the SMME to acquire, disseminate, and process competitors’ environmental strategy information and use it to identify green internal practices that boost competitive advantage. Previous literature that had reviewed the pressures on a business to implement green

practices (J. González-Benito & González-Benito, 2006; Zhu et al., 2013) government pressure as well as consumers' increased awareness concerning the environment, pressures from competitors, as well as customers pushing businesses to adopt green internal practices (Li et al., 2018). The findings of this study reveal that F&B SMMEs that follow a green competitor orientation are implementing green internal practices due to the increase in customers' environmental awareness and their focus on healthier food consumption. R-A theory identified the implementation of green internal practices as an organisational resource (P6). This can be seen as a comparative advantage if management identify the correct resource assortment. The direct impact of GCoO on GIP indicates the resource characteristics (P7). This notion is explained in Sections 3.3.3.2, 3.5 and 4.3.2, indicating how green competitor orientation, as an informational resource from R-A theory, influences the outcome of a superior competitive advantage resulting in the implementation of green internal practices.

The Influence of GIfC on GIP (H2c): A significant positive relationship between green inter-functional coordination and the implementation of green internal practices was expected, as per the prior studies by Li et al., (2018) and Borazon et al., (2022). This was confirmed by the results, which indicated a statistically significant direct, and positive relationship between the two constructs ($\beta = 0.589$; Sig. = 0.000). **H2c is supported**, indicating that green inter-functional coordination positively and significantly influences the implementation of green internal practices of F&B SMMEs in South Africa. Earlier research supports these results, concurring that green inter-functional coordination positively and significantly influences the implementation of green internal practices (Borazon et al., 2022; Li et al., 2018; Ngo, 2022b; C. H. Wang, 2020).

A significant positive relationship between green inter-functional coordination and the implementation of green internal practices in F&B SMMEs in South Africa was confirmed in this study. The finding is supported by findings reported in alternative contexts, such as high-tech (C. H. Wang, 2020), manufacturing (Li et al., 2018) and electric and electronic industries (Borazon et al., 2022). Previous literature (Borazon et al., 2022; Li et al., 2018; Tjahjadi et al., 2020; C. H. Wang, 2020) have linked inter-functional coordination with the adoption of green practices. Literature states that green inter-functional coordination provides market intelligence information, information about the environment, combining business resources to obtain its green customer goals (Auh & Menguc, 2005b; Mohiuddin Babu, 2018). The findings suggest that through coordination and integration with other departments and sections, businesses can achieve their green customer goals by implementing green practices that address environmental issues such as pollution, waste, emissions, and the like. R-A theory

identified the implementation of green internal practices as an organisational resource (P6). This can be seen as a comparative advantage if management identify the correct resource assortment. The direct impact of GIc on GIP indicates the resource characteristics (P7). This is explained and supported in Sections 3.3.3.3, 3.5 and 4.3.3, indicating how green inter-functional coordination, as an informational resource from R-A theory, influences the outcome of a superior competitive advantage resulting in the implementation of green internal practices.

7.6.1.3 INFLUENCE OF GIP ON GP (H3)

The implementation of green internal practices has been identified as a key driver for achieving market success and improvement in a business' performance (Perramon et al., 2014). Furthermore, this relationship was reviewed in the management and economics literature, suggesting that green internal practices can assist businesses to achieve a competitive advantage by optimising inefficient use of resources (Porter & Van Der Linde, 1995c). Having reviewed earlier studies (Afum et al., 2021; Famiyeh et al., 2018; Li et al., 2018), a significant positive relationship between the implementation of green internal practices and sustainable or green performance was anticipated. This research study's results confirmed this proposition by indicating a statistically significant direct, and positive relationship between the two constructs ($\beta = 0.564$; Sig. = 0.000). **H3 is supported**, indicating that the implementation of green internal practices positively and significantly influences sustainable or green performance of F&B SMMEs in South Africa. Former research conducted in other contexts supports these results, concurring that the implementation of green internal practices positively and significantly influences sustainable or green performance (Afum et al., 2021; Famiyeh et al., 2018; Li et al., 2018; Zaid et al., 2018).

The implementation of green internal practices influences a firm's sustainable performance dimensions according to environmental literature (Famiyeh et al., 2018; Zaid et al., 2018), in that the adoption of these practices provides leverage for firms to achieve higher profitability and increase their market share (Roy & Khastagir, 2016). In support of the positive association between green internal practices and sustainable performance, Bour et al., (2019) states that good sustainability practices substantially enhance the image of the business and the profit margins of manufacturing companies. In addition, in support of a positive association, Li et al., (2018) found that green internal practice is significantly positively associated with environmental performance. Literature shows that the implementation of green internal practice is a necessary initial step to external green supply chain management (Ó. González-Benito & González-Benito, 2008; Li et al., 2018; Zhu & Geng, 2013). The positive association is further

supported on the demand side, where sustainable or green consumption is increasing among consumers, with restaurants that implement green internal practices, increasing customers' repeat patronage (Bacig & Young, 2019; Jang et al., 2015; Moon, 2021). This, in turn, increases financial performance (Madanaguli et al., 2022). Being new for the ceramic industries in India, green internal practices was positively linked to environmental performance (Choudhary & Sangwan, 2019), which also supports the findings of other studies. Conversely, Nallusamy et al., (2015) and Maas et al., (2016) provided empirical evidence that green practices do not always enhance sustainable performance as Nallusamy et al., (2015) found no significant impact between green technologies and a business' profit margins, while Maas et al., (2016) found that sustainability practices negatively impacted profit margins.

Based on the literature, this study attempted to determine the relationship between the implementation of green internal practices and sustainable or green performance amongst F&B SMMEs in South Africa. Furthermore, this study attempted to settle the inconsistencies in literature and from the empirical findings presented, this study provided important insights into the influence of the implementation of green internal practices on sustainable or green performance. Moreover, this study considered the direct effects of the implementation of green internal practices on sustainable or green performance. For this study, one hypothesis was tested concerning this relationship, which was supported. Like Afum et al., (2021), the findings of this study confirmed the relationship between the implementation of green internal practices and sustainable/green performance. The implementation of green internal practices has a significant positive impact on sustainable or green performance, supporting existing evidence from alternative contexts (Afum et al., 2021; Bour et al., 2019; Choudhary & Sangwan, 2019; Famiyeh et al., 2018; Li et al., 2018). R-A theory identified the implementation of green internal practices as an organisational resource (P6). This can be seen as a comparative advantage if management identify the correct resource assortment and leads to superior financial performance (Bicen, 2021; S. D. Hunt, 2018; S. D. Hunt & Morgan, 1996). The direct impact of GIP on GP indicates the resource characteristics (P7). This notion is explained in Section 4.4, verifying how the implementation of green internal practices influences the outcome of a superior competitive advantage resulting in sustainable/green performance.

7.6.2 ANALYSIS OF MODERATING EFFECTS

An outcome summary of the developed hypotheses is presented in Sections 4.6.1. As shown in **Table 7.1** three hypotheses were tested for moderation of which only one was

supported. The following sections provide further insights linking the findings to other relevant studies to contextualise or justify the findings of this study.

7.6.2.1 THE MODERATING EFFECT OF GMV ON GCUO AND GIP

It is proposed that green management values moderate the relationship between green customer orientation and the implementation of green internal practices (H4a) (see Section 4.5.1.1), which was supported ($\beta = 0.071$, Sig. = 0.008). Hence, **H4a is supported** in F&B SMMEs in South Africa.

Green management values describe the values that management exhibits that are exclusively linked to nature, and explicit ecological attitudes or concerns (Schultz et al., 2004, p. 32). Existing literature associates personal values with sustainable conduct and leadership behaviours, with several scholars confirming a connection between the attitudes and personal values of managers and the implementation of environmental practices in their businesses (Cassells & Lewis, 2011; Williams & Schaefer, 2013). Several studies (Bansal & Roth, 2000; Nedelko & Potocan, 2021; Papagiannakis & Lioukas, 2012) have noted the significance of managers' personal values concerning environmental responsiveness, indicating that personal values do indeed predict managers' behavioural orientations (Nedelko & Potocan, 2021). According to R-A theory, values are considered as human motivation (P3) and if a business has this present the business would have constraint self-interest in maximizing profit i.e. owner-managers would consider the ethics around harming the environment and would rather ensure that customers are able to trust their businesses.

Literature indicates that green internal practices are affected by organisational attitudes (Bossle et al., 2016; Dangelico, 2016). Earlier literature also investigated the impact of green management values on commitment to sustainability (Jansson et al., 2017). While literature has identified environmental attitude as a moderating influence on the relationship between market orientation and environmental innovation (Liao, 2018), managers' personal values and their motivation per Zainol and Ayadurai (2011) influence the business and management's practices, thereby influencing the success of their businesses. Personal values represent the most influential leader characteristics (Ling et al., 2007b), and businesses' performance reflects the values and cognitive bases of powerful actors in the organisation. The findings of this study suggests that when F&B SMMEs have a green customer orientation, and the management displays green management values, it would greatly encourage or strengthen the implementation of green internal practices within their business in disseminating, interpreting, and analysing the information received from their customers,

demonstrating that they care for the environment and would do all they can to establish green practices. Subsequently, they would actively drive the adoption of these practices and actively participate in achieving sustainable development. When the level of green management values is more pertinent, the impact of green customer orientation on the implementation of green internal practices is strengthened. Alternatively, when the level of green management values is weak or low, the impact of green customer orientation on the implementation of green internal practices is weakened. R-A theory identified the implementation of green internal practices as an organisational resource (P6) and green management values as a human motivation (P3). Both of these variables, thus, can be seen as a comparative advantage if management identify the correct resource assortment, and incorporating them into the business strategy. The moderating role of green management values on the relationship between green customer orientation and its components and green internal practices indicates the resource characteristics (P7). This notion is supported in Section 4.5.1.1, explaining how green management values moderates the relationship between green customer orientation and the implementation of green internal practices.

7.6.2.2 THE MODERATING EFFECT OF GMV ON GCOO AND GIP

Green management values were hypothesised to moderate the relationship between green competitor orientation and the implementation of green internal practices (H4b) (see Section 4.5.1.2), which was not supported by the findings of this study ($\beta = -0.004$; Sig. = 0.874). Therefore, **H4b was not supported**, and therefore green management values **DOES NOT MODERATE** the relationship between green competitor orientation and the implementation of green internal practices.

In the literature green competitor orientation is described as a group of behaviours associated with acquiring, disseminating, and processing the environmental strategy information of competitors. Literature has shown that environmental attitude moderates the relationship between competitor orientation and green practices (Liao, 2018), although this evidence could not be confirmed in this study.

SMMEs, unlike their large counterparts, do not always have the necessary resources to effectively conduct competitor analysis and evaluate their competitors' environmental strategy. This is shortsighted and leads to their competitors eventually overtaking them making strides on improving their products, services, and so forth. Throughout the world, small businesses are increasing and thus need to change in differentiating their core products to become more competing, better positioning themselves and their service delivery (Zatezalo & Gray, 2000). However, this lack of resources may hamper

the efforts of SMMEs in the F&B industry in South Africa to effectively accomplish this, which may have influenced the findings for this study. Literature suggests that small business view competitor orientation differently to large businesses and are not long-termed orientated (Zatezalo & Gray, 2000), which may further explain the findings for this research study. Furthermore, R-A theory identified the implementation of green internal practices as an organisational resource (P6) and green management values as a human motivation (P3). In the study, green competitor orientation rather provides a competitive disadvantage for a business which has green management values to implement green internal practices. The competitive disadvantage may be associated with inefficient resource allocation to green internal practices, imperfect information, or competitors having better information and practices. The moderating role of green management values on the relationship between green competitor orientation and green internal practices indicates that this the resource characteristics (P7) is not met i.e. no impact is seen.

7.6.2.3 THE MODERATING EFFECT OF GMV ON GIFC AND GIP

Green management values were hypothesised to moderate the relationship between green inter-functional coordination and the implementation of green internal practices (H4c) (see Section 4.5.1.3). However, the results could not support the hypothesis ($\beta = 0.000$; Sig. = 0.987). **H4c was not supported**, and therefore green management values **DOES NOT MODERATE** the relationship between green inter-functional coordination and the implementation of green internal practices.

Green inter-functional coordination is the co-operation between various parts of a business that can produce, collect, and allocate environmental intelligence about the market, and inspire togetherness, communication, and trust between the different functional parts of the business to improve superior sustainable performance (Auh & Menguc, 2005a; C. H. Wang, 2020). Therefore, it plays a two-fold role in providing intelligence about the market and environment, as well as integrating the resources of the business to achieve its green customer orientation goals (Auh & Menguc, 2005b; Mohiuddin Babu, 2018). Literature has shown that environmental attitude does not moderates the relationship between inter-functional coordination and green practices (Liao, 2018), which is similar to the results in this study. Although green inter-functional coordination can ease communication throughout the business and facilitate the exchange of information about customers and competitors, it requires information about customers and competitors. If SMMEs do not focus on obtaining this information, it is not possible to have the synergistic effects between departments as they would not have enough knowledge to do so. This may be why the hypothesis was not supported

in this study. Furthermore, most of the respondents for this study had between 10 and 49 employees (44%) indicative of a small business, and the SMME may not have structured their business according to formal departments. The management may have taken the responsibility on themselves to identify the green practices that needed to be implemented, not involving staff members in a synergist manner, thereby negatively impacting the the green inter-functional coordination strategy. Furthermore, R-A theory identified the implementation of green internal practices as an organisational resource (P6) and green management values as a human motivation (P3). In the study, green inter-functional coordination rather provides a competitive disadvantage for a business which has green management values to implement green internal practices. The competitive disadvantage may be associated with inefficient resource allocation to green internal practices, imperfect information, or competitors having better information and practices. The moderating role of green management values on the relationship between green competitor orientation and green internal practices indicates that this the resource characteristics (P7) is not met i.e. no impact is seen.

7.6.3 ANALYSIS OF MEDIATING EFFECTS

A summary of the hypotheses is presented in Section 4.6.1. As shown in **Table 7.1**, three hypotheses were tested for mediation, all of which were supported. The following sections discusses this providing further insights linking the findings to other studies to contextualise or justify the findings of this study.

7.6.3.1 THE MEDIATING EFFECT OF GIP ON GCUO AND GP

It was proposed that the implementation of green internal practices mediates the relationship between green customer orientation and sustainable or green performance (H5a) (see Section 4.5.2.1). This was confirmed ($\beta = 0.2263$, Sig. = 0.000), and hence **H5a is supported** for F&B SMMEs in South Africa.

This finding was also true for other contexts (Borazon et al., 2022; Li et al., 2018; C. H. Wang, 2020), implying that green customer orientation directly or indirectly affects sustainable or green performance through the implementation of green internal practices. From the findings of this study, 52.69% of the total effect of green customer orientation on sustainable/green performance was mediated by the implementation of green internal practices. The significant direct effect of green customer orientation on sustainable/green performance supports earlier studies (e.g., (Borazon et al., 2022; Tjahjadi et al., 2020; C. H. Wang, 2020). Reviewing the indirect effect shows that the relationship derived through the implementation of green internal practices strongly

enhances green performance. A stronger customer orientation facilitates green practices fuelled by customers' environmental concerns (C. H. Wang, 2020). TO increase customers', repeat patronage, F&B SMMEs must attend to the environmental demands of their customers to implement green practices that would enhance their sustainable performance (Li et al., 2018). Management should explore market information about environment issues, to initiate new green practices to improve their business' sustainable/green performance. Furthermore, R-A theory identified the implementation of green internal practices as an organisational resource (P6) and green customer orientation as an informational motivation (P6). In the study, green customer orientation provides a competitive advantage for a business which has implemented green internal practices and achieves superior competitive advantage. Market position of competitive advantage is also achieved and not only leads to superior financial performance, but also social and environmental performance i.e. sustainable/green performance. The mediating role of green internal practices on the relationship between green customer orientation and sustainable/green performance indicates that this the resource characteristics (P7) is indirect. The combining of the resources results in this comparative advantage and superior sustainable/green performance.

7.6.3.2 THE MEDIATING EFFECT OF GIP ON GCOO AND CP

It was proposed that the implementation of green internal practices mediates the relationship between green competitor orientation and sustainable or green performance (H5b) (see Section 4.5.2.2), which was confirmed ($\beta = 0.2150$, Sig. = 0.000). Therefore, **H5b is supported** in the context of F&B SMMEs in South Africa.

This finding confirms findings in alternative contexts (Borazon et al., 2022; Li et al., 2018; C. H. Wang, 2020) that reported that the effect of green customer orientation on sustainable or green performance is partially mediated by the implementation of green internal practices. This implies that green competitor orientation directly or indirectly affects sustainable or green performance through the implementation of green internal practices. This study found that 48.87% of the total effect of green competitor orientation on sustainable/green performance is mediated by the implementation of green internal practices. The direct effect of green competitor orientation on sustainable or green performance is significant supporting previous studies (e.g., (Borazon et al., 2022; Tjahjadi et al., 2020; C. H. Wang, 2020) and reviewing the indirect effect shows that the relationship derived through the implementation of green internal practices strongly contributes to sustainable or green performance. A stronger competitor orientation relates to the more deliberate implementation of green practices

being implemented, using dynamic environmental information about competitors and their green practices in conjunction with existing and practical environmental knowledge. Furthermore, R-A theory identified the implementation of green internal practices as an organisational resource (P6) and green competitor orientation as an informational motivation (P6). In the study, green competitor orientation provides a competitive advantage for a business which has implemented green internal practices and achieves superior competitive advantage. Market position of competitive advantage is also achieved and not only leads to superior financial performance, but also social and environmental performance i.e. sustainable/green performance. The mediating role of green internal practices on the relationship between green competitor orientation and sustainable/green performance indicates that this the resource characteristics (P7) is indirect. The combining of the resources results in this competitive advantage and superior sustainable/green performance.

7.6.3.3 THE MEDIATING EFFECT OF GIP ON GIFC AND GP

The hypothesis that the implementation of green internal practices mediates the relationship between green inter-functional coordination and sustainable/green performance (H5c) (see Section 4.5.2.3) was confirmed ($\beta = 0.1357$, Sig. = 0.000), hence **H5c is supported** in F&B SMMEs in South Africa.

This finding supports earlier research in alternative contexts (Borazon et al., 2022; Li et al., 2018; C. H. Wang, 2020) that reported that the effect of green inter-functional coordination on sustainable or green performance is partially mediated by the implementation of green internal practices. This implies that green inter-functional coordination directly or indirectly affects sustainable or green performance through the implementation of green internal practices. In this study, 65.44% of the total effect of green inter-functional coordination on green performance was mediated by the implementation of green internal practices. The direct effect of green inter-functional coordination on sustainable/green performance is significant supporting previous studies (e.g., (Borazon et al., 2022; Tjahjadi et al., 2020; C. H. Wang, 2020). A review of the indirect effect showed that the relationship derived through the implementation of green internal practices strongly contributes to sustainable or green performance. Unlike the findings by C.H. Wang (2020) indicating full mediation of the relationship between green inter-functional coordination and sustainable performance, and no direct relationship between green inter-functional coordination and sustainable performance, this study showed partial mediation and a direct positive effect between the relevant constructs. A stronger inter-functional coordination relates to the implementation of more green practices throughout the business as individuals as well

as groups in various sections of the business implement these practices synergy. Hereby, sustainable performance is improved. Furthermore, R-A theory identified the implementation of green internal practices as an organisational resource (P6) and green inter-functional coordination as an informational motivation (P6). In the study, green inter-functional coordination provides a comparative advantage for a business which has implemented green internal practices and achieves superior competitive advantage. Market position of competitive advantage is also achieved and not only leads to superior financial performance, but also social and environmental performance i.e. sustainable/green performance. The mediating role of green internal practices on the relationship between green inter-functional coordination and sustainable/green performance indicates that this the resource characteristics (P7) is indirect. Combining available resources provides this competitive advantage and superior sustainable or green performance.

7.7 THE REVISED CONCEPTUAL MODEL

The conceptual model for the study that originally was developed based on literature, is displayed in Figure 4.2. According to the empirical results presented in Chapter 6 – Research Results, as well as the summary outcomes of the hypotheses presented in **Table 7.1**, the conceptual model has been updated to reflect the statistically significant positive results of this research and is presented in **Figure 7.2** accordingly.

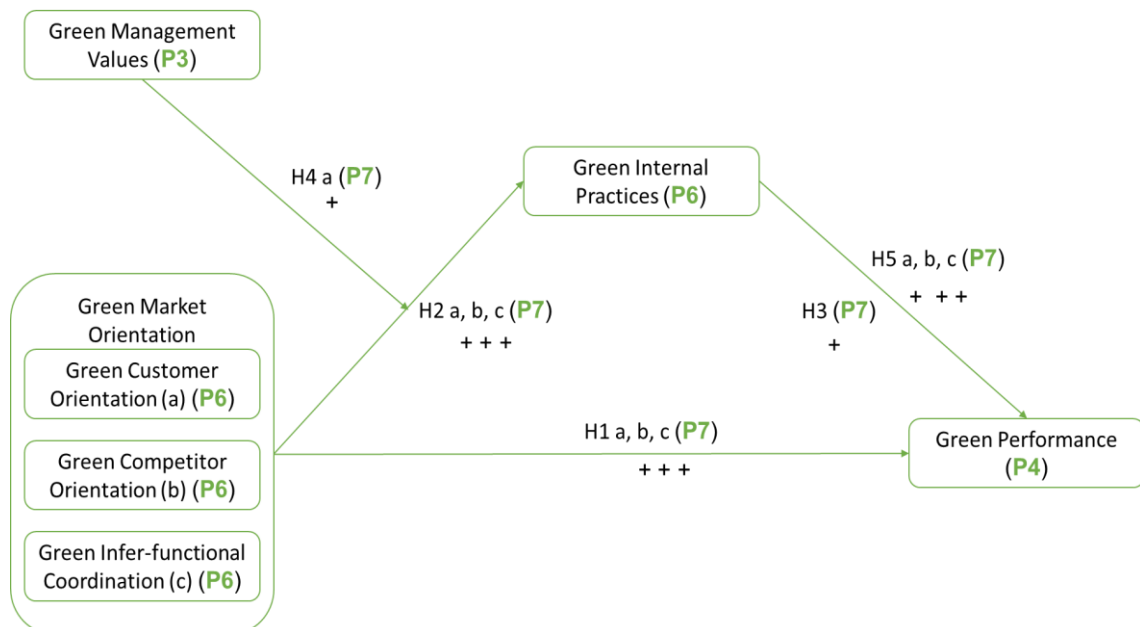


Figure 7.2 - Simplified conceptual model

Note: Representation of the conceptual model for this study. Own work.

The results for this study revealed a significant, strong positive relationship between green customer orientation (H1a), green competitor orientation (H1b), green inter-

functional coordination (H1c) and sustainable or green performance. A statistically significant strong positive relationship was also confirmed between green customer orientation (H2a), green competitor orientation (H2b), green inter-functional coordination (H2c) and the implementation of green internal practices. Furthermore, a significant, strong positive relationship between the implementation of green internal practices and sustainable or green performance (H3) was reported.

The moderating effect of green management values on the relationship between green customer orientation and the implementation of green internal practices (H4a) was found to be statistically significant, strong, and positive. For green competitor orientation (H4b) and green inter-functional coordination (H4c) the moderating effect of green management values on their relationships with the implementation of green internal practices was not statistically significant.

The mediating effect of the implementation of green internal practices on the relationship between green customer orientation (H5a), green competitor orientation (H5b), green inter-functional coordination (H5c) and sustainable or green performance was statistically significant, strong, and positive. The revised model is presented in **Figure 7.3.** and in **Appendix N.**

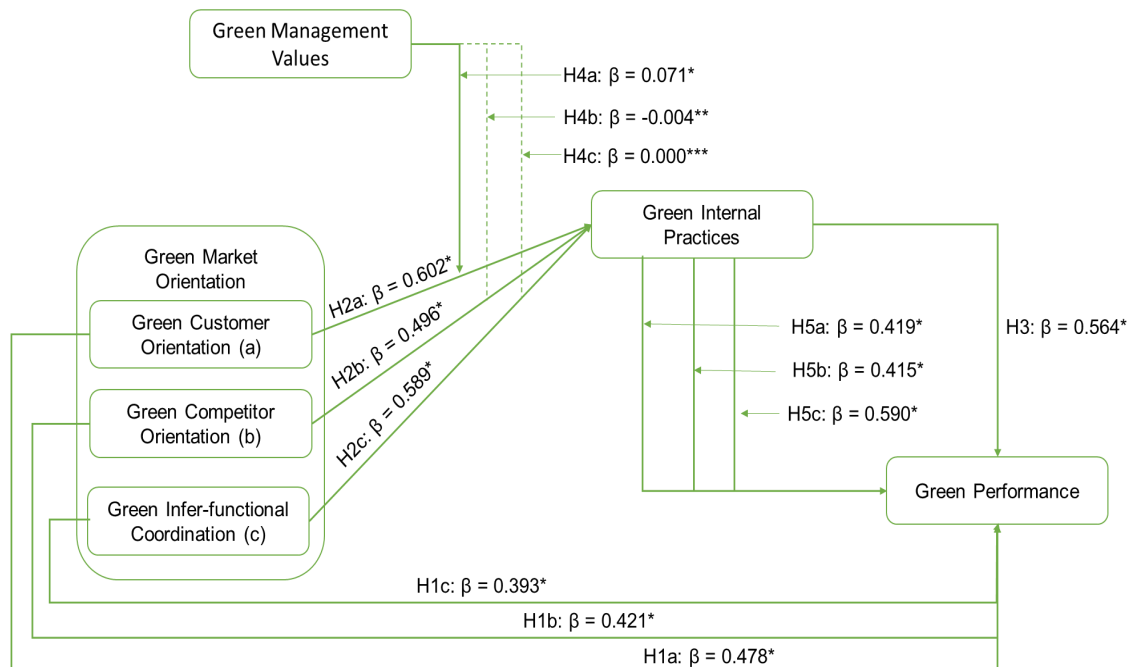


Figure 7.3 - The revised conceptual model

Note. *Sig = 0.000, ** Sig >0.000 (0.874), ***Sig >0.000 (0.987). Dotted lines indicate paths that are not statistically significant; solid lines indicate significant paths. An overview of the revised conceptual model. Own work.

7.8 CHAPTER SUMMARY

This chapter discussed the findings of this research in accordance with the hypotheses that were deduced from literature, and the proposed conceptual model of the study as illustrated in Chapter 6. The quality of the study was discussed, attending to the measurement scales, specifically explicating the validity and reliability statistics to indicate the merit of further analytical procedures. The proposed relationships between selected constructs in the study were discussed and evidence was provided for all the significant relationships between green market orientation and its components as well as sustainable/green performance, which were all supported. The significant relationships between green market orientation and its components and the implementation of green internal practices, which were all supported, were discussed in terms of extant literature.

The moderating effect of green management values was discussed in terms of its influence on the conceptual model. The confirmed moderating effect of green management values on the relationship between green customer orientation and the implementation of green internal practices was discussed. Failure to support the hypotheses relating to the moderating effect of green management values on the relationship between green competitor orientation and the implementation of green internal practices, as well as the relationship between green inter-functional coordination and the implementation of green internal practices were attended by providing possible reasons for the outcomes.

The mediating effect of the implementation of green internal practices were discussed in terms of its influence on the conceptual model. The hypotheses pertaining to the mediating effect of the implementation of green internal practices on the relationships between green customer orientation and sustainable performance; between green competitor orientation and sustainable performance; and between green inter-functional coordination and sustainable performance were explicated, acknowledging existing literature in alternative contexts.

Per the R-A theory, green market orientation strategy can be successful because P5 assumes that information of the F&B SMME is imperfect and costly, and P6 indicates that information can be a resource. This means that gathering information about customers and competitors (present and potential) and using it to direct strategy may enhance the ability of the SMME to efficiently and/or effectively produce market offerings that have value for some market segments.

If a F&B SMME has green market orientation and its competitors do not, then this type of strategy may be a resource that moves the SMME marketplace position upwards and to the right in **Figure 1.4** creating a position of competitive advantage. Information is costly as pointed out by P5 and if implementing a green market orientation is costly, the position of the SMME will shift downwards to the left in **Figure 1.4** creating a position of competitive disadvantage. Thus, it depends on the relative value/relative cost ratio of green market orientation implementation.

The effective implementation of GMO may be seen according to Hunt and Lambe (2000) as an organizational competence because it consists of a synergistic combination of more basic resources. In implementing a GMO strategy, SMMEs would need to deploy tangible resources such as information systems to store, analyse and disseminate information about competitors and customers (S. D. Hunt & Derozier, 2004). Furthermore, using intangible resources such as policies that encourage GMO action must be used to implement GMO so that managers are able to utilise the information obtained from customers and competitors.

The concluding chapter discusses the implications of the outcomes of the study from a theoretical- as well as a practical, business perspective, also disclosing limitations and formulating suggestions for future research.

CHAPTER 8: CONCLUSIONS

"Cooking is all about people. Food is maybe the only universal thing that really has the power to bring everyone together. No matter what culture, everywhere around the world, people eat together."

- (Guy Fieri Quotes, n.d.)

8.1 CHAPTER INTRODUCTION

American restaurateur, author, and Emmy Award-winning television presenter Guy Ramsay Fieri so aptly said that food has the power to bring everyone together not matter what culture you are, and that people eat together. Similarly, this concluding chapter ties the different chapters together through a cohesive summary of the research process and findings.

The previous chapter, Chapter 7 – Discussion of Results, interpreted and discussed the study's findings in terms of existing literature that was presented in Chapter 3, and which formed the foundation for the hypotheses. New understandings and fresh insights about environmental sustainability were explained. **Firstly**, the breakdown of green market orientation into its three components helped in clarifying the GMO-performance link, and this study's findings confirmed that the three components of GMO are determinants for sustainable/green performance. **Secondly**, the three components of GMO significantly and positively impact the implementation of green internal practices, supporting previous literature in different contexts that were mostly not service-orientated. The three components are confirmed to be determinants for the implementation of green internal practices. **Thirdly**, the implementation of green internal practices facilitates superior sustainable/green performance. **Fourthly**, the relationship between green customer orientation and the implementation of green internal practices is moderated by green management values, although green management values do not moderate the relationships between green competitor orientation, green inter-functional coordination, and the implementation of green internal practices. **Fifthly**, the relationship between GMO and its components and sustainable/green performance is partially mediated by the implementation of green internal practices.

This chapter concludes this PhD study, recapping the research objectives and questions. The implications, both theoretical and practical, of the findings are discussed, followed by the limitations encountered, which are discussed. Possibilities

for future research are presented. The design of the content of this chapter is displayed in **Figure 8.1**.

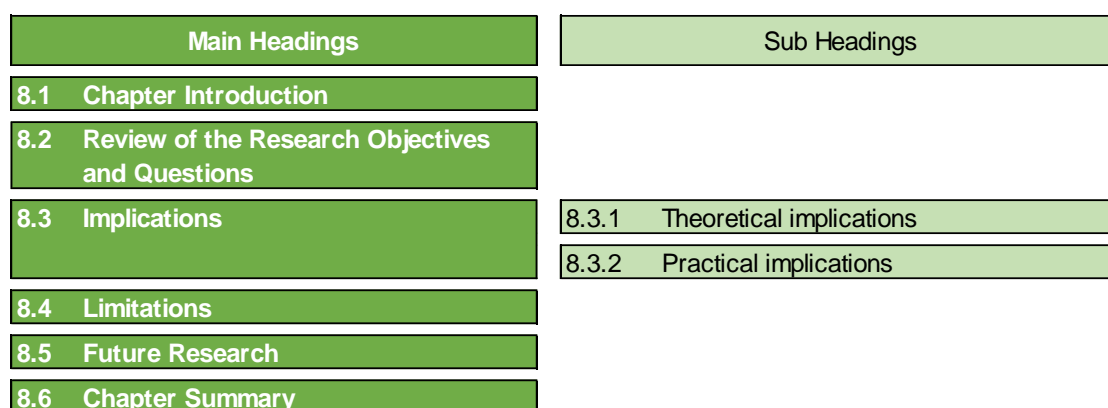


Figure 8.1 – Structure of Chapter 8

Note: An overview of the structure and layout of the chapter. Own work.

8.2 REVIEW OF THE RESEARCH OBJECTIVES AND QUESTIONS

This research problem indicated under-reached areas in the domains of environmental studies and sustainability, particularly in the services sector in developing countries, from an African perspective. Green market orientation has been reviewed in a South African setting before, although only from the hospitality industry, concerning non-financial sustainable performance (Fatoki, 2019b), not considering green internal practices or any other mediators or moderators that could impact businesses' performance. Neither did the authors attend to the relationship between green market orientation and non-financial sustainable performance. This led to the question of whether similar significant relationships are true within other industry sectors.

Previous studies have called for future research in other developing markets (Jiang et al., 2020; C. H. Wang, 2020), and other industry sectors (Abdulsamad et al., 2021; Tjahjadi et al., 2020; C. H. Wang, 2020) including newly industrialised countries where concern about the environment has grown. This study identified six issues that require scholarly attention namely: **Firstly**, considering the current economic model of growth at all costs, considering that businesses can no longer continue like before, as this model cannot be continued to be supported. **Secondly**, considering the downfall of many businesses that were unable to sense and adapt to changes in the marketplace (V. Kumar et al., 2011), businesses need to become more aware of a *market orientation*. **Thirdly**, a market orientation that was previously driven by profits is no longer sustainable and must consider market needs to survive. **Fourthly**, due to SMMEs influence in the marketplace, they interact with consumers who increasingly

prefer green products (P. Kumar & Ghodeswar, 2015), which makes a green market orientation a comparative advantage for businesses. **Fifthly**, small businesses are now obliged to consider a green market orientation as a way of conduct, which not only complies to environmental regulations, but also allocates resources to develop organisational capabilities (Sharma & Sharma, 2011), including green management values that protect the environment (Aragón-Correa & Sharma, 2003; Sharma & Sharma, 2011). **Sixthly**, many motivations push businesses to embrace voluntary environmental management on corporate level (Dangelico, 2015), explaining businesses' increased efforts to include environmental sustainability into their activities and strategies. Considering all of the above, it was not clear what F&B SMMEs in South Africa consider doing or are doing to improve their performance. Additionally, it was uncertain whether the implementation of green internal practices is significant, and what other factors may enhance businesses' green performance. Furthermore, it was unclear to what extent green management values held by F&B SMMEs together with green market orientation, impact the green performance of the SMME.

The above-mentioned uncertainties resulted in the following primary research question that directed the research:

Primary Research Question – How do South African F&B SMMEs' environmental values, in accord with their environmentally focussed market orientation, support the implementation of their sustainability practices, and improve their sustainable performance?

Supplementary research questions to the study also directed the research:

Supplementary Research Question 1 (RQ1) – What is the relationship between green market orientation and green performance in F&B SMMEs in South Africa?

Supplementary Research Question 2 (RQ2) – What is the relationship between F&B SMMEs' green market orientation and their implementation of green internal practices?

Supplementary Research Question 3 (RQ3) – What is the relationship between the implementation of green internal practices and green performance in F&B SMMEs in South Africa?

Supplementary Research Question 4 (RQ4) – What is the possible moderating influence of green management values in the relationship between green market orientation and the implementation of green practices in F&B SMMEs in South Africa?

Supplementary Research Question 5 (RQ5) – What is the mediating influence of the implementation of green internal practices in the relationship between green market orientation and green performance in F&B SMMEs in South Africa?

The purpose of the study was to expand existing literature by providing an in-depth analysis of the multidimensional construct of *market orientation* from an environmental perspective, which is referred to as *green market orientation*. This study explored the impact of a green market orientation on the *green performance of SMMEs* in a specific context (South Africa, in the F&B industry). *Green market orientation* was deconstructed into *green customer orientation*, *green competitor orientation*, and *green inter-functional coordination*. Reviewing the three components of *green market orientation* provided a more nuanced view of the construct and provides detailed information, as well as relational aspects, which align with the core aspects of the R-A theory. Green performance considers the environmental-, social- as well as economic performance of a business. Using the triple bottom line approach for sustainability (Elkington, 1994), was important for this study as it provided a more holistic view of the construct, which previous studies did not consider. The research also considered the mediating effects of the implementation of green internal practices on the relationship between green market orientation and green performance. Furthermore, the research examined the moderating role of green management values on the relationship between green market orientation, the implementation of green internal practices, and the ultimate impact on green performance. These mediating and moderating constructs are enhancers of superior performance leading to competitive advantage.

8.3 IMPLICATIONS

This study makes several contributions, which have theoretical and practical implications. These are discussed next.

8.3.1 THEORETICAL IMPLICATIONS

Theoretically, this study contributes to the literature in the following ways:

Firstly, this study develops a comprehensive research model that tests the interactions (direct and indirect effects) between green market orientation (i.e., green customer orientation, green competitor orientation, green inter-functional coordination),

green management values, green internal practices, and sustainable or green performance (green financial performance, green environmental performance, green social performance) by collecting data in a specific important services sector, from an emerging country perspective.

Secondly, this study extends the work by Wang (2020) and Borazon et al., (2022) on the extension of the market orientation concept from an environmental perspective i.e., green market orientation incorporating green issues in combination with other selected variables. Although studies have been conducted before on green market orientation in various developing market sectors, the business contexts were vastly different – being the electric and electronic industry in Taiwan (Borazon et al., 2022); logistic industry in Vietnam (Ngo, 2022b); small and medium enterprises in Vietnam (Ngo, 2022a); high-tech in Taiwan (C. H. Wang, 2020), and manufacturing in China, Vietnam, and Indonesia (Li et al., 2018; Ngo, 2022a; Tjahjadi et al., 2020), – all in an Asian context that differs vastly from South Africa. A previous study in the hospitality industry that was conducted in South Africa (Fatoki, 2019b) reviewed green market orientation as an entity, not distinguishing its components, and focusing solely on non-financial sustainable performance. Not to be confused with *green marketing orientation*, which is also a novel construct, **green market orientation** is an extension of market orientation from an environmental perspective. This study extends the discussion by C.H. Wang (2020), who showed that green market orientation was in the nascent stage of research. However, this has become a growing area of interest and holds promise for future studies. This research study is positioned to contribute to this novel construct, extending literature about market orientation to provide more insights about the construct from an environmental perspective. Gaps identified, and calls for future research included recommendations to attending to the construct green market orientation and examining the relationships among the three components (C. H. Wang, 2020) (which this study did); conducting research in other countries (Ngo, 2022b) (this study was conducted in South Africa); other industries (Borazon et al., 2022) (this study diverted attention to the F&B services industry); and in developing markets (Green et al., 2015) ((South Africa is a prominent emerging market in Africa). This study acknowledged these gaps and formulated the research questions accordingly.

Thirdly, the study extends the theoretical understanding of the green market orientation – sustainable/green performance relationship by explicating the mechanism under which each component of green market orientation influences sustainable/green performance. Using R-A theory to examine the relationship, the positive significant findings reported in this study, address a gap identified in the literature where the relationship between green market orientation and

sustainable/green performance was found not to be supported (Hult et al., 2005; Ngo, 2022b; Nwokah, 2008; Sin et al., 2003). Previous studies have argued that market orientation is an informational resource (S. D. Hunt & Derozier, 2004; S. D. Hunt & Morgan, 2005) that contributes to the business differentiation and delivery of customer value that enhances a business' competitive advantage. Neither have previous studies reported before that all three components of the green market orientation construct have a significant positive relationship with sustainable/green performance (Ngo, 2022b; C. H. Wang, 2020). This study concluded that each of the three components of a green market orientation (green customer orientation, green competitor orientation, and green inter-functional coordination) had significant and positive relationships with sustainable/green performance.

With a call from Hunt and Morgan (2005) for more research using R-A theory to assess other types of resources and their effects on firm performance, this study addressed the gap by looking at green market orientation (including green customer orientation, green competitor orientation, green inter-functional coordination), green management values, and green internal practices in F&B SMMEs in South Africa and their direct, indirect, moderating, and mediating effects on each other namely the resource characteristics (P7). Green market orientation (including green customer orientation, green competitor orientation, green inter-functional coordination) were found to be informational resources (P6), whilst green internal practices were organizational resource (P6) as per R-A theory. Green management values were considered as human motivation (P3). Per R-A theory the assortment of resources combined and chosen by management (P8) provided a competitive advantage, which in turn achieved the firm objective (P4) of superior financial performance. The study confirmed not only superior financial performance but also the advancement of environmental and social performance i.e. sustainable/green performance. Furthermore, it confirmed that firms that possess a choice of resources, create relative value enabling a competitive advantage by combining resources that enhance their market offering. The right market offering, and skilful combination of resources contribute to superior financial performance. Having confirmed this, the study provided a theoretical contribution in identifying additional resources and their impacts on improved business performance.

Fourthly, with a call by several scholars for more research on green practices in small companies (Hillary, 2004; Kassinis & Soteriou, 2003; K. Lee, 2009), this study addressed the gap by focusing on SMMEs in the F&B industry in South Africa. Furthermore, the model presented as the outcome of the study, extends our understanding of the green market – green internal practices relationship explicating

how each component of green market orientation influences the implementation of green internal practices. The model presents the effects of the individual components of green market orientation on the implementation of green internal practices providing new insights into the relationships that are at play when adopting a green market orientation. This addresses a gap identified in the literature as the effect of each of the components of the main construct green market orientation, on the implementation of businesses' green internal practices is not yet fully researched (Crick, 2021; Tsiotsou, 2010). This study also indicates the effect of the implementation of green internal practices on businesses' sustainable/green performance. It extends the literature in terms of an understanding of the green internal practices – sustainable/green performance relationship by explicating the mechanisms of implementation of green internal practices, addressing a gap identified in the literature (Maas et al., 2016; Nallusamy et al., 2015). Noteworthy, is the confirmation in this study that the implementation of green internal practices has a positive significant relationship with sustainable/green performance.

Fifthly, previous studies (Abdulsamad et al., 2021; J. K. Han et al., 1998) claimed that there is a missing link between businesses' market orientation and performance, that warrants the testing of mediating variables. This study highlights the role of green market orientation as a marketing strategy that enables the implementation of green internal practices, to enhance sustainable performance. This study addresses this gap in the literature by indicating the mediating role of green internal practices between green market orientation and sustainable performance. Findings indicated in the model, show that all three components of green market orientation i.e., green customer orientation, green competitor orientation, and green inter-functional coordination are significantly and positively related to the sustainable performance of a business, being mediated by the implementation of green internal practices. This outcome provides an understanding of the businesses' implementation of green internal practices indicating the link in the GMO-performance relationship.

Sixthly, prior studies (Afum et al., 2021; C. H. Wang, 2020) advocate for moderators to be included in future studies. This study included green management values as a moderator. The model that is based on the findings indicates that green management values moderates the relationship between *green customer orientation* and the implementation of *green internal practices*. The model furthers our understanding of the impact of green management values' role in ensuring the implementation of green internal practices in a business with a green customer orientation addressing a gap in the literature (C. H. Wang, 2020).

8.3.2 PRACTICAL IMPLICATIONS

This study presents some key practical implications to be noted by business leaders and managers in the F&B sector.

Firstly, the findings have provided evidence that a strong green market orientation results in strong sustainable or green performance. This serves to direct the actions of the SMME to detect and act upon the demands and needs of their customers concerning environmental sustainability. By detecting and acting accordingly, the SMMEs can continuously improve business processes also considering the environment from a customer's perspective. A business that can robustly discover and advance its environmental-related competencies, products, and services, can allow green market orientation to develop as a VRIN resource (Li et al., 2018). These finding can influence managers to adopt a green market orientation as a way of conduct, which plays a vital role in “corporate greening”, in developing and implementing environmental driven services, and products that would attain superior performance (Daddi et al., 2011; Fraj et al., 2013; Lin et al., 2020).

Secondly, this study concludes that green market orientation per its three components (green customer orientation, green competitor orientation, and green inter-functional coordination), enhances the implementation of green internal practices in a business, suggesting that businesses should correctly identify and realise customer needs and concerns to secure environmentally friendly establishments and manufacturing companies. They should be conscious to collect, monitor, and analyse the business strategies of their competitors and attempt cross-functional collaboration to foster and project an environmentally conscious culture. From the R-A theory perspective, managers can choose the appropriate strategy (such as green market orientation and its components) and utilize their resources in combination with other complex resources (i.e. green internal practices), to gain a competitive advantage as the foundation for superior sustainable/green performance.

Thirdly, the findings indicate that the implementation of green internal practices enhances sustainable performance. This provides management with a blueprint on how to build competencies and improve skills through the implementation of green internal practices. This will also enhance the businesses' compliance to regulations and environmental goals, providing sustainable performance – economically through cost reduction for fines, socially through improving the environment of the community, and environmentally by reducing waste and pollution. From a medium-term perspective, SMMEs should incorporate green internal practices such as pollution

prevention, waste management, and sustainable development in their processes. With the increase in ecological awareness and international environmental protection policies, SMMEs should revise and improve their internal practices to maintain a competitive advantage amid prevailing environmental issues that are not bound to be solved soon. From a long-term perspective, SMMEs should consider greening their entire supply chain paying close attention to customer and market demands, and reviewing future trends that will enhance their green internal practices and sustainable performance.

Fourthly, this study found that the implementation of green internal practices mediates the relationship between green market orientation and sustainable performance. The implementation of green internal practices can lower costs, and improve quality, distribution, operational flexibility, and performance (Famiyeh et al., 2018). Management of F&B establishments, therefore, should invest in practices that would enhance sustainable performance and improve conformity to environmental regulations and standards. Meeting consumers' needs and demands will improve the reputation of a business, boosting customer patronage.

Fifthly, this study concludes that green management values moderate the relationship between green customer orientation and the implementation of green internal practices. Businesses can, therefore, implement practices such as recycling, waste management, pollution prevention, creating fertile ground for sustainability values to deepen and spread within and across businesses. The implementation of green internal practices can impact the SMMEs, as well as its social environment strengthening environmental attitude and related values within the community. The "FYN" restaurant in Cape Town is a perfect example using local ingredients and approaching local fisherman and farmers to purchase products, for their restaurant. Hereby, the restaurant was the recipient of the award for the world's best sustainable restaurant. When the management of SMMEs demonstrate green management values their commitment to environmental preservation/conservation is evident. The implementation of green internal practices by employing a green customer orientation is the foundation for enhanced sustainable/green performance. Manager's commitment to adopt green customer orientation as a resource will unite their business in implementing better green internal practices, boosting sustainable performance.

8.4 LIMITATIONS

Limitations noted after completion of this study present useful avenues for future research.

Firstly, the study started during the COVID-19 pandemic in 2021, which was an unprecedented context and a profound shift from the norm. The crisis brought focus back to the relationship between business and society due to the economic and social impacts (Lehmann et al., 2021). The pandemic severely impacted businesses negatively with many small businesses – especially in the food and beverage industry closing down. This complicated the data collection process as managers of F&B SMMEs were in survival mode and were not necessarily willing to spend time participating in the survey. This led to a lower than anticipated sample size and a drawn data collection process.

Secondly, with the implementation of the POPI Act, obtaining personal information about SMMEs was a challenge. Even though contacts had been established within CIPC, no contact details of SMMEs were permitted to be shared and the database obtained was not fully functional as information was not updated correctly. The sampling process, therefore, had to be adapted.

Thirdly, the time horizon for this study was cross-sectional, which excluded richer evidence of longer-term effects. In practice, a green market orientation is a strategic orientation that takes time to implement. A longitudinal study is advisable to accrue evidence of the outcome. This study, however, never intended to measure outcomes, and focused on managers' perceptions and experiences of the outcomes of their existing and envisaged strategies.

Fourthly, the survey questionnaire was sent to owners and senior managers of the F&B SMMEs as they were considered the decision-makers within the business. Personnel appointed on different levels in a business may make valuable contributions as they are often more involved in the everyday decisions and outcomes of a food establishment.

Fifthly, the survey method used for data collection on subjective assessments of businesses' operations, and therefore, self-reported performance measures may be somewhat biased even though respondents were assured that information would not be linked to them or their businesses in the final report. Incorporating data from businesses' annual reports may be very useful to ensure more objective findings.

Lastly, during the data collection process, despite continuous follow-up emails and requests, the response rate was low, and a marketing consulting agency was employed to collect responses through structured interviews. Even though the field workers were

properly trained and advised to use easy-to-understand language, it is possible that respondents' understanding and interpretation of all the constructs may have been affected.

Notwithstanding, this research has provided valuable insights into the effect of green market orientation and green management values on the implementation of green internal practices and sustainable/green performance. The limitations mentioned serve as guidelines for future research as indicated in the next section.

8.5 FUTURE RESEARCH

Several possibilities exist for future research based on the experience of, and outcomes of this study.

Firstly, exploratory factor analysis (EFA) was conducted in this study as the measurement instrument using the scales from C.H. Wang (2020) as a starting point and adding other scales and questions to the instrument. EFA confirmed the scales and factors for the instrument. Future research can use the measurement instrument of this study and conduct confirmatory factor analysis to verify the factor structure for the variables used in this study to establish a scale for future use.

Secondly, delineating green market orientation into its three components expanded insights and nuances on the role of these constructs and their relationship with sustainable performance. Future research can continue to explore green market orientation as a multidimensional construct and identify other variables that may enhance sustainable performance when implementing a green market orientation as a strategy. One issue that came to the fore was green supply chain management.

Thirdly, sustainable, or green performance is a multidimensional construct. In as much as this study identified financial, social, and environmental components, the factor analysis distinguished four empirical factors which deserve further attention. Future research can focus on these factors and expand the content to establish a better measurement scale. Future studies could furthermore investigate the relationship between the different components and their interactive effect on green performance.

Fourthly, as green market orientation is still a novel concept, most of the reported studies conducted have been quantitative in nature. Future research may use

qualitative means to gain in depth information about the constructs and related components.

Fifthly, green internal practices include several aspects including operational practices, innovation, environmental management practices, and green supply chain management practices. Future research should focus on specific dimensions, exploring how the implementation of these specific practices enhance businesses' green performance.

Sixthly, subjective assessment was conducted in this study using a survey method. Future research can incorporate objective assessment measures, including annual reports, environmental impact assessments, and similar reports which are publicly available to assist in gaining in depth information about the business, industry, and their impact on the environment and society.

Lastly, longitudinal studies are recommended, as explained earlier, to further insights on green market orientation as a strategic orientation,

8.6 CHAPTER SUMMARY

This chapter discussed the research objectives and questions for this study before stating the implications of the study's findings presenting theoretical and practical contributions of the study to highlight the merit of this doctoral study (i.e., the benefits and value it has brought to scholars and practitioners). In addition, it has indicated ways in which future studies may be conducted building on the themes of this PhD study.

***“FOOD, IN THE END, IN OUR OWN TRADITION, IS
SOMETHING HOLY. IT’S NOT ABOUT NUTRIENTS
AND CALORIES. IT’S ABOUT SHARING. IT’S ABOUT
HONESTY. IT’S ABOUT IDENTITY”***

(LOUISE FRESCO QUOTE, N.D.)

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APPENDICES

Appendix A – Market orientation definition, components, and perspectives

Author	Definition	Core components	Scale	Perspective
<i>Kohli & Jaworski (1990)</i>	“The organisation-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organisation-wide responsiveness to it” (Kohli & Jaworski, 1990, p. 3)	Intelligence generation Intelligence dissemination Organisation-wide responsiveness	MARKOR (Kohli et al., 1993)	Behavioural perspective
<i>Narver & Slater (1990) Jaworski & Kohli (1993)</i>	“The organisation culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers, and thus, continuous superior performance for the business” (Kohli & Jaworski, 1990, p. 53; Narver & Slater, 1990, p. 21))	Customer orientation Competitor orientation Inter-functional coordination	MKTOR (Narver & Slater, 1990)	Cultural perspective
<i>Deshpandè, Farley, & Webster (1993)</i>	“The set of beliefs that puts the customer’s interest first, while not excluding those of all other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise” (Deshpandè et al., 1993, p. 27)	Organisational culture Customer orientation Organisational innovativeness		
<i>Oakley (2012)</i>	“A firm that is market-oriented would be customer-focused, one which coordinates and plans with marketing as a function of the entire organisation, and one which is externally focused” Oakley, 2012, p. 1096)	Customer focus Coordination and planning External focus	-	Behavioural and cultural perspectives

Note. The author’s compilation shows the various definitions for market orientation, the respective core components of each definition, the scales that are applicable to each definition where relevant, and the perspectives that it represents. Own work.

Appendix B – Definition of enterprises

Column 1	Column 2	Column 3	Column 4
Sectors or sub-sectors in accordance with the standard Industry 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
Transportation, 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

Note: Definition of enterprises. Adapted from Revised Schedule 1 of the National Definition of Small Enterprise in South Africa, 2019. www.gpwonline.co.za. Copyright (2019) South African Government Gazette No. 399 110. Reprinted with permission.

Appendix C – Research question and related hypotheses

No.	Primary Research Question	No.	Supplementary Research Question	No.	Hypothesis
1.	How do South African F&B SMMEs' environmental values, in accord with their environmentally focussed market orientation, support the implementation of their sustainability practices, and improve their sustainable performance?	RQ1.	Supplementary Research Question 1 (RQ1) – What is the relationship between green market orientation and green performance in F&B SMMEs in South Africa?	H1a	Green customer orientation is directly and positively related to green performance among F&B SMMEs in South Africa
				H1b	Green competitor orientation is directly and positively related to green performance among F&B SMMEs in South Africa
				H1c	Green inter-functional coordination is directly and positively related to green performance among F&B SMMEs in South Africa
		RQ2.	Supplementary Research Question 2 (RQ2) – What is the relationship between F&B SMMEs' green market orientation and their implementation of green internal practices?	H2a	Green customer orientation is directly and positively related to the implementation of green internal practices among F&B SMMEs in South Africa
				H2b	Green competitor orientation is directly and positively related to the implementation of green internal practices among F&B SMMEs in South Africa
				H2c	Green inter-functional coordination is directly and positively related to the implementation of green internal practices among F&B SMMEs in South Africa
		RQ3	Supplementary Research Question 3 (RQ3) – What is the relationship between the implementation of green internal practices and green performance in F&B SMMEs in South Africa?	H3	Green internal practices is directly and positively related to green performance among F&B SMMES in South Africa
		RQ4	Supplementary Research Question 4 (RQ4) – What is the possible moderating influence of green management values in the relationship between green market orientation and the implementation of green practices in F&B SMMEs in South Africa?	H4a	The relationship between green customer orientation and the implementation of green internal practices is moderated by green management values among F&B SMMEs in South Africa
				H4b	The relationship between green competitor orientation and the implementation of green internal practices is moderated by green management values among F&B SMMEs in South Africa
				H4c	The relationship between green inter-functional coordination and the implementation of green internal practices is moderated by green management values among F&B SMMEs in South Africa

No.	Main research question	No.	Sub- question	No.	Hypothesis
1.	How do South African F&B SMMEs' environmental values, in accord with their environmentally focussed market orientation, support the implementation of their sustainability practices, and improve their sustainable performance?	RQ5.	Supplementary Research Question 5 (RQ5) – What is the mediating influence of the implementation of green internal practices in the relationship between green market orientation and green performance in F&B SMMEs in South Africa?	H5a.	<i>The relationship between green customer orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa</i>
				H5b.	<i>The relationship between green competitor orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa</i>
				H5c.	<i>The relationship between green inter-functional coordination and green performance is mediated by the green internal practices of F&B SMMEs in South Africa</i>

Note. An overview of the various research questions and sub-questions that answer the hypotheses. Own work.

Appendix D – Operationalisation of the constructs

Concept	Variable description	Component description	Variable code	Measure	Related Questions in questionnaire	Item no.	Source		
<i>Independent variables</i>	Green Market Orientation	Green customer orientation	GCuO 1-5	Likert scale (1 = strongly disagree to 5 = strongly agree)	Q8	3, 4	(Li et al., 2018)		
						5	(Jansson et al., 2017)		
						1, 2	(Narver & Slater, 1990)		
						1, 2, 3, 4	(C.H. Wang, 2020)		
		Green competitor orientation	GCoO 1-5	Likert scale (1 = strongly disagree to 5 = strongly agree)	Q9	5	(Jansson et al., 2017)		
						1, 2, 3	(Narver & Slater, 1990)		
						1, 2, 3, 4	(C.H. Wang, 2020)		
		Green inter-functional coordination	GIfC 1-4	Likert scale (1 = strongly disagree to 5 = strongly agree)	Q10	1, 2, 3, 4	(Narver & Slater, 1990)		
						1, 2, 3, 4	(C.H. Wang, 2020)		
<i>Mediator variable</i>	Green Internal Practices	Consumption policies	GIP 1-6	Likert scale (1 = strongly disagree to 5 = strongly agree)	Q11	1, 2, 3, 4, 5, 6	(Jansson et al., 2017)		
		Waste policies	GIP 7-8				Q11	7, 8	(Jansson et al., 2017)
		Internal supplier practices	ISP 1-5				Q12	9, 12, 13	(Zhu et al., 2007)
							10, 11	(Carter et al., 2000)	
		Internal business practices	IBP 1-5				Q13	14, 15	(Curkovic et al., 2000)
								14, 15, 16, 17	(Li et al., 2018)
								18	(Montabon et al., 2007)
		<i>Moderator variable</i>	Green management values					GMV 1-5	Likert scale (1 = strongly disagree to 5 = strongly agree)
1, 2, 3, 4, 5	(Jansson et al., 2017)								

Concept	Variable description	Component description	Variable code	Measure	Related Questions in questionnaire	Item no.	Source
<i>Dependent variable</i>	Green performance		GP 1-35	Likert scale (1 = strongly disagree to 5 = strongly agree)	Q15	7, 9, 10, 12, 14, 24, 26, 29, 33	(Fatoki, 2019)
						1, 32	(Jansson et al., 2017)
						6, 16, 18, 28, 30, 31	(Li et al., 2018)
						4, 25, 28, 30, 31	(Montabon et al., 2007)
						3, 4, 5, 6, 13, 16, 18, 19, 21, 22, 23, 30, 31, 33, 34	(Paulraj, 2011)
						2, 17, 20, 27, 28, 30, 31, 35	(C.H. Wang, 2020)
8, 11, 15, 17, 22, 27, 35	(Yu et al., 2017)						

Note. The operationalisation of the constructs. Own work.

Appendix E – Informed Consent

Informed Consent

You are invited to participate in a research study about the impact of an environmentally friendly business strategy on sustainable performance in small, micro and medium-sized enterprises of the food and beverage sector. The study will also explore how environmental practices and management values impact the sustainable performance of the SMME. The outcomes will assist SMMEs in making decisions to implement environmental practices to further improve performance from a financial, social, and environmental perspective.

Participation in this study is voluntary. If you agree to participate in this study, you would be required to complete various questions about the company strategic focus, the values of the top management, the company's green internal practices, and the company's sustainable or green performance. This should take **less than 30 minutes** of your time.

The information you will share with the researcher if you participate in this study will be kept completely confidential to the full extent of the law.

Although you are required to identify yourself in the study, this is only for tracking and monitoring participation. All information collected is anonymous and the responses provided cannot be used to identify any participant as data will be reported without identifiers. Data collection will be kept confidential. If the results from this study are published, only aggregated results will be reported, and individual responses will not be identifiable. While the researcher will keep your information confidential, there are some risks of data breaches when sending information over the internet that are beyond the control of the researcher.

Please note: You must be 18 years and older to participate in this study. By clicking “Yes” below you are indicating that you are at least 18 years old, have read and understood this consent form, and agree to participate in this research study.

Appendix F – Survey Questionnaire

ENVIRONMENTAL SUSTAINABILITY

*required

1. Email*
-

Informed Consent

You are invited to participate in a research study about the impact of an environmentally friendly business strategy on sustainable performance in small, micro and medium-sized enterprises of the food and beverage sector. The study will also explore how environmental practices and management values impact the sustainable performance of the SMME. The outcomes will assist SMMEs in making decisions to implement environmental practices to further improve performance from a financial, social, and environmental perspective.

Participation in this study is voluntary. If you agree to participate in this study, you would be required to complete various questions about the company strategic focus, the values of the top management, the company's green internal practices, and the company's sustainable or green performance. This should take **less than 30 minutes** of your time.

The information you will share with the researcher if you participate in this study will be kept completely confidential to the full extent of the law.

Although you are required to identify yourself in the study, this is only for tracking and monitoring participation. All information collected is anonymous and the responses provided cannot be used to identify any participant as data will be reported without identifiers. Data collection will be kept confidential. If the results from this study are published, only aggregated results will be reported, and individual responses will not be identifiable. While the researcher will keep your information confidential, there are some risks of data breaches when sending information over the internet that are beyond the control of the researcher.

Please note: You must be 18 years and older to participate in this study. By clicking “Yes” below you are indicating that you are at least 18 years old, have read and understood this consent form, and agree to participate in this research study.

2. **Industry type:** To what sector does your business belong? Please select the box closest to your business. *

Mark only one oval.

<input type="checkbox"/>	Agriculture and fishery
<input type="checkbox"/>	Mining and Quarrying
<input type="checkbox"/>	Manufacturing
<input type="checkbox"/>	Electricity, Gas, and Water
<input type="checkbox"/>	Construction
<input type="checkbox"/>	Retail and Motor Trade and Repair Services
<input type="checkbox"/>	Wholesale Trade, Commercial Agents and Allied Services
<input type="checkbox"/>	Catering, Accommodation, and other Trade
<input type="checkbox"/>	Transportation, Storage, and Communication
<input type="checkbox"/>	Finance and Business Solutions
<input type="checkbox"/>	Community, Social, and Personal Services
<input type="checkbox"/>	Real Estate
<input type="checkbox"/>	Insurance, Company Services, and Consultancy
<input type="checkbox"/>	Educational Services
<input type="checkbox"/>	Hotel and/or Restaurants
<input type="checkbox"/>	Healthcare and Related Services
<input type="checkbox"/>	Personal and Cultural Services, and Artistry

Participation

You qualify to participate in this survey if you are part of the food and beverage industry in the manufacturing and/or services sector (hotels, restaurants, coffee shops, fast food outlets, takeaways, catering, retail, wholesale trade).

3. If you qualify, do you wish to participate? *

Mark only one oval.



Yes *Skip to question 4*



No *Skip to section 2 (Declined participation)*

Declined participation:

You have decided to not partake in this research survey. Thank you for your time and have a good day. Please either exit the browser or submit the form.

Section A: General Business Information

This section deals about general information concerning your business.

*Below you are asked a few background questions concerning your business.
(Please tick the appropriate oval)*

4. **Business Size:** How many people are currently employed in the business? *

Mark only one oval.

Owner only	<input type="checkbox"/>
Less than 10 (micro)	<input type="checkbox"/>
Between 10 and 49 (small)	<input type="checkbox"/>
Between 50 and 249 (medium)	<input type="checkbox"/>
More than 250 (large)	<input type="checkbox"/>

5. **Business Age:** How long has the company been in business? *

Mark only one oval.

less than one year	<input type="checkbox"/>
1-4 years	<input type="checkbox"/>
5-9 years	<input type="checkbox"/>
10-20 years	<input type="checkbox"/>
more than 20 years	<input type="checkbox"/>

6. **Business Customer:** Who are your main customers that you serve? *

Mark only one oval.

Consumers / households	<input type="checkbox"/>
Other businesses / companies	<input type="checkbox"/>
Public organisations such as municipalities, government entities, etc.	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>

7. **Location:** In which province is your business situated? *

Mark only one oval.



Eastern Cape	<input type="checkbox"/>
Free State	<input type="checkbox"/>
Gauteng	<input type="checkbox"/>
Kwa-Zulu Natal	<input type="checkbox"/>
Limpopo	<input type="checkbox"/>
Mpumalanga	<input type="checkbox"/>
Northern Cape	<input type="checkbox"/>
North West	<input type="checkbox"/>
Western Cape	<input type="checkbox"/>

Section B: Business Strategy of your Business

This section deals with your businesses' green market orientation and how your business approaches its strategies for success.

The following questions concern your business strategic focus, specifically around the environment and market. Please tick the appropriate box next to the relevant item

The following scale applies for all the questions in this section:

1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree

8. Concerning customers and your business operations: To what degree do you agree with the following statements? *

Mark only one oval per row.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Our business continuously seeks to increase the environmental value that we provide to our customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We periodically revise our environmentally friendly products in accordance with our customers' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We supply our customers with environmental protection information to keep them informed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our competitive advantage is that we understand our customers' concern about the protection of the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We are fast to detect changes in our customers' preferences concerning environmental issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Concerning competitors and your business operations: To what degree do you agree with the following statements? *

Mark only one oval per row.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
In our organization, personnel share information on competitors' environmental strategies with customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We respond quickly to competitors' environmental strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Top managers discuss the strengths and weaknesses of competitors' environmental strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
When managers have information on competitors' environmental strategies, they promptly share it with others in the business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We are fast to detect fundamental shifts in our market concerning environmental issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Concerning interactions between departments/sections within your business operation: To what degree do you agree with the following statements? *

Mark only one oval per row.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Any environmental regulation information that becomes available is distributed throughout our entire business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We share environmental information with other departments in our business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All departments are equipped to satisfy customers' demands for environmentally friendly products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information that becomes available from existing and potential competitors on how to protect the environment is distributed throughout the business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section C: Green Internal Practices of your Business

This section deals with your business green practices and how these are implemented.

*The following questions concern your practical work related to the implementation of **green internal practices**. Please tick the appropriate oval next to each statement.*

11. Concerning the environmental policies in your company: How do the following statements correspond to what your company does? *

Mark only one oval per row.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Our policy is to curb electricity usage to the minimum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our policy is to curb water usage to the minimum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Our policy is to curb fuel usage to the minimum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our policy is to curb stationery usage to the minimum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our policy is to optimise the usage of our time in the business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our policy is to recycle office supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our policy is to recycle food and canteen waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our policy is to recycle other waste (packaging materials, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Concerning the internal practices related to your suppliers: To what extent do you agree with the following statements? *

Mark only one oval per row.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
We implement supplier development and vendor rating programmes that promote sustainable production and consumption	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We ask our suppliers to commit to waste reduction goals in their organisations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We ask our suppliers to participate in the design of products for recycling or reuse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We conduct audits on our suppliers concerning their sustainability practices on a regular basis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We ensure our products are sourced from sustainable or organic means	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Concerning the internal practices in your business: How do the following statements correspond to what your business does? *

Mark only one oval per row.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
We completely control the environmental impact of our products and processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a comprehensive approach to setting environmental targets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
We have a detailed manner to achieving environmental targets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a detailed method to demonstrating that environmental targets have been met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have established environmental initiatives and allocated resources including funds for environmental programmes and projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section D: Environmentally Friendly Values of your Business

This section deals with your businesses' green management values.

*The following questions concern **your personal attitude to sustainability**. Please tick the appropriate oval next to each statement.*

14. Below are a **few general statements about the environment**: To what degree do you agree with each of the following statements? *

Mark only one oval per row.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Humans do not have the right to modify the natural environment to suit their needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The balance of nature is not strong enough to cope with the impacts of modern industrial nations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The earth does not have enough natural resources even if we learn how to develop them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human ingenuity will not prevent us from making the earth unlivable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If things continue on their present course, we will soon experience a major ecological catastrophe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section E: Sustainable Performance of your Business

This section deals with the sustainable or green performance of your business.

The following questions concern the **performance of your business** from an economic or financial, an environmental, and a social perspective. Please tick the appropriate oval next to each statement.

15. Concerning the performance of your company's operations: To what degree do you agree with the following statements? *Mark only one box per row.

Mark only one oval per row.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Compared to our largest competitor our profitability is very good.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm conforms to requirements of community relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has achieved a decrease in the consumption of hazardous / harmful / toxic material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has achieved a decrease in the frequency of environmental accidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has achieved a reduction in environmental impacts and risks to the general public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is a decrease in expenses related to materials purchased in our business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has achieved improved efficiency of raw materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has been growing over the last five years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has increased its contribution to the local community for social issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has increased its overall reputation in respects of products and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has increased its product portfolio over the last five years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has increased its recycling practices of materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is an improvement in overall stakeholder welfare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has reduced the cost of environmental compliance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, our environmental performance has improved over the past five years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is a decrease in expenses related to energy consumption in our business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
We have regularly achieved targets imposed on energy conservation, recycling, and/or waste reductions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is a decrease in the expenses related to waste discharge in our business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is an improved awareness and protection of the claims and rights of people in the community served	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We conform to requirements of indicators providing information on the local, regional, or national condition of the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is an improvement in community health and safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is an increase in energy saved due to conservation and efficiency improvements in our firm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have achieved an improvement in the return on investment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is an increased employee satisfaction within our firm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has achieved a decrease in the consumption of water in our facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is increased customer satisfaction with our products and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We conform to expectations of implementation of environmental policies and programmes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We conform to requirements of inputs of energy and there is a reduction in energy usage in our firm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our firm has achieved a reduction in the number of staff turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We conform to requirements of outputs of air emissions and there is a reduction in air emission in our firm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We conform to requirements of outputs of wastewater and there is a reduction in waste (water and/or solid) in our firm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We generally have higher profit margins on our goods/services compare to our main competitors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is an improvement in occupational health and safety of our employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have achieved an improvement in earnings per share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
We have achieved important environmental certifications (e.g. ISO 14 031, ISO 14 000)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section F: Personal Information

This section deals with your personal information.

Finally, the following questions concern yourself. Please tick the appropriate oval

16. What is your gender? *

Mark only one oval per row.

Female	<input type="checkbox"/>
Male	<input type="checkbox"/>
Prefer not to disclose	<input type="checkbox"/>

17. What is your age? *

Mark only one oval per row.

Younger than 30	<input type="checkbox"/>
30 – 39	<input type="checkbox"/>
40 – 49	<input type="checkbox"/>
50 – 59	<input type="checkbox"/>
60 – 69	<input type="checkbox"/>
70 or older	<input type="checkbox"/>

18. What is your position in the business? *

Mark only one oval per row.

Owner	<input type="checkbox"/>
CEO	<input type="checkbox"/>
Senior Executive / Director	<input type="checkbox"/>
Manager	<input type="checkbox"/>
Other	<input type="checkbox"/>

19. How long have you been in your current position? *

Mark only one oval per row.

Less than 1 year	<input type="checkbox"/>
1 – 4 years	<input type="checkbox"/>
5 – 9 years	<input type="checkbox"/>
10 years or more	<input type="checkbox"/>

20. What is your education level? *

Mark only one oval per row.

<i>Less than Grade 10)</i>	<input type="checkbox"/>
<i>Grade 10 - 11</i>	<input type="checkbox"/>
<i>Grade 12 (Matric)</i>	<input type="checkbox"/>
<i>Graduate (Degree / Diploma)</i>	<input type="checkbox"/>
<i>Postgraduate (Honours / Masters / PhD)</i>	<input type="checkbox"/>

21. Do you have any further comments to make? *

End of Survey Questionnaire

Thank you Note!

You have come to the end of the questionnaire.

Thank you so much for taking the time to answer the questions. This will really help me to understand small and medium-sized enterprises and how their business strategies assist them in making decision on how to improve their performance depending on the top management’s beliefs and values.

A summary of the findings will be sent to you for your information upon completion of the research project.



Appendix G – Ethics Approval

**Gordon
Institute
of Business
Science**
University
of Pretoria

28 April 2022

Vanessa Green

Dear Vanessa

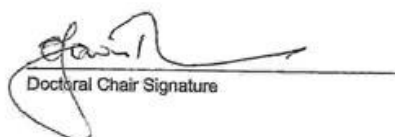
Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained

*We wish you everything of the best for the rest of the project.
Kind Regards*

GIBS Doctoral Research Ethical Clearance Committee


Doctoral Chair Signature

Appendix H – Invitation letter

Dear **Specific Respondent**

My name is Vanessa Green, and I am a doctoral student at GIBS and would appreciate your help with my research project.

I am writing to request your participation in an **Environmental Sustainability Survey** of the Food and Beverage small, micro, and medium-sized enterprises (SMMEs).

The purpose of the survey is to gather information on how SMMEs set up their business. I am conducting research to understand the impact of an environmentally friendly business strategy on the implementation of environmentally friendly business practices and how this improves sustainable/green performance in SMMEs in the Food and Beverage sector.

You are asked to complete a survey questionnaire on a set number of questions. The questionnaire should take **no longer than 30 minutes** of your time to complete. Your participation in this study is completely voluntary and you can withdraw at any time without penalty.

Completion of this survey is taken to constitute your consent to participate.

To participate, please click on the following link: [survey link]

If you would like us to send you the survey in an MS Word doc. please reply to this mail.

If you do not wish to participate in this survey, please exit the survey now.

An overview of the results will be sent to you on completion of the survey.

Should you have any concerns or questions, please contact myself or my supervisor.

Our contact details are as follows:

Researcher: Vanessa Green
97293441@mygibs.co.za or +27 71 227 7967

Supervisor: Prof Alet C. Erasmus
erasmusa@gibs.co.za or +27 11 771 4000

Best regards,
Vanessa

Appendix I – CIPC approval



Ref : 11 April 2022.....
 MSwart@cipc.co.za / DMakathong@cipc.co.za
 Tel (012) 394 5339 / 5223
 CIPC Data Sales and Maintenance Division

University of Pretoria
 Gordon Institute of Business Science
 Register: Ahmed Docrat
 Student: Vanessa Green
 Student No: 97293441

Good day,

The attached request of 11 April 2022 for free access / information for purpose of research ("Letter") in terms of section 187(7)(b) below of the Companies Act, 2008 ("the Act") has reference.

"(7) (b) may waive any such fee if satisfied that any inspection, certificate, copy or extract is required for the purposes of research by or under the control of an institution for higher education.

Based on the contents of the Letter and consideration by CIPC, CIPC hereby waives the disclosure / access fee(s) for purposes of your research stipulated in the Letter with the following stipulations (conditions):

- a) research will be done by or under the control of Gordon Institute of Business Science (University of Pretoria) ("Institution") as confirmed in the Letter;
- b) free access to CIPC data will be used for research purposes only and not for selling , marketing etc;
- c) CIPC is exempted from any liability or damages that may arise out of the use of the provided information for research;
- d) CIPC does not confirm the completeness or correctness of the information provided since the information provided, is based on documents and or the content of documents submitted by companies, close corporations and co-operatives with the CIPC;

Regards

Data Sales and Maintenance Division

Date: 12 April 2022

Appendix J – Interactive approval

A.N.A.L.O.G.U.E
MARKETING INFORMATION SERVICES CC

Registration: 1992/033139/23

P O Box 5178
Meyersdal
1447

Phone: 082 497-0596
Fax: 086 508-2340

V.A.T. Reg. No.: 4560138812

Wednesday, July 21, 2021

To whom it may concern

Interactive Direct is a division of Analogue Marketing Information Services cc, owned and managed by Tony Sham since 1992. The division specialises in researching its business to business database which it supplies to marketing and research campaigns. Our research team works continuously in keeping the database up-to-date and introducing new records to the database.

We are fully POPIa compliant and our database has a reputation on being the most up to date B2B database in the country. We have implemented all the processes according to the act.

Our processes and practices have been reviewed by John Giles of Michalsons and Dale Guild of Baker Street Analytics and they have confirmed this.

We have given permission to Vanessa Green, a student at GIBS, to use a section of this database for research purposes.

Please contact me if you need more information.

Regards



A.F. Sham
ID 5409245108080
Member
082 4970596

Member: Anthony Francis Sham 5409245102080
12 van Staden Place, Meyersdal, Alberton 1448

Appendix K – Statistician letter

Jaclyn de Klerk
MCom Statistics (UP)
JDK Consulting
jaclyn@jdk-consulting.co.za
082 689 4675

5 October 2023

To Whom It May Concern,

STATISTICAL CONSULTATION FOR VANESSA GREEN

This is to certify that I, Jaclyn de Kerk, the Statistician, have rendered the services as listed and detailed below for the doctoral thesis “The Interactive Influence of a Green Market Orientation and Green Management Values on Green Practices and Green Performance of Food and Beverage SMMEs” prepared by Vanessa Green, a PhD candidate at the University of Pretoria’s Gordon Institute of Business Science (GIBS). This study was submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Business Administration.

The services rendered to the student were statistical analysis including:

1. Frequencies & Descriptives
2. Exploratory Factor Analysis (EFA)
3. Empirical- & Theoretical Reliabilities
4. Descriptives on Scales/Factors
5. Regression Analysis
6. Percentage of Mediation Calculations

The interpretation of the results, as well as the statistical write-up was solely done by the student, Vanessa Green.

Signed:



Date Signed:

5 October 2023

Jaclyn de Klerk



Appendix L – Tables from Chapter 6

Table L 1 – Business Characteristics

Business Demographic Statistics		Frequency	
		No.	(%)
Industry	Manufacturing	49	13.0
	Service	326	86.7
Business Size (no. of employees)	Owner only	23	6.1
	Less than 10	123	32.7
	Between 10 and 49	168	44.7
	Between 50 and 249	62	16.5
Business Age (duration of operation)	Less than 1 year	8	2.1
	1-4 years	69	18.4
	5-9 years	98	26.1
	10-20 years	177	47.1
	More than 20 years	24	6.4
Business Customers	Consumers/households	290	77.1
	Other businesses/companies	79	21.0
	Public organisations such as municipalities, government entities, etc.	7	1.9
Business Location (provinces)	Eastern Cape	6	1.6
	Free State	18	4.8
	Gauteng	120	31.9
	KwaZulu Natal	94	25.0
	Limpopo	50	13.3
	Mpumalanga	31	8.2
	North West	5	1.3
	Northern Cape	1	0.3
	Western Cape	51	13.6

Note. An overview of the business characteristics of the respondents. Own work.

Table L 2 – Personal characteristics of respondents

Respondent's Descriptive Statistics		Frequency	
		No.	(%)
Gender	Male	189	50.3
	Female	183	48.7
	Prefer not to disclose	4	1.1
Age	Younger than 30	39	10.5
	30-39 years	118	31.6
	40-49 years	101	27.1
	50-59 years	89	23.9
	60-69 years	22	5.9
	70 years and older	4	1.1
Position in the business	Owner	125	33.5
	CEO	19	5.1
	Senior Executive/Director	28	7.5
	Manager	114	30.6
	Other	87	23.3
Length in the position	Less than 1 year	30	8.1
	1-4 years	154	41.4
	5-9 years	90	24.2
	10 years or more	98	26.3
Education level	Less than Grade 10	6	1.6
	Grade 10-11	119	32.2
	Grade 12 (Matric)	180	48.6
	Graduate (Degree/Diploma)	65	17.6

Note. An overview of the personal characteristics of the respondents. Own work.

Table L3 – Descriptive Statistics for Business Strategy

Question No.	N	Min	Max	Mean	Median	Mode	Std Dev
B8.1	376	1	5	4.02	4.00	4	.907
B8.2	376	1	5	3.92	4.00	4	.959
B8.5	376	1	5	3.86	4.00	4	.991
B8.4	376	1	5	3.73	4.00	4	1.051
B9.5	376	1	5	3.68	4.00	4	1.068
B8.3	376	1	5	3.66	4.00	4	1.071
B10.1	376	1	5	3.59	4.00	4	1.137
B10.3	376	1	5	3.59	4.00	4	1.128
B10.2	376	1	5	3.58	4.00	4	1.161
B10.4	376	1	5	3.50	4.00	4	1.171
B9.2	376	1	5	3.49	4.00	4	1.093
B9.3	376	1	5	3.49	4.00	4	1.145
B9.4	376	1	5	3.44	4.00	4	1.183
B9.1	376	1	5	3.17	3.00	4	1.214

Note. An overview of the descriptive statistics of business strategy. Own work.

Table L4 – Responses Rating for Business Strategy

Question No.	Strongly disagree (1)	Disagree (2)	Uncertain (3)	Agree (4)	Strongly agree (5)
B8.1	2.7%	5.1%	8.8%	54.3%	29.3%
B8.2	3.5%	6.6%	9.3%	55.3%	25.3%
B8.3	6.4%	9.0%	14.4%	52.4%	17.8%
B8.4	5.9%	7.4%	14.9%	51.6%	20.2%
B8.5	4.8%	5.6%	11.7%	55.1%	22.9%
B9.1	10.4%	23.1%	18.1%	36.2%	12.2%
B9.2	6.1%	13.8%	19.9%	45.2%	14.9%
B9.3	7.2%	15.2%	15.4%	46.0%	16.2%
B9.4	8.5%	15.2%	16.8%	42.8%	16.8%
B9.5	5.9%	9.0%	16.0%	49.7%	19.4%
B10.1	5.6%	14.9%	15.4%	43.4%	20.7%
B10.2	6.6%	13.6%	16.2%	42.0%	21.5%
B10.3	5.9%	12.5%	19.7%	40.7%	21.3%
B10.4	7.2%	14.6%	18.6%	39.9%	19.7%

Note. The responses rating for business strategy. Own work.

Table L5 – Descriptive Statistics for Green Practices

Question No.	N	Min	Max	Mean	Median	Mode	Std Dev
C11.1	376	1	5	4.34	4.00	5	.783
C11.2	376	1	5	4.31	4.00	4	.784
C11.3	376	1	5	4.27	4.00	4	.784
C11.5	376	1	5	4.23	4.00	5	.889
C11.4	376	1	5	4.06	4.00	4	.969
C11.6	376	1	5	3.92	4.00	4	1.084
C11.8	376	1	5	3.65	4.00	5	1.410
C11.7	376	1	5	3.48	4.00	5	1.423
C12.5	376	1	5	3.28	4.00	4	1.364
C13.2	376	1	5	3.13	4.00	4	1.284
C13.3	376	1	5	3.10	3.00	4	1.281
C12.3	376	1	5	3.05	3.00	4	1.347
C13.4	376	1	5	3.04	3.00	4	1.268
C12.1	376	1	5	2.95	3.00	4	1.298
C13.5	376	1	5	2.92	3.00	4	1.305
C12.2	376	1	5	2.87	3.00	2	1.333
C13.1	376	1	5	2.83	3.00	2	1.315
C12.4	376	1	5	2.64	2.00	2	1.336

Note. An overview of the descriptive statistics for green internal practices. Own work.

Table L6 – Responses Rating for Green Practices

<i>Question No.</i>	<i>Strongly disagree (1)</i>	<i>Disagree (2)</i>	<i>Uncertain (3)</i>	<i>Agree (4)</i>	<i>Strongly agree (5)</i>
C11.1	1.9%	0.8%	5.9%	44.7%	46.8%
C11.2	1.9%	1.3%	4.8%	47.9%	44.1%
C11.3	1.3%	2.1%	6.4%	48.4%	41.8%
C11.4	2.9%	5.1%	11.2%	44.4%	36.4%
C11.5	2.4%	2.7%	8.2%	43.1%	43.6%
C11.6	3.5%	9.3%	14.1%	37.8%	35.4%
C11.7	13.3%	16.2%	12.2%	25.8%	32.4%
C11.8	12.2%	13.3%	9.0%	27.7%	37.8%
C12.1	16.0%	26.3%	17.0%	28.2%	12.5%
C12.2	17.6%	29.5%	14.6%	24.7%	13.6%
C12.3	15.7%	25.8%	11.4%	31.9%	15.2%
C12.4	23.9%	30.6%	14.9%	19.1%	11.4%
C12.5	15.2%	17.0%	12.5%	35.1%	20.2%
C13.1	19.4%	26.6%	16.5%	26.3%	11.2%
C13.2	15.2%	19.1%	15.2%	38.6%	12.0%
C13.3	14.9%	19.4%	19.1%	33.5%	13.0%
C13.4	14.9%	21.8%	19.1%	32.4%	11.7%
C13.5	17.0%	25.3%	18.9%	26.1%	12.8%

Note. The responses rating for green internal practices. Own work.

Table L7 – Descriptive Statistics for Environmentally Friendly Values

<i>Question No.</i>	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>Median</i>	<i>Mode</i>	<i>Std Dev</i>
D14.5	376	1	5	3.89	4.00	4	1.122
D14.2	376	1	5	3.48	4.00	4	1.352
D14.3	376	1	5	3.21	3.50	4	1.329
D14.4	376	1	5	3.18	3.00	4	1.244
D14.1	376	1	5	3.12	3.00	4	1.364

Note. The descriptive statistics for environmentally friendly values. Own work.

Table L8 – Responses Ratings for Environmentally Friendly Values

<i>Question No.</i>	<i>Strongly disagree (1)</i>	<i>Disagree (2)</i>	<i>Uncertain (3)</i>	<i>Agree (4)</i>	<i>Strongly agree (5)</i>
<i>D14.1</i>	15.4%	23.9%	11.2%	32.2%	17.3%
<i>D14.2</i>	12.8%	15.4%	8.0%	38.8%	25.0%
<i>D14.3</i>	14.1%	19.1%	16.8%	31.6%	18.4%
<i>D14.4</i>	13.0%	17.3%	22.3%	33.8%	13.6%
<i>D14.5</i>	6.6%	4.5%	15.7%	39.9%	33.2%

Note. The responses ratings for environmentally friendly values. Own work.

Table L9 – Descriptive Statistics for Sustainable Performance

Question No.	N	Min	Max	Mean	Median	Mode	Std Dev
E15.10	376	1	5	4.11	4.00	4	0.754
E15.26	376	1	5	4.11	4.00	4	0.770
E15.11	376	1	5	4.02	4.00	4	0.844
E15.8	376	1	5	3.99	4.00	4	0.899
E15.2	376	1	5	3.95	4.00	4	0.833
E15.3	376	1	5	3.95	4.00	4	0.881
E15.33	376	1	5	3.95	4.00	4	0.823
E15.24	376	1	5	3.93	4.00	4	0.902
E15.4	376	1	5	3.92	4.00	4	0.865
E15.9	376	1	5	3.91	4.00	4	0.932
E15.12	376	1	5	3.91	4.00	4	0.906
E15.5	376	1	5	3.88	4.00	4	0.878
E15.29	376	1	5	3.88	4.00	4	0.968
E15.7	376	1	5	3.87	4.00	4	0.891
E15.13	376	1	5	3.86	4.00	4	0.851
E15.15	376	1	5	3.80	4.00	4	0.925
E15.25	376	1	5	3.80	4.00	4	0.977
E15.27	376	1	5	3.80	4.00	4	0.934
E15.23	376	1	5	3.78	4.00	4	0.995
E15.20	376	1	5	3.77	4.00	4	1.000
E15.21	376	1	5	3.77	4.00	4	0.988
E15.19	376	1	5	3.75	4.00	4	1.009
E15.22	376	1	5	3.75	4.00	4	1.008
E15.28	376	1	5	3.72	4.00	4	1.017
E15.31	376	1	5	3.71	4.00	4	1.014
E15.6	376	1	5	3.67	4.00	4	1.072
E15.30	376	1	5	3.61	4.00	4	1.012
E15.34	376	1	5	3.61	4.00	4	0.990
E15.16	376	1	5	3.59	4.00	4	1.151
E15.14	376	1	5	3.50	4.00	4	1.007
E15.17	376	1	5	3.47	4.00	4	1.085
E15.18	376	1	5	3.45	4.00	4	1.097
E15.32	376	1	5	3.37	3.00	3	1.100
E15.35	376	1	5	3.25	3.00	3	1.182
E15.1	376	1	5	3.18	3.00	3	1.142

Note. An overview of the descriptive statistics for sustainable performance. Own work.

Table L10 – Respondents Rating for Sustainable Performance

Question No.	Strongly disagree (1)	Disagree (2)	Uncertain (3)	Agree (4)	Strongly agree (5)
E15.1	9.3%	17.6%	31.4%	29.5%	12.2%
E15.2	2.4%	2.9%	13.8%	58.5%	22.3%
E15.3	2.4%	3.7%	15.7%	52.7%	25.5%
E15.4	1.9%	3.5%	19.9%	50.0%	24.7%
E15.5	2.4%	3.7%	19.9%	51.9%	22.1%
E15.6	4.8%	11.2%	16.8%	46.5%	20.7%
E15.7	2.4%	5.9%	14.9%	55.9%	21.0%
E15.8	2.7%	5.1%	9.6%	55.9%	26.9%
E15.9	1.6%	8.0%	14.9%	49.2%	26.3%
E15.10	1.1%	2.4%	9.8%	57.7%	29.0%
E15.11	2.1%	3.7%	10.6%	57.2%	26.3%
E15.12	1.3%	7.2%	16.5%	49.5%	25.5%
E15.13	1.6%	4.0%	22.6%	50.5%	21.3%
E15.14	4.0%	10.4%	33.0%	37.0%	15.7%
E15.15	2.4%	6.1%	22.1%	48.1%	21.3%
E15.16	6.4%	13.0%	17.6%	41.2%	21.8%
E15.17	5.6%	12.5%	27.9%	37.0%	17.0%
E15.18	5.6%	14.6%	25.0%	38.6%	16.2%
E15.19	4.0%	6.6%	22.3%	44.1%	22.9%
E15.20	4.3%	5.9%	21.0%	46.5%	22.3%
E15.21	3.7%	6.1%	21.8%	45.7%	22.6%
E15.22	4.0%	7.2%	21.0%	45.7%	22.1%
E15.23	3.2%	6.9%	22.6%	42.8%	24.5%
E15.24	2.1%	5.3%	15.7%	51.3%	25.5%
E15.25	2.1%	9.0%	19.7%	44.9%	24.2%
E15.26	1.3%	1.6%	12.0%	55.1%	30.1%
E15.27	3.5%	4.0%	23.1%	48.4%	21.0%
E15.28	4.0%	7.2%	24.2%	42.3%	22.3%
E15.29	3.2%	6.6%	14.6%	50.5%	25.0%
E15.30	3.2%	8.8%	33.0%	34.3%	20.7%
E15.31	3.2%	8.5%	25.3%	40.2%	22.9%
E15.32	5.9%	13.8%	35.4%	27.7%	17.3%
E15.33	1.6%	2.9%	18.1%	53.7%	23.7%
E15.34	3.7%	6.9%	33.0%	37.5%	18.9%
E15.35	9.6%	15.7%	31.1%	27.7%	16.0%

Note. The respondents rating for sustainable performance. Own work.

Table L11 – Distribution of data for Business Strategy

Question No.	N	Skewness	Std Error of Skewness	Kurtosis	Std Error of Kurtosis
B8.1	376	-1.317	0.126	2.136	0.251
B8.2	376	-1.250	0.126	1.605	0.251
B8.3	376	-0.997	0.126	0.462	0.251
B8.4	376	-1.046	0.126	0.716	0.251
B8.5	376	-1.246	0.126	1.524	0.251
B9.1	376	-0.262	0.126	-1.018	0.251
B9.2	376	-0.656	0.126	-0.277	0.251
B9.3	376	-0.675	0.126	-0.426	0.251
B9.4	376	-0.608	0.126	-0.570	0.251
B9.5	376	-0.939	0.126	0.384	0.251
B10.1	376	-0.672	0.126	-0.402	0.251
B10.2	376	-0.690	0.126	-0.383	0.251
B10.3	376	-0.658	0.126	-0.309	0.251
B10.4	376	-0.588	0.126	-0.536	0.251

Note. The distribution of data for business strategy. Own work.

Table L12 – Test for Normality for Business Strategy

	Kolmogorov-Smirnov^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
B8.1	0.325	376	0.000	0.775	376	0.000
B8.2	0.338	376	0.000	0.784	376	0.000
B8.3	0.326	376	0.000	0.822	376	0.000
B8.4	0.320	376	0.000	0.821	376	0.000
B8.5	0.337	376	0.000	0.789	376	0.000
B9.1	0.238	376	0.000	0.894	376	0.000
B9.2	0.281	376	0.000	0.871	376	0.000
B9.3	0.294	376	0.000	0.860	376	0.000
B9.4	0.277	376	0.000	0.871	376	0.000
B9.5	0.310	376	0.000	0.836	376	0.000
B10.1	0.282	376	0.000	0.865	376	0.000
B10.2	0.276	376	0.000	0.866	376	0.000
B10.3	0.261	376	0.000	0.875	376	0.000
B10.4	0.260	376	0.000	0.879	376	0.000

a. Lilliefors Significance Correction

Note. The test for normality for business strategy. Own work.

Table L13 – Distribution of Data for Green Practices

Question No.	N	Skewness	Std Error of Skewness	Kurtosis	Std Error of Kurtosis
C11.1	376	-1.710	0.126	4.640	0.251
C11.2	376	-1.710	0.126	4.689	0.251
C11.3	376	-1.453	0.126	3.393	0.251
C11.4	376	-1.240	0.126	1.494	0.251
C11.5	376	-1.518	0.126	2.851	0.251
C11.6	376	-0.944	0.126	0.202	0.251
C11.7	376	-0.484	0.126	-1.148	0.251
C11.8	376	-0.714	0.126	-0.875	0.251
C12.1	376	-0.001	0.126	-1.205	0.251
C12.2	376	0.133	0.126	-1.244	0.251
C12.3	376	-0.106	0.126	-1.309	0.251
C12.4	376	0.372	0.126	-1.103	0.251
C12.5	376	-0.400	0.126	-1.135	0.251
C13.1	376	0.093	0.126	-1.228	0.251
C13.2	376	-0.336	0.126	-1.108	0.251
C13.3	376	-0.249	0.126	-1.089	0.251
C13.4	376	-0.175	0.126	-1.119	0.251
C13.5	376	0.028	0.126	-1.185	0.251

Note. The distribution of data for green internal practices. Own work.

Table L14 – Test for Normality for Green Practices

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
C11.1	0.269	376	0.000	0.713	376	0.000
C11.2	0.266	376	0.000	0.711	376	0.000
C11.3	0.266	376	0.000	0.743	376	0.000
C11.4	0.282	376	0.000	0.795	376	0.000
C11.5	0.265	376	0.000	0.750	376	0.000
C11.6	0.260	376	0.000	0.831	376	0.000
C11.7	0.225	376	0.000	0.849	376	0.000
C11.8	0.251	376	0.000	0.817	376	0.000
C12.1	0.198	376	0.000	0.897	376	0.000
C12.2	0.214	376	0.000	0.890	376	0.000
C12.3	0.230	376	0.000	0.881	376	0.000
C12.4	0.228	376	0.000	0.879	376	0.000
C12.5	0.254	376	0.000	0.869	376	0.000
C13.1	0.197	376	0.000	0.893	376	0.000
C13.2	0.256	376	0.000	0.877	376	0.000
C13.3	0.223	376	0.000	0.894	376	0.000
C13.4	0.216	376	0.000	0.897	376	0.000
C13.5	0.184	376	0.000	0.900	376	0.000

a. Lilliefors Significance Correction

Note. The test for normality for green internal practices. Own work.

Table L15 – Distribution of Data for Environmentally Friendly Values

Question No.	N	Skewness	Std Error of Skewness	Kurtosis	Std Error of Kurtosis
D14.1	376	-0.173	0.126	-1.304	0.251
D14.2	376	-0.618	0.126	-0.914	0.251
D14.3	376	-0.281	0.126	-1.137	0.251
D14.4	376	-0.320	0.126	-0.937	0.251
D14.5	376	-1.106	0.126	0.699	0.251

Note. The distribution of data for environmentally friendly values. Own work.

Table L16 – Test for Normality for Environmentally Friendly Values

	Kolmogorov-Smirnov^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
D14.1	0.235	376	0.000	0.879	376	0.000
D14.2	0.288	376	0.000	0.842	376	0.000
D14.3	0.224	376	0.000	0.889	376	0.000
D14.4	0.220	376	0.000	0.897	376	0.000
D14.5	0.272	376	0.000	0.816	376	0.000

a. Lilliefors Significance Correction

Note. The test for normality for environmentally friendly values. Own work.

Table L17 – Distribution of Data for Green Performance

Question No.	N	Skewness	Std Error of Skewness	Kurtosis	Std Error of Kurtosis
<i>E15.1</i>	376	-0.235	0.126	-0.678	0.251
<i>E15.2</i>	376	-1.223	0.126	2.547	0.251
<i>E15.3</i>	376	-1.082	0.126	1.701	0.251
<i>E15.4</i>	376	-0.868	0.126	1.173	0.251
<i>E15.5</i>	376	-0.942	0.126	1.374	0.251
<i>E15.6</i>	376	-0.808	0.126	0.065	0.251
<i>E15.7</i>	376	-1.065	0.126	1.456	0.251
<i>E15.8</i>	376	-1.291	0.126	2.122	0.251
<i>E15.9</i>	376	-0.887	0.126	0.583	0.251
<i>E15.10</i>	376	-1.125	0.126	2.657	0.251
<i>E15.11</i>	376	-1.268	0.126	2.495	0.251
<i>E15.12</i>	376	-0.832	0.126	0.569	0.251
<i>E15.13</i>	376	-0.745	0.126	0.914	0.251
<i>E15.14</i>	376	-0.434	0.126	-0.125	0.251
<i>E15.15</i>	376	-0.788	0.126	0.656	0.251
<i>E15.16</i>	376	-0.681	0.126	-0.354	0.251
<i>E15.17</i>	376	-0.485	0.126	-0.347	0.251
<i>E15.18</i>	376	-0.481	0.126	-0.457	0.251
<i>E15.19</i>	376	-0.818	0.126	0.456	0.251
<i>E15.20</i>	376	-0.907	0.126	0.708	0.251
<i>E15.21</i>	376	-0.853	0.126	0.617	0.251
<i>E15.22</i>	376	-0.843	0.126	0.483	0.251
<i>E15.23</i>	376	-0.764	0.126	0.339	0.251
<i>E15.24</i>	376	-0.998	0.126	1.214	0.251
<i>E15.25</i>	376	-0.729	0.126	0.152	0.251
<i>E15.26</i>	376	-1.104	0.126	2.556	0.251
<i>E15.27</i>	376	-0.904	0.126	1.072	0.251
<i>E15.28</i>	376	-0.742	0.126	0.280	0.251
<i>E15.29</i>	376	-1.043	0.126	1.030	0.251
<i>E15.30</i>	376	-0.409	0.126	-0.210	0.251
<i>E15.31</i>	376	-0.630	0.126	0.014	0.251
<i>E15.32</i>	376	-0.246	0.126	-0.515	0.251
<i>E15.33</i>	376	-0.916	0.126	1.561	0.251
<i>E15.34</i>	376	-0.512	0.126	0.105	0.251
<i>E15.35</i>	376	-0.256	0.126	-0.719	0.251

Note. The distribution of data for green performance. Own work.

Table L18 – Test for Normality of Green Performance

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
E15.1	0.182	376	0.000	0.912	376	0.000
E15.2	0.330	376	0.000	0.783	376	0.000
E15.3	0.304	376	0.000	0.812	376	0.000
E15.4	0.283	376	0.000	0.834	376	0.000
E15.5	0.296	376	0.000	0.829	376	0.000
E15.6	0.293	376	0.000	0.854	376	0.000
E15.7	0.326	376	0.000	0.810	376	0.000
E15.8	0.331	376	0.000	0.778	376	0.000
E15.9	0.295	376	0.000	0.835	376	0.000
E15.10	0.308	376	0.000	0.772	376	0.000
E15.11	0.326	376	0.000	0.776	376	0.000
E15.12	0.291	376	0.000	0.840	376	0.000
E15.13	0.284	376	0.000	0.844	376	0.000
E15.14	0.217	376	0.000	0.894	376	0.000
E15.15	0.281	376	0.000	0.854	376	0.000
E15.16	0.269	376	0.000	0.869	376	0.000
E15.17	0.226	376	0.000	0.896	376	0.000
E15.18	0.239	376	0.000	0.894	376	0.000
E15.19	0.267	376	0.000	0.859	376	0.000
E15.20	0.280	376	0.000	0.848	376	0.000
E15.21	0.274	376	0.000	0.854	376	0.000
E15.22	0.277	376	0.000	0.856	376	0.000
E15.23	0.259	376	0.000	0.863	376	0.000
E15.24	0.300	376	0.000	0.824	376	0.000
E15.25	0.272	376	0.000	0.861	376	0.000
E15.26	0.295	376	0.000	0.783	376	0.000
E15.27	0.281	376	0.000	0.842	376	0.000
E15.28	0.255	376	0.000	0.868	376	0.000
E15.29	0.307	376	0.000	0.823	376	0.000
E15.30	0.202	376	0.000	0.890	376	0.000
E15.31	0.243	376	0.000	0.877	376	0.000
E15.32	0.181	376	0.000	0.906	376	0.000
E15.33	0.298	376	0.000	0.820	376	0.000
E15.34	0.217	376	0.000	0.883	376	0.000
E15.35	0.174	376	0.000	0.910	376	0.000

a. Lilliefors Significance Correction

Note. The test for normality of green performance. Own work.

Table L19 – First order correlation matrix for independent variables

	B8.1	B8.2	B8.3	B8.4	B8.5	B9.1	B9.2	B9.3	B9.4	B9.5	B10.1	B10.2	B10.3	B10.4	D14.1	D14.2	D14.3	D14.4	D14.5	
Correlation	B8.1	1.000	0.793	0.686	0.737	0.730	0.376	0.507	0.512	0.485	0.572	0.537	0.561	0.567	0.553	0.215	0.247	0.217	0.249	0.335
	B8.2	0.793	1.000	0.676	0.667	0.769	0.442	0.514	0.569	0.491	0.580	0.465	0.488	0.503	0.514	0.191	0.187	0.184	0.208	0.292
	B8.3	0.686	0.676	1.000	0.821	0.693	0.532	0.524	0.553	0.501	0.602	0.466	0.498	0.510	0.510	0.064	0.066	0.095	0.195	0.210
	B8.4	0.737	0.667	0.821	1.000	0.792	0.531	0.587	0.560	0.543	0.608	0.493	0.521	0.565	0.551	0.101	0.037	0.087	0.094	0.173
	B8.5	0.730	0.769	0.693	0.792	1.000	0.472	0.597	0.577	0.511	0.609	0.475	0.527	0.572	0.538	0.161	0.123	0.138	0.163	0.220
	B9.1	0.376	0.442	0.532	0.531	0.472	1.000	0.722	0.718	0.702	0.657	0.392	0.407	0.430	0.459	0.097	0.031	0.119	0.139	0.157
	B9.2	0.507	0.514	0.524	0.587	0.597	0.722	1.000	0.784	0.763	0.766	0.517	0.571	0.561	0.618	0.161	0.151	0.164	0.196	0.233
	B9.3	0.512	0.569	0.553	0.560	0.577	0.718	0.784	1.000	0.785	0.735	0.499	0.567	0.554	0.600	0.164	0.177	0.197	0.196	0.239
	B9.4	0.485	0.491	0.501	0.543	0.511	0.702	0.763	0.785	1.000	0.746	0.544	0.583	0.550	0.613	0.137	0.119	0.144	0.165	0.195
	B9.5	0.572	0.580	0.602	0.608	0.609	0.657	0.766	0.735	0.746	1.000	0.623	0.674	0.647	0.652	0.197	0.238	0.211	0.217	0.298
	B10.1	0.537	0.465	0.466	0.493	0.475	0.392	0.517	0.499	0.544	0.623	1.000	0.879	0.843	0.831	0.328	0.354	0.274	0.242	0.301
	B10.2	0.561	0.488	0.498	0.521	0.527	0.407	0.571	0.567	0.583	0.674	0.879	1.000	0.859	0.816	0.308	0.382	0.297	0.213	0.295
	B10.3	0.567	0.503	0.510	0.565	0.572	0.430	0.561	0.554	0.550	0.647	0.843	0.859	1.000	0.857	0.309	0.342	0.244	0.234	0.311
	B10.4	0.553	0.514	0.510	0.551	0.538	0.459	0.618	0.600	0.613	0.652	0.831	0.816	0.857	1.000	0.310	0.302	0.232	0.227	0.326
	D14.1	0.215	0.191	0.064	0.101	0.161	0.097	0.161	0.164	0.137	0.197	0.328	0.308	0.309	0.310	1.000	0.684	0.566	0.490	0.387
	D14.2	0.247	0.187	0.066	0.037	0.123	0.031	0.151	0.177	0.119	0.238	0.354	0.382	0.342	0.302	0.684	1.000	0.573	0.429	0.507
	D14.3	0.217	0.184	0.095	0.087	0.138	0.119	0.164	0.197	0.144	0.211	0.274	0.297	0.244	0.232	0.566	0.573	1.000	0.671	0.452
D14.4	0.249	0.208	0.195	0.094	0.163	0.139	0.196	0.196	0.165	0.217	0.242	0.213	0.234	0.227	0.490	0.429	0.671	1.000	0.481	
D14.5	0.335	0.292	0.210	0.173	0.220	0.157	0.233	0.239	0.195	0.298	0.301	0.295	0.311	0.326	0.387	0.507	0.452	0.481	1.000	

Note. The results for first order correlation matrix for independent variables. Own work.

Table L20 – First order sample adequacy for independent variables

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.913	
Bartlett's Test of Sphericity	Approx. Chi-Square	6444.115
	df	171
	Sig.	0.000

Note. The results for first order sample adequacy for independent variables. Own work.

Table L21 – First order anti-image matrix for independent variables

	B8.1	B8.2	B8.3	B8.4	B8.5	B9.1	B9.2	B9.3	B9.4	B9.5	B10.1	B10.2	B10.3	B10.4	D14.1	D14.2	D14.3	D14.4	D14.5	
Anti-image Correlation	B8.1	.927a	-0.474	-0.034	-0.304	-0.04	0.153	-0.025	0.04	-0.063	0.015	-0.055	-0.059	0	0.034	0.057	-0.106	0.032	-0.091	-0.094
	B8.2	-0.474	.902a	-0.185	0.181	-0.402	-0.039	0.093	-0.142	0.016	-0.059	-0.031	0.068	0.066	-0.066	-0.049	0.023	-0.031	0.064	-0.041
	B8.3	-0.034	-0.185	.895a	-0.55	0.045	-0.172	0.141	-0.06	0.097	-0.112	0.014	-0.097	0.079	-0.035	0.154	-0.051	0.144	-0.254	0.011
	B8.4	-0.304	0.181	-0.55	.876a	-0.387	-0.056	-0.081	0.061	-0.058	0.012	-0.011	0.079	-0.094	-0.019	-0.118	0.166	-0.114	0.228	0.015
	B8.5	-0.04	-0.402	0.045	-0.387	.927a	0.072	-0.158	-0.035	0.072	-0.037	0.098	-0.039	-0.151	0.065	-0.037	0.037	0.021	-0.033	0.03
	B9.1	0.153	-0.039	-0.172	-0.056	0.072	.928a	-0.266	-0.219	-0.203	-0.105	-0.062	0.141	-0.078	0.091	-0.078	0.117	-0.067	0.048	-0.023
	B9.2	-0.025	0.093	0.141	-0.081	-0.158	-0.266	.941a	-0.25	-0.151	-0.253	0.068	-0.05	0.078	-0.158	0.027	-0.023	0.06	-0.088	0.003
	B9.3	0.04	-0.142	-0.06	0.061	-0.035	-0.219	-0.25	.948a	-0.326	-0.068	0.127	-0.065	-0.024	-0.074	0.044	-0.063	-0.058	0.02	0.013
	B9.4	-0.063	0.016	0.097	-0.058	0.072	-0.203	-0.151	-0.326	.948a	-0.212	-0.045	-0.072	0.099	-0.103	0.001	0.062	0.042	-0.044	0.041
	B9.5	0.015	-0.059	-0.112	0.012	-0.037	-0.105	-0.253	-0.068	-0.212	.970a	-0.056	-0.123	-0.049	0.065	0.047	-0.073	0.007	0.009	-0.077
	B10.1	-0.055	-0.031	0.014	-0.011	0.098	-0.062	0.068	0.127	-0.045	-0.056	.928a	-0.486	-0.185	-0.285	-0.055	0.016	0.022	-0.057	0.017
	B10.2	-0.059	0.068	-0.097	0.079	-0.039	0.141	-0.05	-0.065	-0.072	-0.123	-0.486	.918a	-0.328	-0.055	0.063	-0.121	-0.171	0.162	0.072
	B10.3	0	0.066	0.079	-0.094	-0.151	-0.078	0.078	-0.024	0.099	-0.049	-0.185	-0.328	.933a	-0.41	0.018	-0.073	0.098	-0.09	-0.003
	B10.4	0.034	-0.066	-0.035	-0.019	0.065	0.091	-0.158	-0.074	-0.103	0.065	-0.285	-0.055	-0.41	.941a	-0.11	0.09	0.039	0.029	-0.116
	D14.1	0.057	-0.049	0.154	-0.118	-0.037	-0.078	0.027	0.044	0.001	0.047	-0.055	0.063	0.018	-0.11	.818a	-0.515	-0.135	-0.199	0.069
	D14.2	-0.106	0.023	-0.051	0.166	0.037	0.117	-0.023	-0.063	0.062	-0.073	0.016	-0.121	-0.073	0.09	-0.515	.796a	-0.219	0.112	-0.279
	D14.3	0.032	-0.031	0.144	-0.114	0.021	-0.067	0.06	-0.058	0.042	0.007	0.022	-0.171	0.098	0.039	-0.135	-0.219	.809a	-0.525	-0.066
D14.4	-0.091	0.064	-0.254	0.228	-0.033	0.048	-0.088	0.02	-0.044	0.009	-0.057	0.162	-0.09	0.029	-0.199	0.112	-0.525	.750a	-0.218	
D14.5	-0.094	-0.041	0.011	0.015	0.03	-0.023	0.003	0.013	0.041	-0.077	0.017	0.072	-0.003	-0.116	0.069	-0.279	-0.066	-0.218	.912a	

a Measures of Sampling Adequacy(MSA)

Note. The results for first order anti-image matrix for independent variables. Own work.

Table L22 – First order communalities for independent variables

	<i>Initial</i>	<i>Extraction</i>
B8.1	0.748	0.776
B8.2	0.738	0.719
B8.3	0.746	0.705
B8.4	0.816	0.797
B8.5	0.756	0.758
B9.1	0.655	0.686
B9.2	0.753	0.785
B9.3	0.747	0.782
B9.4	0.728	0.767
B9.5	0.737	0.750
B10.1	0.828	0.856
B10.2	0.849	0.872
B10.3	0.833	0.855
B10.4	0.809	0.814
D14.1	0.561	0.550
D14.2	0.621	0.620
D14.3	0.587	0.651
D14.4	0.557	0.531
D14.5	0.394	0.391

Extraction Method: Principal Axis Factoring.

Note. The results for first order communalities for independent variables. Own work.

Table L23 – First order total variance explained for independent variables

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.313	49.016	49.016	9.080	47.789	47.789	3.849	20.257	20.257
2	2.817	14.826	63.843	2.422	12.750	60.538	3.671	19.323	39.581
3	1.377	7.248	71.090	1.143	6.018	66.557	3.261	17.162	56.743
4	1.257	6.616	77.706	1.018	5.356	71.913	2.882	15.170	71.913
5	0.637	3.352	81.059						
6	0.616	3.244	84.303						
7	0.425	2.235	86.538						
8	0.358	1.886	88.424						
9	0.314	1.650	90.074						
10	0.297	1.563	91.637						
11	0.265	1.397	93.034						
12	0.249	1.310	94.344						
13	0.223	1.176	95.520						
14	0.197	1.036	96.556						
15	0.170	0.893	97.449						
16	0.162	0.851	98.300						
17	0.121	0.639	98.940						
18	0.110	0.576	99.516						
19	0.092	0.484	100.000						

Extraction Method: Principal Axis Factoring.

Note. The results for first order total variance explained for independent variables. Own work.

Table L24 – First order rotated factor matrix for independent variables

	Factor			
	1	2	3	4
B8.4	0.785	0.344	0.250	
B8.1	0.784	0.195	0.278	0.214
B8.5	0.770	0.319	0.235	
B8.2	0.759	0.278	0.190	0.172
B8.3	0.738	0.343	0.201	
B9.4	0.259	0.773	0.312	
B9.2	0.319	0.772	0.273	0.108
B9.1	0.274	0.771	0.122	
B9.3	0.333	0.770	0.246	0.133
B9.5	0.385	0.653	0.386	0.163
B10.1	0.260	0.258	0.818	0.231
B10.2	0.286	0.309	0.802	0.228
B10.3	0.336	0.287	0.785	0.207
B10.4	0.307	0.369	0.738	0.198
D14.3				0.799
D14.2			0.253	0.746
D14.1			0.191	0.715
D14.4	0.107	0.112		0.712
D14.5	0.172	0.101	0.129	0.578

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 5 iterations.

Note. The results for the first order rotated factor matrix for independent variables. Own work.

Table L25 – Second order correlation matrix for independent variables

		GCuO	GCoO	GfC	GMV
Correlation	GCuO	1.000	0.676	0.622	0.234
	GCoO	0.676	1.000	0.658	0.242
	GfC	0.622	0.658	1.000	0.393
	GMV	0.234	0.242	0.393	1.000

Note. The results for the second order correlation matrix for independent variables. Own work.

Table L26 – Second order sample adequacy of independent variables

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.737
Bartlett's Test of Sphericity	Approx. Chi-Square
	542.447
	df
	6
	Sig.
	0.000

Note. The results for the second order sample adequacy of independent variables. Own work.

Table L27 – Second order anti-image matrix

		GCuO	GCoO	GIfC	GMV
Anti-image Correlation	GCuO	.751 ^a	-0.452	-0.305	0.005
	GCoO	-0.452	.723 ^a	-0.398	0.019
	GIfC	-0.305	-0.398	.738 ^a	-0.306
	GMV	0.005	0.019	-0.306	.740 ^a

a. Measures of Sampling Adequacy (MSA)

Note. The results for the second order anti-image matrix. Own work.

Table L28 – Second order communality for independent variables

	Initial	Extraction
GCuO	0.512	0.603
GCoO	0.549	0.663
GIfC	0.539	0.690
GMV	0.155	0.130

Extraction Method: Principal Axis Factoring.

Note. The results for the second order communality for independent variables. Own work

Table L29 – Second-order total variance explained of independent variables

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
GCuO	2.475	61.886	61.886	2.087	52.171	52.171
GCoO	0.862	21.539	83.424			
GIfC	0.353	8.820	92.245			
GMV	0.310	7.755	100.000			

Extraction Method: Principal Axis Factoring.

Note. The results for the second-order total variance explained of independent variables. Own work.

Table L30 – Second order factor matrix for independent variables

	Factor 1
GIfC	0.831
GCoO	0.814
GCuO	0.777
GMV	0.360

Extraction Method:
Principal Axis Factoring.

a. 1 factors extracted. 7 iterations required.

Note. The results for the second-order factor matrix for independent variables. Own work.

Table L31 – First order correlation matrix for mediator variable

	C11.1	C11.2	C11.3	C11.4	C11.5	C11.6	C11.7	C11.8	C12.1	C12.2	C12.3	C12.4	C12.5	C13.1	C13.2	C13.3	C13.4	C13.5	
Correlation	C11.1	1.000	0.896	0.810	0.670	0.597	0.521	0.328	0.345	0.227	0.213	0.219	0.156	0.280	0.182	0.272	0.311	0.265	0.260
	C11.2	0.896	1.000	0.804	0.665	0.582	0.543	0.327	0.358	0.267	0.255	0.248	0.213	0.304	0.206	0.296	0.321	0.292	0.271
	C11.3	0.810	0.804	1.000	0.655	0.558	0.561	0.318	0.348	0.281	0.271	0.255	0.197	0.270	0.163	0.261	0.293	0.262	0.258
	C11.4	0.670	0.665	0.655	1.000	0.713	0.672	0.411	0.426	0.363	0.392	0.343	0.304	0.335	0.282	0.381	0.390	0.360	0.379
	C11.5	0.597	0.582	0.558	0.713	1.000	0.530	0.377	0.408	0.315	0.317	0.322	0.234	0.320	0.252	0.331	0.389	0.341	0.344
	C11.6	0.521	0.543	0.561	0.672	0.530	1.000	0.513	0.494	0.342	0.392	0.357	0.334	0.346	0.329	0.459	0.457	0.446	0.444
	C11.7	0.328	0.327	0.318	0.411	0.377	0.513	1.000	0.844	0.397	0.439	0.424	0.363	0.444	0.445	0.430	0.419	0.407	0.429
	C11.8	0.345	0.358	0.348	0.426	0.408	0.494	0.844	1.000	0.416	0.421	0.434	0.344	0.429	0.405	0.393	0.376	0.380	0.406
	C12.1	0.227	0.267	0.281	0.363	0.315	0.342	0.397	0.416	1.000	0.880	0.807	0.771	0.699	0.601	0.621	0.616	0.630	0.610
	C12.2	0.213	0.255	0.271	0.392	0.317	0.392	0.439	0.421	0.880	1.000	0.848	0.793	0.711	0.609	0.631	0.634	0.644	0.648
	C12.3	0.219	0.248	0.255	0.343	0.322	0.357	0.424	0.434	0.807	0.848	1.000	0.714	0.711	0.582	0.630	0.625	0.661	0.656
	C12.4	0.156	0.213	0.197	0.304	0.234	0.334	0.363	0.344	0.771	0.793	0.714	1.000	0.665	0.618	0.632	0.650	0.667	0.669
	C12.5	0.280	0.304	0.270	0.335	0.320	0.346	0.444	0.429	0.699	0.711	0.711	0.665	1.000	0.539	0.649	0.665	0.660	0.650
	C13.1	0.182	0.206	0.163	0.282	0.252	0.329	0.445	0.405	0.601	0.609	0.582	0.618	0.539	1.000	0.733	0.690	0.690	0.676
	C13.2	0.272	0.296	0.261	0.381	0.331	0.459	0.430	0.393	0.621	0.631	0.630	0.632	0.649	0.733	1.000	0.924	0.890	0.809
C13.3	0.311	0.321	0.293	0.390	0.389	0.457	0.419	0.376	0.616	0.634	0.625	0.650	0.665	0.690	0.924	1.000	0.930	0.836	
C13.4	0.265	0.292	0.262	0.360	0.341	0.446	0.407	0.380	0.630	0.644	0.661	0.667	0.660	0.690	0.890	0.930	1.000	0.865	
C13.5	0.260	0.271	0.258	0.379	0.344	0.444	0.429	0.406	0.610	0.648	0.656	0.669	0.650	0.676	0.809	0.836	0.865	1.000	

Note. The results for first-order correlation matrix for mediator variable. Own work.

Table L32 – First order sampling adequacy of the mediator variable

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.921
Bartlett's Test of Sphericity	Approx. Chi-Square
	7080.667
	df
	153
	Sig.
	0.000

Note. The results for first-order sampling adequacy of the mediator variable. Own work.

Table L33 – First order anti-image matrix for the mediator variable

Anti-image Correlation	C11.1	.846 ^a	-0.666	-0.305	-0.130	-0.068	0.066	-0.061	0.041	0.003	0.076	-0.034	0.092	-0.053	-0.027	0.057	-0.110	0.077	-0.046
	C11.2	-0.666	.864 ^a	-0.243	-0.047	-0.038	-0.062	0.058	-0.051	0.010	0.004	0.036	-0.088	-0.049	-0.014	-0.046	0.078	-0.080	0.086
	C11.3	-0.305	-0.243	.940 ^a	-0.085	-0.003	-0.163	0.030	-0.024	-0.080	-0.026	-0.007	0.027	0.045	0.076	0.035	-0.021	0.010	-0.004
	C11.4	-0.130	-0.047	-0.085	.914 ^a	-0.434	-0.319	0.011	-0.008	0.002	-0.130	0.071	-0.025	0.051	0.027	-0.099	0.083	0.035	-0.057
	C11.5	-0.068	-0.038	-0.003	-0.434	.917 ^a	-0.022	0.020	-0.086	-0.039	0.051	-0.083	0.089	-0.008	-0.010	0.152	-0.195	0.045	-0.004
	C11.6	0.066	-0.062	-0.163	-0.319	-0.022	.947 ^a	-0.157	-0.040	0.089	-0.065	0.024	-0.027	0.078	0.075	-0.095	0.029	-0.062	-0.040
	C11.7	-0.061	0.058	0.030	0.011	0.020	-0.157	.836 ^a	-0.760	0.110	-0.104	0.034	0.007	-0.077	-0.120	0.009	-0.054	0.047	0.010
	C11.8	0.041	-0.051	-0.024	-0.008	-0.086	-0.040	-0.760	.839 ^a	-0.117	0.091	-0.077	0.035	-0.030	-0.013	-0.016	0.087	-0.022	-0.042
	C12.1	0.003	0.010	-0.080	0.002	-0.039	0.089	0.110	-0.117	.933 ^a	-0.489	-0.160	-0.201	-0.108	-0.080	-0.062	0.036	-0.035	0.103
	C12.2	0.076	0.004	-0.026	-0.130	0.051	-0.065	-0.104	0.091	-0.489	.912 ^a	-0.409	-0.248	-0.075	-0.043	0.043	-0.066	0.083	-0.031
	C12.3	-0.034	0.036	-0.007	0.071	-0.083	0.024	0.034	-0.077	-0.160	-0.409	.948 ^a	0.011	-0.166	0.012	-0.047	0.130	-0.142	-0.078
	C12.4	0.092	-0.088	0.027	-0.025	0.089	-0.027	0.007	0.035	-0.201	-0.248	0.011	.963 ^a	-0.105	-0.125	0.094	-0.068	-0.040	-0.128
	C12.5	-0.053	-0.049	0.045	0.051	-0.008	0.078	-0.077	-0.030	-0.108	-0.075	-0.166	-0.105	.979 ^a	0.097	-0.044	-0.091	0.011	-0.073
	C13.1	-0.027	-0.014	0.076	0.027	-0.010	0.075	-0.120	-0.013	-0.080	-0.043	0.012	-0.125	0.097	.965 ^a	-0.288	0.046	-0.016	-0.114
	C13.2	0.057	-0.046	0.035	-0.099	0.152	-0.095	0.009	-0.016	-0.062	0.043	-0.047	0.094	-0.044	-0.288	.926 ^a	-0.554	-0.118	-0.023
C13.3	-0.110	0.078	-0.021	0.083	-0.195	0.029	-0.054	0.087	0.036	-0.066	0.130	-0.068	-0.091	0.046	-0.554	.896 ^a	-0.524	-0.072	
C13.4	0.077	-0.080	0.010	0.035	0.045	-0.062	0.047	-0.022	-0.035	0.083	-0.142	-0.040	0.011	-0.016	-0.118	-0.524	.927 ^a	-0.361	
C13.5	-0.046	0.086	-0.004	-0.057	-0.004	-0.040	0.010	-0.042	0.103	-0.031	-0.078	-0.128	-0.073	-0.114	-0.023	-0.072	-0.361	.965 ^a	

a. Measures of Sampling Adequacy(MSA)

Note. The results for first-order anti-image matrix for the mediator variable. Own work.

Table L34 – First order communality for the mediator variable

	<i>Initial</i>	<i>Extraction</i>
C11.1	0.841	0.840
C11.2	0.830	0.821
C11.3	0.717	0.748
C11.4	0.695	0.667
C11.5	0.572	0.516
C11.6	0.577	0.542
C11.7	0.743	0.872
C11.8	0.737	0.809
C12.1	0.812	0.853
C12.2	0.855	0.910
C12.3	0.770	0.779
C12.4	0.709	0.716
C12.5	0.636	0.627
C13.1	0.614	0.589
C13.2	0.882	0.890
C13.3	0.919	0.936
C13.4	0.899	0.918
C13.5	0.785	0.787

Extraction Method: Principal Axis Factoring.

Note. The results for first-order communality for the mediator variable. Own work.

Table L35 – First order total variance explained for the mediator variable

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.278	51.543	51.543	9.062	50.347	50.347	4.087	22.705	22.705
2	3.100	17.220	68.763	2.853	15.851	66.198	4.064	22.576	45.280
3	1.202	6.678	75.442	1.046	5.810	72.008	3.839	21.328	66.608
4	1.018	5.658	81.100	0.860	4.775	76.784	1.832	10.176	76.784
5	0.607	3.375	84.475						
6	0.473	2.628	87.103						
7	0.430	2.387	89.490						
8	0.294	1.636	91.126						
9	0.278	1.546	92.672						
10	0.234	1.300	93.972						
11	0.220	1.221	95.193						
12	0.206	1.146	96.339						
13	0.162	0.902	97.240						
14	0.153	0.852	98.092						
15	0.103	0.575	98.667						
16	0.098	0.545	99.212						
17	0.090	0.501	99.714						
18	0.052	0.286	100.000						

Extraction Method: Principal Axis Factoring.

Note. The results for first-order total variance explained for the mediator variable. Own work.

Table L36 – First order rotated factor matrix for the mediator variable

	Factor			
	1	2	3	4
C11.1	0.909			
C11.2	0.894			
C11.3	0.851		0.118	
C11.4	0.750	0.172	0.182	0.207
C11.5	0.651	0.176	0.141	0.202
C11.6	0.577	0.285	0.148	0.326
C13.3	0.225	0.870	0.340	0.114
C13.4	0.180	0.855	0.376	0.118
C13.2	0.185	0.842	0.351	0.153
C13.5	0.179	0.747	0.410	0.169
C13.1		0.592	0.423	0.229
C12.2	0.161	0.321	0.867	0.169
C12.1	0.168	0.313	0.841	0.139
C12.3	0.150	0.365	0.768	0.181
C12.4		0.439	0.709	0.110
C12.5	0.191	0.440	0.601	0.190
C11.7	0.247	0.219	0.209	0.848
C11.8	0.285	0.164	0.232	0.805

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 7 iterations.

Note. The results for first-order rotated factor matrix for the mediator variable. Own work.

Table L37 – Second order correlation matrix for the mediator variable

		CoP	WsP	ISP	IBP
Correlation	CoP	1.000	0.491	0.392	0.421
	WsP	0.491	1.000	0.477	0.464
	ISP	0.392	0.477	1.000	0.766
	IBP	0.421	0.464	0.766	1.000

Note. The results for the second-order correlation matrix for the mediator variable. Own work.

Table L38 – Second order sample adequacy for the mediator variable

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.707
Bartlett's Test of Sphericity	Approx. Chi-Square	565.194
	df	6
	Sig.	0.000

Note. The results for the second-order sample adequacy for the mediator variable. Own work.

Table L39 – Second order anti-image for the mediator variable

		CoP	WsP	ISP	IBP
Anti-image Correlation	CoP	.792 ^a	-0.353	-0.044	-0.152
	WsP	-0.353	.801 ^a	-0.183	-0.108
	ISP	-0.044	-0.183	.658 ^a	-0.684
	IBP	-0.152	-0.108	-0.684	.661 ^a

a. Measures of Sampling Adequacy (MSA)

Note. The results of second-order anti-image for the mediator variable. Own work.

Table L40 – Second order correlation matrix for the mediator variable

		CoP	WsP	ISP	IBP
Correlation	CoP	1.000	0.491	0.392	0.421
	WsP	0.491	1.000	0.477	0.464
	ISP	0.392	0.477	1.000	0.766
	IBP	0.421	0.464	0.766	1.000

Note. The results of the second-order correlation matrix for the mediator variable. Own work.

Table L41 – Second order total variance explained for the mediator variable

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
CoP	2.517	62.935	62.935	2.081	52.033	52.033
WsP	0.748	18.711	81.646			
ISP	0.502	12.549	94.195			
IBP	0.232	5.805	100.000			

Extraction Method: Principal Axis Factoring.

Note. The results of the second-order total variance explained for the mediator variable. Own work

Table L42 – Second order factor matrix for mediator variable

	Factor 1
CoP	0.554
WsP	0.623
ISP	0.827
IBP	0.838

Extraction Method:
Principal Axis Factoring.

a. 1 factor extracted. 7
iterations required.

Note. The results for the second-order factor matrix for mediator variable. Own work.

Table L43 – First order correlation matrix for dependent variable

	E15.2	E15.3	E15.4	E15.5	E15.6	E15.7	E15.8	E15.9	E15.10	E15.11	E15.12	E15.13	E15.14	E15.15	E15.16	E15.17	E15.18	E15.19	E15.20	E15.21	E15.22	E15.23	E15.24	E15.25	E15.26	E15.27	E15.28	E15.29	E15.30	E15.31	E15.32	E15.33	E15.34	E15.35	
Correlation	E15.2	1.000	0.651	0.602	0.601	0.408	0.470	0.477	0.578	0.594	0.491	0.457	0.506	0.428	0.445	0.392	0.422	0.446	0.481	0.487	0.506	0.472	0.438	0.546	0.477	0.515	0.478	0.457	0.380	0.412	0.474	0.368	0.557	0.402	0.342
	E15.3	0.651	1.000	0.803	0.799	0.480	0.549	0.474	0.547	0.586	0.482	0.556	0.556	0.553	0.594	0.483	0.526	0.544	0.565	0.544	0.582	0.578	0.472	0.593	0.562	0.534	0.562	0.523	0.409	0.535	0.570	0.423	0.611	0.410	0.398
	E15.4	0.602	0.803	1.000	0.865	0.490	0.551	0.510	0.560	0.589	0.473	0.505	0.583	0.516	0.564	0.399	0.471	0.470	0.537	0.528	0.563	0.516	0.482	0.529	0.464	0.497	0.558	0.484	0.406	0.517	0.531	0.397	0.612	0.457	0.371
	E15.5	0.601	0.799	0.865	1.000	0.554	0.600	0.445	0.533	0.573	0.486	0.569	0.605	0.560	0.616	0.469	0.516	0.477	0.534	0.590	0.585	0.591	0.466	0.578	0.558	0.489	0.560	0.516	0.440	0.521	0.549	0.396	0.637	0.456	0.395
	E15.6	0.408	0.480	0.490	0.554	1.000	0.657	0.404	0.463	0.504	0.455	0.485	0.540	0.565	0.512	0.535	0.427	0.464	0.416	0.472	0.446	0.523	0.559	0.497	0.546	0.405	0.436	0.463	0.382	0.491	0.548	0.437	0.495	0.477	0.472
	E15.7	0.470	0.549	0.551	0.600	0.657	1.000	0.471	0.554	0.569	0.482	0.633	0.595	0.544	0.593	0.536	0.465	0.487	0.501	0.493	0.455	0.573	0.546	0.582	0.546	0.471	0.523	0.493	0.467	0.506	0.529	0.421	0.486	0.403	0.417
	E15.8	0.477	0.474	0.510	0.445	0.404	0.471	1.000	0.613	0.709	0.704	0.471	0.567	0.426	0.489	0.352	0.367	0.328	0.401	0.363	0.437	0.383	0.594	0.529	0.350	0.529	0.440	0.350	0.333	0.354	0.375	0.405	0.504	0.539	0.341
	E15.9	0.578	0.547	0.560	0.533	0.463	0.554	0.613	1.000	0.690	0.572	0.549	0.629	0.439	0.489	0.325	0.373	0.391	0.528	0.489	0.525	0.389	0.522	0.630	0.471	0.519	0.511	0.380	0.513	0.439	0.462	0.445	0.599	0.527	0.394
	E15.10	0.594	0.586	0.589	0.573	0.504	0.569	0.709	0.690	1.000	0.722	0.558	0.606	0.429	0.568	0.409	0.404	0.380	0.485	0.494	0.499	0.430	0.515	0.596	0.461	0.654	0.491	0.389	0.502	0.383	0.451	0.391	0.589	0.459	0.292
	E15.11	0.491	0.482	0.473	0.486	0.455	0.482	0.704	0.572	0.722	1.000	0.477	0.546	0.447	0.460	0.362	0.337	0.322	0.356	0.391	0.418	0.420	0.535	0.492	0.534	0.394	0.363	0.372	0.346	0.387	0.427	0.466	0.481	0.311	
	E15.12	0.457	0.556	0.505	0.569	0.485	0.633	0.471	0.549	0.558	0.477	1.000	0.644	0.633	0.703	0.444	0.552	0.499	0.503	0.503	0.486	0.503	0.451	0.550	0.476	0.485	0.579	0.501	0.428	0.524	0.534	0.447	0.555	0.417	0.373
	E15.13	0.506	0.556	0.583	0.605	0.540	0.595	0.567	0.629	0.606	0.546	0.644	1.000	0.562	0.614	0.485	0.529	0.491	0.555	0.526	0.562	0.549	0.632	0.609	0.486	0.536	0.594	0.521	0.484	0.493	0.540	0.486	0.618	0.545	0.435
	E15.14	0.428	0.553	0.516	0.560	0.565	0.544	0.426	0.439	0.429	0.447	0.633	0.562	1.000	0.762	0.626	0.632	0.633	0.537	0.550	0.554	0.564	0.523	0.504	0.541	0.435	0.620	0.602	0.390	0.605	0.534	0.610	0.468	0.531	0.541
	E15.15	0.445	0.594	0.564	0.616	0.512	0.593	0.489	0.489	0.568	0.460	0.703	0.614	0.762	1.000	0.628	0.704	0.629	0.566	0.561	0.534	0.617	0.480	0.539	0.528	0.465	0.684	0.628	0.422	0.619	0.597	0.558	0.561	0.432	0.424
	E15.16	0.392	0.483	0.399	0.469	0.535	0.536	0.352	0.325	0.409	0.362	0.444	0.485	0.626	0.628	1.000	0.632	0.671	0.502	0.409	0.479	0.621	0.502	0.493	0.560	0.426	0.485	0.605	0.411	0.523	0.494	0.532	0.473	0.386	0.455
	E15.17	0.422	0.526	0.471	0.516	0.427	0.465	0.367	0.373	0.404	0.337	0.552	0.529	0.632	0.704	0.632	1.000	0.801	0.553	0.526	0.530	0.658	0.467	0.476	0.512	0.391	0.609	0.643	0.412	0.612	0.542	0.567	0.513	0.426	0.439
	E15.18	0.446	0.544	0.470	0.477	0.464	0.487	0.328	0.391	0.380	0.322	0.499	0.491	0.633	0.629	0.671	0.801	1.000	0.588	0.536	0.560	0.625	0.466	0.488	0.542	0.421	0.572	0.647	0.418	0.586	0.574	0.541	0.504	0.401	0.487
	E15.19	0.481	0.565	0.537	0.534	0.416	0.501	0.401	0.528	0.485	0.356	0.503	0.555	0.537	0.566	0.502	0.553	0.588	1.000	0.791	0.824	0.706	0.557	0.604	0.558	0.556	0.633	0.584	0.476	0.555	0.532	0.519	0.569	0.479	0.449
	E15.20	0.487	0.544	0.528	0.590	0.472	0.493	0.363	0.489	0.494	0.391	0.503	0.526	0.550	0.561	0.409	0.526	0.536	0.791	1.000	0.830	0.691	0.518	0.611	0.627	0.545	0.637	0.549	0.480	0.550	0.560	0.531	0.595	0.485	0.493
	E15.21	0.506	0.582	0.563	0.585	0.446	0.455	0.437	0.525	0.499	0.418	0.486	0.562	0.554	0.534	0.479	0.530	0.560	0.824	0.830	1.000	0.738	0.618	0.643	0.591	0.586	0.649	0.587	0.498	0.554	0.555	0.516	0.612	0.528	0.475
	E15.22	0.472	0.578	0.516	0.591	0.523	0.573	0.383	0.389	0.430	0.420	0.503	0.549	0.564	0.617	0.621	0.658	0.625	0.706	0.691	0.738	1.000	0.594	0.590	0.607	0.523	0.616	0.698	0.473	0.611	0.591	0.553	0.573	0.427	0.431
	E15.23	0.438	0.472	0.482	0.466	0.559	0.546	0.594	0.522	0.515	0.535	0.451	0.632	0.523	0.480	0.502	0.467	0.466	0.557	0.518	0.618	0.594	1.000	0.719	0.556	0.657	0.558	0.580	0.495	0.546	0.556	0.548	0.556	0.686	0.469
	E15.24	0.546	0.593	0.529	0.578	0.497	0.582	0.529	0.630	0.596	0.492	0.550	0.609	0.504	0.539	0.493	0.476	0.488	0.604	0.611	0.643	0.590	0.719	1.000	0.680	0.725	0.600	0.542	0.644	0.524	0.531	0.486	0.670	0.572	0.469
	E15.25	0.477	0.562	0.464	0.558	0.546	0.546	0.350	0.471	0.461	0.422	0.476	0.486	0.541	0.528	0.560	0.512	0.542	0.558	0.627	0.591	0.607	0.556	0.680	1.000	0.621	0.566	0.571	0.540	0.560	0.631	0.528	0.601	0.573	0.475
	E15.26	0.515	0.534	0.497	0.489	0.405	0.471	0.529	0.519	0.654	0.534	0.485	0.536	0.435	0.465	0.426	0.391	0.421	0.556	0.545	0.586	0.523	0.657	0.725	0.621	1.000	0.591	0.553	0.573	0.480	0.519	0.434	0.665	0.556	0.366
	E15.27	0.478	0.562	0.558	0.560	0.436	0.523	0.440	0.511	0.491	0.394	0.579	0.594	0.620	0.684	0.485	0.609	0.572	0.633	0.637	0.649	0.616	0.558	0.600	0.566	0.591	1.000	0.739	0.541	0.736	0.661	0.616	0.663	0.493	0.575
	E15.28	0.457	0.523	0.484	0.516	0.463	0.493	0.350	0.380	0.389	0.363	0.501	0.521	0.602	0.628	0.605	0.643	0.647	0.584	0.549	0.587	0.698	0.580	0.542	0.571	0.553	0.739	1.000	0.503	0.706	0.652	0.601	0.566	0.460	0.515
	E15.29	0.380	0.409	0.406	0.440	0.382	0.467	0.333	0.513	0.502	0.372	0.428	0.484	0.390	0.422	0.411	0.412	0.418	0.476	0.480	0.498	0.473	0.495	0.644	0.540	0.573	0.541	0.503	1.000	0.535	0.572	0.522	0.601	0.517	0.433
	E15.30	0.412	0.535	0.517	0.521	0.491	0.506	0.354	0.439	0.383	0.346	0.524	0.493	0.605	0.619	0.523	0.612	0.586	0.555	0.550	0.554	0.611	0.546	0.524	0.560	0.480	0.736	0.706	0.535	1.000	0.791	0.646	0.597	0.536	0.597
	E15.31	0.474	0.570	0.531	0.549	0.548	0.529	0.375	0.462	0.451	0.387	0.534	0.540	0.534	0.597	0.494	0.542	0.574	0.532	0.560	0.555	0.591	0.556	0.531	0.631	0.519	0.661	0.652	0.572	0.791	1.000	0.586	0.647	0.554	0.558
	E15.32	0.368	0.423	0.397	0.396	0.437	0.421	0.405	0.445	0.391	0.427	0.447	0.486	0.610	0.558	0.532	0.567	0.541	0.519	0.531	0.516	0.553	0.548	0.486	0.528	0.434	0.616	0.601	0.522	0.646	0.586	1.000	0.530	0.676	0.636
	E15.33	0.557	0.611	0.612	0.637	0.495	0.486	0.504	0.599	0.589	0.466	0.555	0.618	0.468	0.561	0.473	0.513	0.504	0.569	0.595	0.612	0.573	0.556	0.670	0.601	0.665	0.663	0.566	0.601	0.597	0.647	0.530	1.000	0.617	0.506
	E15.34	0.402	0.410	0.457	0.456	0.477	0.403	0.539	0.527	0.459	0.481	0.417	0.545	0.531	0.432	0.386	0.426	0.401	0.479	0.485	0.528	0.427	0.686	0.572	0.573	0.556	0.493	0.460	0.517	0.536	0.554	0.676	0.617	1.000	0.555
	E15.35	0.342	0.398	0.371	0.395	0.472	0.4																												

Table L44 – First order sample adequacy for dependent variable

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.957
Bartlett's Test of Sphericity	Approx. Chi-Square	11926.316
	df	561
	Sig.	0.000

Note. The results of the first-order sample adequacy for the dependent variable. Own work.

Table L45 – First order anti-image matrix for the dependent variable

	E15.2	E15.3	E15.4	E15.5	E15.6	E15.7	E15.8	E15.9	E15.10	E15.11	E15.12	E15.13	E15.14	E15.15	E15.16	E15.17	E15.18	E15.19	E15.20	E15.21	E15.22	E15.23	E15.24	E15.25	E15.26	E15.27	E15.28	E15.29	E15.30	E15.31	E15.32	E15.33	E15.34	E15.35	
Anti-image Correlation	E15.2	.979 ^a	-0.175	-0.035	-0.045	0.059	-0.004	0.001	-0.172	-0.143	-0.035	0.018	0.003	-0.051	0.148	-0.032	-0.025	-0.037	0.020	-0.038	0.015	-0.032	0.058	-0.077	0.008	-0.014	-0.005	-0.099	0.112	0.068	-0.091	0.017	-0.050	-0.001	0.007
	E15.3	-0.175	.970 ^a	-0.309	-0.226	0.069	0.045	-0.007	-0.008	-0.066	-0.009	-0.059	0.047	-0.077	0.029	0.010	0.007	-0.081	-0.075	0.125	-0.027	-0.049	0.039	-0.116	-0.115	-0.039	0.047	0.037	0.121	-0.018	-0.104	-0.055	-0.018	0.153	-0.034
	E15.4	-0.035	-0.309	.940 ^a	-0.601	0.001	-0.070	-0.127	-0.033	-0.051	0.086	0.140	-0.032	-0.026	0.007	0.116	0.048	-0.094	-0.083	0.066	-0.037	0.094	-0.069	0.112	0.129	-0.036	-0.049	0.011	0.009	-0.077	0.006	-0.039	-0.048	-0.014	0.068
	E15.5	-0.045	-0.226	-0.601	.940 ^a	-0.087	-0.073	0.135	0.047	0.031	-0.105	-0.054	-0.072	-0.005	-0.085	-0.070	-0.075	0.165	0.137	-0.141	-0.027	-0.094	0.119	-0.072	-0.070	0.107	0.026	-0.047	-0.041	0.033	0.040	0.165	-0.086	-0.110	-0.017
	E15.6	0.059	0.069	0.001	-0.087	.958 ^a	-0.268	0.097	-0.037	-0.200	0.008	0.027	-0.040	-0.185	0.076	-0.102	0.075	-0.030	0.097	-0.065	0.052	-0.090	-0.181	0.044	-0.101	0.133	0.099	0.000	0.106	-0.004	-0.119	0.064	-0.089	-0.024	-0.121
	E15.7	-0.004	0.045	-0.070	-0.073	-0.268	.960 ^a	-0.040	-0.119	-0.060	0.023	-0.272	-0.024	0.044	-0.015	-0.111	0.113	-0.051	-0.069	-0.042	0.218	-0.184	-0.104	-0.038	-0.087	0.043	-0.066	0.055	-0.098	-0.016	0.007	0.061	0.170	0.076	-0.065
	E15.8	0.001	-0.007	-0.127	0.135	0.097	-0.040	.951 ^a	-0.116	-0.264	-0.309	-0.002	-0.005	0.019	-0.093	-0.019	-0.042	0.038	0.021	0.088	-0.028	-0.040	-0.166	-0.054	0.110	0.026	-0.046	0.042	0.173	0.037	0.021	0.060	-0.041	-0.175	-0.089
	E15.9	-0.172	-0.008	-0.033	0.047	-0.037	-0.119	-0.116	.965 ^a	-0.184	-0.062	-0.051	-0.158	0.014	0.004	0.153	0.062	-0.056	-0.150	0.090	-0.082	0.169	0.043	-0.159	-0.053	0.163	-0.007	0.042	-0.097	-0.065	0.064	-0.067	-0.102	-0.030	0.004
	E15.10	-0.143	-0.066	-0.051	0.031	-0.200	-0.060	-0.264	-0.184	.938 ^a	-0.327	-0.011	-0.019	0.183	-0.213	-0.094	-0.068	0.063	-0.010	-0.114	-0.020	0.151	0.084	0.050	0.094	-0.314	0.005	0.081	-0.193	0.063	0.003	-0.001	0.016	0.057	0.103
	E15.11	-0.035	-0.009	0.086	-0.105	0.008	0.023	-0.309	-0.062	-0.327	.954 ^a	-0.041	-0.060	-0.111	0.069	0.046	0.076	-0.013	0.131	-0.003	0.010	-0.127	-0.088	0.092	-0.074	-0.057	0.075	-0.012	0.022	0.000	0.024	-0.131	0.051	0.025	0.004
	E15.12	0.018	-0.059	0.140	-0.054	0.027	-0.272	-0.002	-0.051	-0.011	-0.041	.966 ^a	-0.205	-0.204	-0.185	0.145	-0.100	0.030	-0.023	0.026	-0.027	0.068	0.114	-0.073	0.057	-0.061	0.017	-0.003	0.039	-0.030	-0.071	0.001	-0.106	0.037	0.075
	E15.13	0.003	0.047	-0.032	-0.072	-0.040	-0.024	-0.005	-0.158	-0.019	-0.060	-0.205	.982 ^a	-0.003	-0.034	-0.051	-0.065	0.022	-0.054	0.018	0.020	-0.029	-0.193	0.008	0.096	0.046	-0.102	0.006	-0.025	0.144	-0.059	0.043	-0.076	-0.053	-0.024
	E15.14	-0.051	-0.077	-0.026	-0.005	-0.185	0.044	0.019	0.014	0.183	-0.111	-0.204	-0.003	.952 ^a	-0.398	-0.157	0.032	-0.114	0.058	-0.060	-0.094	0.101	0.000	0.056	-0.007	-0.049	-0.061	-0.008	-0.003	-0.073	0.164	-0.058	0.227	-0.175	-0.120
	E15.15	0.148	0.029	0.007	-0.085	0.076	-0.015	-0.093	0.004	-0.213	0.069	-0.185	-0.034	-0.398	.955 ^a	-0.159	-0.184	0.045	-0.040	-0.060	0.129	-0.060	0.087	-0.087	0.031	0.099	-0.181	-0.042	0.118	0.016	-0.157	-0.052	-0.036	0.067	0.159
	E15.16	-0.032	0.010	0.116	-0.070	-0.102	-0.111	-0.019	0.153	-0.094	0.046	0.145	-0.051	-0.157	-0.159	.946 ^a	-0.038	-0.207	-0.118	0.292	-0.071	-0.085	-0.065	0.003	-0.185	0.003	0.172	-0.088	-0.033	-0.025	0.091	-0.141	-0.114	0.162	-0.087
	E15.17	-0.025	-0.007	0.048	-0.075	-0.075	0.113	-0.042	0.062	-0.068	-0.076	-0.100	-0.065	0.032	-0.184	-0.038	.947 ^a	-0.550	0.035	-0.023	0.080	-0.196	-0.064	0.027	-0.030	0.127	-0.030	0.127	-0.014	-0.125	0.130	-0.050	-0.073	0.055	
	E15.18	-0.037	-0.081	-0.094	0.165	-0.030	0.038	-0.056	0.063	-0.013	0.030	0.022	-0.114	0.045	-0.207	-0.550	.949 ^a	-0.084	-0.018	-0.052	0.063	0.051	-0.011	-0.014	-0.027	0.074	-0.118	0.006	0.071	-0.131	0.021	-0.017	0.067	-0.078	
	E15.19	0.020	-0.075	-0.083	0.137	0.097	-0.069	0.021	-0.150	-0.010	0.131	-0.023	-0.054	0.058	-0.040	-0.118	0.035	-0.084	.966 ^a	-0.314	-0.320	-0.132	0.010	0.018	0.058	-0.064	-0.025	-0.014	0.015	-0.030	0.053	0.005	0.064	-0.069	0.024
	E15.20	-0.038	0.125	0.066	-0.141	-0.065	-0.042	0.088	0.090	-0.114	-0.003	0.026	0.018	-0.060	-0.060	0.292	-0.023	-0.018	-0.314	.950 ^a	-0.410	-0.068	0.073	-0.058	-0.191	0.001	-0.020	0.067	0.054	0.014	-0.018	-0.126	-0.053	0.083	-0.107
	E15.21	0.015	-0.027	-0.037	-0.027	0.052	0.218	-0.028	-0.082	-0.020	0.010	-0.027	0.020	-0.094	0.129	-0.071	0.080	-0.052	-0.320	-0.410	.954 ^a	-0.278	-0.145	-0.021	0.034	0.026	-0.128	0.036	-0.031	0.050	-0.017	0.115	0.001	-0.066	-0.008
	E15.22	-0.032	-0.049	0.094	-0.094	-0.090	-0.184	-0.040	0.169	0.151	-0.127	0.068	-0.029	0.101	-0.060	-0.085	-0.196	0.063	-0.132	-0.068	-0.278	.961 ^a	-0.077	-0.007	-0.033	-0.007	0.105	-0.203	-0.018	-0.056	-0.002	-0.136	-0.081	0.172	0.125
	E15.23	0.058	0.039	-0.069	0.119	-0.181	-0.104	-0.166	0.043	0.108	-0.084	0.114	-0.193	0.000	0.087	-0.065	-0.042	0.051	0.010	0.073	-0.145	-0.077	.946 ^a	-0.368	0.128	-0.185	-0.008	-0.124	0.104	-0.028	-0.102	0.005	0.155	-0.308	0.077
	E15.24	-0.077	-0.116	0.112	-0.072	0.044	-0.038	-0.054	-0.159	0.050	0.092	-0.073	0.008	0.056	-0.087	0.003	0.027	-0.011	0.018	-0.058	-0.021	-0.007	-0.368	.957 ^a	-0.233	-0.203	0.010	0.070	-0.289	-0.194	0.064	-0.089	0.080	-0.101	
	E15.25	0.008	-0.115	0.129	-0.070	-0.101	-0.087	0.110	-0.053	0.094	-0.074	0.057	0.096	-0.007	0.031	-0.185	-0.030	-0.014	0.058	-0.191	0.034	-0.033	0.128	-0.233	.962 ^a	-0.191	-0.041	-0.010	0.015	0.072	-0.205	0.023	0.039	-0.226	0.065
	E15.26	-0.014	-0.039	-0.036	0.107	0.133	0.043	0.026	0.163	-0.314	-0.057	-0.061	0.046	-0.049	0.099	0.003	0.127	-0.027	-0.064	0.001	0.026	-0.007	-0.185	-0.203	-0.191	.956 ^a	-0.124	-0.150	-0.065	0.024	0.023	0.107	-0.202	-0.080	0.082
	E15.27	-0.005	0.047	-0.049	0.026	0.099	-0.066	-0.046	-0.007	0.005	0.075	0.017	-0.102	-0.061	-0.181	0.172	-0.064	0.074	-0.025	-0.020	-0.128	0.105	-0.008	0.010	-0.041	-0.124	.965 ^a	-0.292	-0.018	-0.232	0.025	-0.116	-0.165	0.194	-0.158
	E15.28	-0.099	0.037	0.011	-0.047	0.000	0.055	0.042	0.042	0.081	-0.012	-0.003	0.006	-0.008	-0.042	-0.088	-0.014	-0.118	-0.014	0.067	0.036	-0.203	-0.124	0.070	-0.010	-0.150	-0.292	.975 ^a	-0.054	-0.117	-0.051	-0.062	0.040	0.065	-0.018
	E15.29	0.112	0.121	0.009	-0.041	0.106	-0.098	0.173	-0.097	-0.193	0.022	0.039	-0.025	-0.003	0.118	-0.033	-0.021	0.006	0.015	0.054	-0.031	-0.018	0.104	-0.289	0.015	-0.065	-0.018	-0.054	.959 ^a	-0.033	-0.179	-0.141	-0.097	-0.065	0.014
	E15.30	0.068	-0.018	-0.077	0.033	-0.004	-0.016	0.037	-0.065	0.063	0.000	-0.030	0.144	-0.073	0.016	-0.025	-0.125	0.071	-0.030	0.014	0.050	-0.056	-0.028	-0.019	0.072	0.024	-0.232	-0.117	-0.033	.964 ^a	-0.462	-0.076	0.000	-0.035	-0.092
	E15.31	-0.091	-0.104	0.006	0.040	-0.119	0.007	0.021	0.064	0.003	0.024	-0.071	-0.059	0.164	-0.157	0.091	0.130	-0.131	0.053	-0.018	-0.017	-0.002	-0.102	0.194	-0.205	0.023	0.025	-0.051	-0.179	-0.462	.953 ^a	0.015	-0.111	-0.042	-0.076
	E15.32	0.017	-0.055	-0.039	0.165	0.064	0.061	0.060	-0.067	-0.001	-0.131	0.001	0.043	-0.058	-0.052	-0.141	-0.050	0.021	0.005	-0.126	0.115	-0.136	0.005	0.064	0.023	0.107	-0.116	-0.062	-0.141	-0.076	0.015	.956 ^a	0.047	-0.389	-0.223
	E15.33	-0.050	-0.018	-0.048	-0.086	-0.089	0.170	-0.041	-0.102	0.016	0.051	-0.106	-0.076	0.227	-0.036	-0.114	-0.004	-0.017	0.064	-0.053	0.001	-0.081	0.155	-0.089	0.039	-0.202	-0.165	0.040	-0.097	0.000	-0.111	0.047	.969 ^a	-0.233	-0.072
	E15.34	-0.001	0.153	-0.014	-0.110	-0.024	0.076	-0.175	-0.030	0.057	0.025	0.037	-0.053	-0.175	0.067	0.162	-0.073	0.067	-0.069	0.083	-0.066	0.172	-0.308	0.080	-0.226	-0.080	0.194	0.065	-0.065	-0.035	-0.042				

Table L46 – First order communalities for dependent variable

	<i>Initial</i>	<i>Extraction</i>
<i>E15.2</i>	0.554	0.519
<i>E15.3</i>	0.765	0.732
<i>E15.4</i>	0.823	0.706
<i>E15.5</i>	0.841	0.760
<i>E15.6</i>	0.617	0.475
<i>E15.7</i>	0.671	0.559
<i>E15.8</i>	0.688	0.640
<i>E15.9</i>	0.675	0.625
<i>E15.10</i>	0.788	0.755
<i>E15.11</i>	0.654	0.611
<i>E15.12</i>	0.656	0.567
<i>E15.13</i>	0.655	0.619
<i>E15.14</i>	0.746	0.680
<i>E15.15</i>	0.789	0.745
<i>E15.16</i>	0.674	0.565
<i>E15.17</i>	0.753	0.677
<i>E15.18</i>	0.741	0.658
<i>E15.19</i>	0.769	0.698
<i>E15.20</i>	0.795	0.716
<i>E15.21</i>	0.822	0.774
<i>E15.22</i>	0.766	0.684
<i>E15.23</i>	0.761	0.653
<i>E15.24</i>	0.770	0.700
<i>E15.25</i>	0.686	0.581
<i>E15.26</i>	0.723	0.637
<i>E15.27</i>	0.762	0.670
<i>E15.28</i>	0.718	0.671
<i>E15.29</i>	0.589	0.490
<i>E15.30</i>	0.756	0.672
<i>E15.31</i>	0.744	0.618
<i>E15.32</i>	0.695	0.651
<i>E15.33</i>	0.721	0.652
<i>E15.34</i>	0.734	0.641
<i>E15.35</i>	0.573	0.487

Extraction Method: Principal Axis Factoring.

Note. The results of the first-order communalities for the dependent variable. Own work.

Table L47 – First order total variance explained for the dependent variable

Factor	Initial Eigenvalues			Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18.376	54.046	54.046	18.026	53.018	53.018	6.991	20.562	20.562
2	2.145	6.308	60.354	1.799	5.292	58.310	6.231	18.328	38.890
3	1.464	4.305	64.659	1.117	3.284	61.594	4.460	13.117	52.007
4	1.272	3.741	68.400	0.943	2.775	64.369	4.203	12.363	64.369
5	0.968	2.846	71.246						
6	0.863	2.537	73.783						
7	0.807	2.373	76.157						
8	0.745	2.191	78.348						
9	0.608	1.789	80.137						
10	0.551	1.621	81.758						
11	0.523	1.539	83.297						
12	0.485	1.427	84.724						
13	0.451	1.326	86.051						
14	0.409	1.202	87.253						
15	0.385	1.132	88.385						
16	0.353	1.038	89.423						
17	0.333	0.978	90.401						
18	0.315	0.925	91.326						
19	0.309	0.910	92.235						
20	0.289	0.851	93.086						
21	0.268	0.787	93.873						
22	0.247	0.726	94.599						
23	0.217	0.639	95.238						
24	0.199	0.584	95.822						
25	0.192	0.564	96.387						
26	0.187	0.551	96.938						
27	0.165	0.485	97.423						
28	0.164	0.482	97.905						
29	0.147	0.432	98.336						
30	0.134	0.394	98.730						
31	0.121	0.357	99.087						
32	0.113	0.332	99.419						
33	0.107	0.313	99.732						
34	0.091	0.268	100.000						

Extraction Method: Principal Axis Factoring.

Note. The results for the first-order total variance explained for the dependent variable. Own work.

Table L48 – First order rotated factor matrix for the dependent variable

	Factor			
	1	2	3	4
E15.17	0.735	0.190	0.181	0.261
E15.15	0.713	0.414	0.128	0.222
E15.18	0.708	0.160	0.207	0.298
E15.14	0.704	0.326	0.230	0.159
E15.16	0.657	0.230	0.229	0.167
E15.28	0.626	0.154	0.382	0.331
E15.30	0.619	0.167	0.431	0.274
E15.22	0.545	0.202	0.306	0.503
E15.27	0.534	0.263	0.411	0.382
E15.31	0.529	0.256	0.425	0.303
E15.12	0.500	0.498	0.155	0.214
E15.6	0.453	0.427	0.251	0.154
E15.10	0.163	0.788	0.235	0.227
E15.8	0.163	0.718	0.309	
E15.11	0.179	0.707	0.276	
E15.9	0.166	0.652	0.330	0.253
E15.4	0.341	0.579		0.503
E15.13	0.393	0.564	0.299	0.240
E15.5	0.407	0.555		0.535
E15.3	0.406	0.535		0.530
E15.2	0.241	0.526	0.149	0.403
E15.7	0.459	0.515	0.186	0.222
E15.33	0.317	0.442	0.437	0.407
E15.34	0.272	0.378	0.642	0.110
E15.23	0.303	0.427	0.580	0.206
E15.32	0.541	0.188	0.559	0.101
E15.29	0.258	0.291	0.513	0.276
E15.26	0.158	0.468	0.508	0.367
E15.24	0.245	0.472	0.506	0.402
E15.35	0.463	0.150	0.479	0.143
E15.25	0.403	0.284	0.441	0.380
E15.21	0.315	0.236	0.426	0.662
E15.20	0.342	0.214	0.384	0.637
E15.19	0.371	0.216	0.368	0.615

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 14 iterations.

Note. The results for the first-order rotated factor matrix for the dependent variable. Own work.

Table L49 – Second order correlation matrix for the dependent variable

		GP_F1	GP_F2	GP_F3	GP_F4
Correlation	GP_F1	1.000	0.777	0.815	0.742
	GP_F2	0.777	1.000	0.777	0.690
	GP_F3	0.815	0.777	1.000	0.731
	GP_F4	0.742	0.690	0.731	1.000

Note. The results for the second-order correlation matrix for the dependent variable. Own work.

Table L50 – Second order sample adequacy for the dependent variable

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.858
Bartlett's Test of Sphericity	Approx. Chi-Square	1164.613
	df	6
	Sig.	0.000

Note. The results for the second-order sample adequacy for the dependent variable. Own work.

Table L51 – Second order anti-image matrix for the dependent variable

		GP_F1	GP_F2	GP_F3	GP_F4
Anti-image Correlation	GP_F1	.831 ^a	-0.324	-0.422	-0.292
	GP_F2	-0.324	.873 ^a	-0.336	-0.163
	GP_F3	-0.422	-0.336	.836 ^a	-0.248
	GP_F4	-0.292	-0.163	-0.248	.900 ^a

a. Measures of Sampling Adequacy (MSA)

Note. The results for the second-order anti-image matrix for the dependent variable. Own work.

Table L52 – Second order communalities for dependent variable

	<i>Initial</i>	<i>Extraction</i>
GP_F1	0.741	0.824
GP_F2	0.674	0.733
GP_F3	0.734	0.813
GP_F4	0.609	0.659

Extraction Method: Principal Axis Factoring.

Note. The results for the second-order communalities for the dependent variable. Own work.

Table L53 – Second order total variance explained for the dependent variable

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.268	81.692	81.692	3.029	75.729	75.729
2	0.319	7.980	89.672			
3	0.229	5.714	95.387			
4	0.185	4.613	100.000			

Extraction Method: Principal Axis Factoring.

Note. The results for the second-order total variance explained for the dependent variable. Own work.

Table L54 – Descriptive statistics of scales

	N		Mean	Median	Mode	Std. Deviation	Minimum	Maximum
	Valid	Missing						
GCuO	376	0	3.8388	4.0000	4.00	0.88476	1.00	5.00
GCoO	376	0	3.4532	3.6000	4.00	1.01358	1.00	5.00
GIfC	376	0	3.5658	4.0000	4.00	1.08143	1.00	5.00
GMV	376	0	3.3739	3.6000	4.00	1.01270	1.00	5.00
GMO	376	0	3.6231	3.7143	4.00	0.86590	1.00	5.00
CoP	376	0	4.1893	4.0000	5.00	0.73977	1.00	5.00
IBP	376	0	3.0064	3.2000	4.00 ^a	1.18469	1.00	5.00
ISP	376	0	2.9580	3.0000	4.00	1.19984	1.00	5.00
WsP	376	0	3.5665	4.0000	5.00	1.36023	1.00	5.00
GIP	376	0	3.4495	3.5556	3.56	0.85711	1.00	5.00
GFP	376	0	3.6858	3.7500	4.00	0.76004	1.00	5.00
GSP	376	0	3.8984	4.0000	4.00	0.70074	1.00	5.00
GEP	376	0	3.7457	3.8750	4.00	0.73795	1.00	5.00
GP	376	0	3.7765	3.8529	4.00	0.70214	1.00	5.00

a. Multiple modes exist. The smallest value is shown

Note. The descriptive statistics of the scales. Own work.

Table L55 – Gender Split of Major Constructs Descriptive Statistics

Variables and components	FEMALES			MALES			PREFER NOT TO DISCLOSE		
	No.	Mean	SD	No.	Mean	SD	No.	Mean	SD
GMO summated	183	3.63	1.10	189	3.61	1.12	4	3.54	1.09
GCuO	183	3.88	0.95	189	3.79	1.06	4	3.95	0.76
GCoO	183	3.42	1.17	189	3.49	1.14	4	3.35	1.23
GIfC	183	3.59	1.14	189	3.55	1.16	4	3.25	1.18
GIP summated	183	3.44	1.32	189	3.41	1.34	4	3.32	1.02
GCP	183	4.23	0.88	189	4.16	1.16	4	3.92	0.93
GWP	183	3.63	1.41	189	3.50	0.92	4	3.88	1.25
GISP	183	3.00	1.32	189	2.92	1.43	4	3.10	0.79
GIBP	183	2.97	1.27	189	3.05	1.33	4	2.60	0.68
GMV	183	3.43	1.27	189	3.33	1.36	4	3.25	0.79
GP summated	183	3.75	0.94	189	3.77	1.05	4	3.36	0.67
GFP	183	3.58	1.02	189	3.59	1.15	4	3.13	0.87
GSP	183	3.88	0.85	189	3.92	0.95	4	3.63	0.59
GEP	183	3.76	0.93	189	3.77	1.04	4	3.31	0.55
Overall	183	3.64	1.11	189	3.63	1.18	4	3.36	0.87

Note. The descriptive statistics results of the gender split of the major constructs. Own work.

Table L56 – Pearson's correlation coefficient for GCuO and GP

		GCuO	GP
Pearson Correlation	GCuO	1.000	.603**
	GP	.603**	1.000
Sig. (2-tailed)	GCuO	.	0.000
	GP	0.000	.

** . Correlation is significant at the 0.01 level (2-tailed).

Note. The Pearson's correlation coefficient results for the independent and dependent variables. Own work.

Table L57 – Linear regression analysis for H1a**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.603 ^a	0.363	0.362	0.56098

a. Predictors: (Constant), GCuO

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.177	1	67.177	213.460	<.001 ^b
	Residual	117.699	374	0.315		
	Total	184.876	375			

a. Dependent Variable: GP

b. Predictors: (Constant), GCuO

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.940	0.129		15.042	0.000
	GCuO	0.478	0.033	0.603	14.610	0.000

a. Dependent Variable: GP

Note. The results for the linear regression for H1a. Own work.

Table L58 – Pearson's correlation coefficient for GCoO and GP

		GCoO	GP
Pearson Correlation	GCoO	1.000	.607**
	GP	.607**	1.000
Sig. (2-tailed)	GCoO	.	0.000
	GP	0.000	.

** . Correlation is significant at the 0.01 level (2-tailed).

Note. The Pearson's correlation coefficient results for the independent and dependent variables. Own work.

Table L59 – Regression output for GCoO and GP (H1b)**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.607 ^a	0.369	0.367	0.55864

a. Predictors: (Constant), GCoO

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.160	1	68.160	218.408	<.001 ^b
	Residual	116.716	374	0.312		
	Total	184.876	375			

a. Dependent Variable: GP

b. Predictors: (Constant), GCoO

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.324	0.102		22.692	0.000
	GCoO	0.421	0.028	0.607	14.779	0.000

a. Dependent Variable: GP

Note. The results for the linear regression for H1b. Own work.

Table L60 – Pearson's correlation coefficient for GfC and GP

		<i>GfC</i>	<i>GP</i>
<i>Pearson Correlation</i>	<i>GfC</i>	1.000	.605**
	<i>GP</i>	.605**	1.000
<i>Sig. (2-tailed)</i>	<i>GfC</i>	.	0.000
	<i>GP</i>	0.000	.

** . Correlation is significant at the 0.01 level (2-tailed).

Note. The Pearson's correlation coefficient results for the independent and dependent variables. Own work.

Table L61 – Regression output for GfC and GP (H1c)**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.605 ^a	0.366	0.364	0.55977

a. Predictors: (Constant), GfC

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.684	1	67.684	216.003	<.001 ^b
	Residual	117.192	374	0.313		
	Total	184.876	375			

a. Dependent Variable: GP

b. Predictors: (Constant), GfC

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.376	0.100		23.854	0.000
	GfC	0.393	0.027	0.605	14.697	0.000

a. Dependent Variable: GP

Note. The results for the linear regression for H1c. Own work.

Table L62 – Pearson's correlation coefficient for GCuO and GIP

		GCuO	GIP
Pearson Correlation	GCuO	1.000	.622**
	GIP	.622**	1.000
Sig. (2-tailed)	GCuO	.	0.000
	GIP	0.000	.

** . Correlation is significant at the 0.01 level (2-tailed).

Note. The Pearson's correlation coefficient results for the independent and mediator variables. Own work.

Table L63 – Regression output for GCuO and GIP (H2a)**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.622 ^a	0.386	0.385	0.67225

a. Predictors: (Constant), GCuO

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	106.474	1	106.474	235.607	<.001 ^b
	Residual	169.016	374	0.452		
	Total	275.491	375			

a. Dependent Variable: GIP

b. Predictors: (Constant), GCuO

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.138	0.155		7.360	0.000
	GCuO	0.602	0.039	0.622	15.350	0.000

a. Dependent Variable: GIP

Note. The results for the linear regression for H2a. Own work.

Table L64 – Pearson's correlation coefficient for GCoO and GIP

		GCoO	GIP
Pearson Correlation	GCoO	1.000	.586**
	GIP	.586**	1.000
Sig. (2-tailed)	GCoO	.	0.000
	GIP	0.000	.

** . Correlation is significant at the 0.01 level (2-tailed).

Note. The Pearson's correlation coefficient results for the independent and dependent variables. Own work.

Table L65 – Regression output for GCoO and GIP (H2b)**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.586 ^a	0.344	0.342	0.69524

a. Predictors: (Constant), GCoO

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	94.714	1	94.714	195.951	<.001 ^b
	Residual	180.776	374	0.483		
	Total	275.491	375			

a. Dependent Variable: GIP

b. Predictors: (Constant), GCoO

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.737	0.127		13.630	0.000
	GCoO	0.496	0.035	0.586	13.998	0.000

a. Dependent Variable: GIP

Note. The results for the linear regression for H2b. Own work.

Table L66 – Pearson's correlation coefficient for GfC and GIP

		<i>GfC</i>	<i>GIP</i>
<i>Pearson Correlation</i>	<i>GfC</i>	1.000	.743**
	<i>GIP</i>	.743**	1.000
<i>Sig. (2-tailed)</i>	<i>GfC</i>	.	0.000
	<i>GIP</i>	0.000	.

** . Correlation is significant at the 0.01 level (2-tailed).

Note. The Pearson's correlation coefficient results for the independent and dependent variables. Own work.

Table L67 – Regression output for GfC and GIP (H2c)**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.743 ^a	0.553	0.551	0.57407

a. Predictors: (Constant), GfC

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152.238	1	152.238	461.953	<.001 ^b
	Residual	123.253	374	0.330		
	Total	275.491	375			

a. Dependent Variable: GIP

b. Predictors: (Constant), GfC

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.349	0.102		13.204	0.000
	GfC	0.589	0.027	0.743	21.493	0.000

a. Dependent Variable: GIP

Note. The results for the linear regression for H2c. Own work.

Table L68 – Pearson's correlation coefficient for GIP and GP

		<i>GIP</i>	<i>GP</i>
<i>Pearson Correlation</i>	<i>GIP</i>	1.000	.743**
	<i>GP</i>	.743**	1.000
<i>Sig. (2-tailed)</i>	<i>GIP</i>	.	0.000
	<i>GP</i>	0.000	.

** . Correlation is significant at the 0.01 level (2-tailed).

Note. The Pearson's correlation coefficient results for the mediator and dependent variables. Own work.

Table L69 – Regression output for GIP and GP (H3)**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.688 ^a	0.474	0.472	0.51013

a. Predictors: (Constant), *GIP*

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87.547	1	87.547	336.415	<.001 ^b
	Residual	97.328	374	0.260		
	Total	184.876	375			

a. Dependent Variable: *GP*

b. Predictors: (Constant), *GIP*

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.832	0.109		16.771	0.000
	<i>GIP</i>	0.564	0.031	0.688	18.342	0.000

a. Dependent Variable: *GP*

Note. The results for the linear regression for H3. Own work.

Table L70 – Residual statistics for GIP moderation GCuO GMV interaction

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Std. Residual	-2.753	4.506	0.000	0.996	376

a. Dependent Variable: GIP_mean

Note. The results for the residual statistics for the moderation. Own work.

Table L71 – Correlation results for GCuO GMV and GIP interaction

		GIP_1	GCuO_MC	GMV_MC	Interact_1
Pearson Correlation	GIP_1	1.000	0.668	0.517	-0.190
	GCuO_MC	0.668	1.000	0.250	-0.337
	GMV_MC	0.517	0.250	1.000	-0.213
	Interact_1	-0.190	-0.337	-0.213	1.000
Sig. (1-tailed)	GIP_1		0.000	0.000	0.000
	GCuO_MC	0.000		0.000	0.000
	GMV_MC	0.000	0.000		0.000
	Interact_1	0.000	0.000	0.000	
N	GIP_1	373	373	373	373
	GCuO_MC	373	373	373	373
	GMV_MC	373	373	373	373
	Interact_1	373	373	373	373

MC - mean centred

Note. The results of the correlation. Own work.

Table L72 – Variables entered for moderation analysis GCuO

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	GMV_centered, GCuO_centered ^b		Enter
2	Interact_1 ^b		Enter

a. Dependent Variable: GIP_1

b. All requested variables entered.

Note. The results for the variables entered for moderation analysis. Own work.

Table L73 – Regression output for moderation GCuO GMV and GIP

Model Summary ^c									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.760 ^a	0.577	0.575	0.55446	0.577	252.756	2	370	0.000
2	.765 ^b	0.585	0.582	0.54994	0.008	7.106	1	369	0.008

a. Predictors: (Constant), GMV_MC, GCuO_MC

b. Predictors: (Constant), GMV_MC, GCuO_MC, Interact_1

c. Dependent Variable: GIP_1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	155.405	2	77.703	252.756	<.001 ^b
	Residual	113.746	370	0.307		
	Total	269.151	372			
2	Regression	157.554	3	52.518	173.654	<.001 ^c
	Residual	111.596	369	0.302		
	Total	269.151	372			

a. Dependent Variable: GIP_1

b. Predictors: (Constant), GMV_MC, GCuO_MC

c. Predictors: (Constant), GMV_MC, GCuO_MC, Interact_1

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.431	0.029		119.485	0.000		
	GCuO_MC	0.561	0.034	0.575	16.467	0.000	0.937	1.067
	GMV_MC	0.314	0.029	0.374	10.704	0.000	0.937	1.067
2	(Constant)	3.415	0.029		117.298	0.000		
	GCuO_MC	0.589	0.035	0.604	16.638	0.000	0.853	1.172
	GMV_MC	0.325	0.029	0.387	11.061	0.000	0.919	1.088
	Interact_1	0.071	0.027	0.096	2.666	0.008	0.869	1.151

a. Dependent Variable: GIP_1

MC - mean centered

Note. The results for the regression output for moderation. Own work.

Table L74 – Multicollinearity diagnostics for moderation GCuO

Collinearity Diagnostics ^a							
Model	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	GCuO_MC	GMV_MC	Interact_1	
1	1	1.250	1.000	0.00	0.37	0.37	
	2	1.000	1.118	1.00	0.00	0.00	
	3	0.749	1.292	0.00	0.63	0.62	
2	1	1.548	1.000	0.02	0.19	0.15	0.20
	2	1.055	1.212	0.70	0.06	0.08	0.04
	3	0.783	1.407	0.07	0.22	0.77	0.10
	4	0.614	1.588	0.21	0.54	0.00	0.65

a. Dependent Variable: GIP_1

MC - mean centered

Note. The results for multicollinearity for moderation. Own work.

Table L75 – Residual statistics for GIP moderation GCoO GMV interaction

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Std. Residual	-2.675	3.275	0.000	0.996	376

a. Dependent Variable: GIP_1

Note. The results for the residual statistics for the moderation. Own work.

Table L76 – Correlation results for GCoO GMV and GIP interaction

Correlations					
		GIP_1	GCoO_MC	GMV_MC	Interact_2
Pearson Correlation	GIP_1	1.000	0.586	0.513	-0.156
	GCoO_MC	0.586	1.000	0.242	-0.141
	GMV_MC	0.513	0.242	1.000	-0.206
	Interact_2	-0.156	-0.141	-0.206	1.000
Sig. (1-tailed)	GIP_1		0.000	0.000	0.001
	GCoO_MC	0.000		0.000	0.003
	GMV_MC	0.000	0.000		0.000
	Interact_2	0.001	0.003	0.000	
N	GIP_1	376	376	376	376
	GCoO_MC	376	376	376	376
	GMV_MC	376	376	376	376
	Interact_2	376	376	376	376

MC - mean centred

Note. The results of the correlation. Own work.

Table L77 – Variables entered for moderation analysis GCoO

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	GMV_centered, GCoO_centered ^b		Enter
2	Interact_2 ^b		Enter

a. Dependent Variable: GIP_1

b. All requested variables entered.

Note. The results for the variables entered for moderation analysis. Own work.

Table L78 – Regression output for moderation GCoO GMV and GIP

Model Summary ^c									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.700 ^a	0.490	0.487	0.61375	0.490	179.177	2	373	0.000
2	.700 ^b	0.490	0.486	0.61455	0.000	0.025	1	372	0.874

a. Predictors: (Constant), GMV_MC, GCoO_MC

b. Predictors: (Constant), GMV_MC, GCoO_MC, Interact_2

c. Dependent Variable: GIP_1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	134.987	2	67.493	179.177	<.001 ^b
	Residual	140.504	373	0.377		
	Total	275.491	375			
2	Regression	134.996	3	44.999	119.148	<.001 ^c
	Residual	140.494	372	0.378		
	Total	275.491	375			

a. Dependent Variable: GIP_1

b. Predictors: (Constant), GMV_MC, GCoO_MC

c. Predictors: (Constant), GMV_MC, GCoO_MC, Interact_2

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.449	0.032		108.982	0.000		
	GCoO_MC	0.415	0.032	0.491	12.881	0.000	0.941	1.062
	GMV_MC	0.334	0.032	0.394	10.340	0.000	0.941	1.062
2	(Constant)	3.451	0.032		106.466	0.000		
	GCoO_MC	0.415	0.032	0.490	12.790	0.000	0.933	1.072
	GMV_MC	0.333	0.033	0.393	10.131	0.000	0.911	1.097
	Interact_2	-0.004	0.027	-0.006	-0.159	0.874	0.949	1.054

a. Dependent Variable: GIP_1

MC - mean centered

Note. The results for the regression output for moderation. Own work.

Table L79 – Multicollinearity diagnostics for moderation GCoO

Collinearity Diagnostics ^a							
Model	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	GCoO_MC	GMV_MC	InteractF2	
1	1	1.242	1.000	0.00	0.38	0.38	
	2	1.000	1.115	1.00	0.00	0.00	
	3	0.758	1.280	0.00	0.62	0.62	
2	1	1.422	1.000	0.05	0.17	0.21	0.21
	2	1.090	1.142	0.52	0.15	0.10	0.10
	3	0.780	1.350	0.16	0.62	0.22	0.18
	4	0.708	1.417	0.26	0.06	0.47	0.51

a. Dependent Variable: GIP_1

MC - mean centered

Note. The results for multicollinearity for moderation. Own work.

Table L80 – Residual statistics for GIP moderation GfC GMV interaction

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Std. Residual	-3.121	4.366	0.000	0.996	376

a. Dependent Variable: GIP_1

Note. The results for the residual statistics for the moderation. Own work.

Table L81 – Correlation results for GfC GMV and GIP interaction

		Correlations			
		GIP_1	GfC_MC	GMV_MC	Interact_3
Pearson Correlation	GIP_1	1.000	0.754	0.518	-0.223
	GfC_MC	0.754	1.000	0.392	-0.227
	GMV_MC	0.518	0.392	1.000	-0.287
	Interact_3	-0.223	-0.227	-0.287	1.000
Sig. (1-tailed)	GIP_1		0.000	0.000	0.000
	GfC_MC	0.000		0.000	0.000
	GMV_MC	0.000	0.000		0.000
	Interact_3	0.000	0.000	0.000	
N	GIP_1	375	375	375	375
	GfC_MC	375	375	375	375
	GMV_MC	375	375	375	375
	Interact_3	375	375	375	375

MC - mean centred

Note. The results of the correlation. Own work.

Table L82 – Variables entered for moderation analysis GfC

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	GMV_centered, GfC_centered ^b		Enter
2	Interact_3 ^b		Enter

a. Dependent Variable: GIP_1

b. All requested variables entered.

Note. The results for the variables entered for moderation analysis. Own work.

Table L83 – Regression output for moderation GIfC GMV and GIP

Model Summary ^c									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.792 ^a	0.627	0.625	0.52323	0.627	312.744	2	372	0.000
2	.792 ^b	0.627	0.624	0.52393	0.000	0.000	1	371	0.987

a. Predictors: (Constant), GMV_MC, GIfC_MC

b. Predictors: (Constant), GMV_MC, GIfC_MC, Interact_3

c. Dependent Variable: GIP_1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	171.238	2	85.619	312.744	<.001 ^b
	Residual	101.842	372	0.274		
	Total	273.080	374			
2	Regression	171.238	3	57.079	207.936	<.001 ^c
	Residual	101.842	371	0.275		
	Total	273.080	374			

a. Dependent Variable: GIP_mean

b. Predictors: (Constant), GMV_centered, GIfC_centered

c. Predictors: (Constant), GMV_centered, GIfC_centered, Interact_3

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.443	0.027		127.433	0.000		
	GIfC_MC	0.515	0.027	0.651	18.912	0.000	0.846	1.182
	GMV_MC	0.222	0.029	0.263	7.637	0.000	0.846	1.182
2	(Constant)	3.443	0.029		119.694	0.000		
	GIfC_MC	0.515	0.027	0.651	18.727	0.000	0.832	1.202
	GMV_MC	0.222	0.030	0.263	7.443	0.000	0.805	1.242
	Interact_3	0.000	0.023	0.001	0.016	0.987	0.902	1.108

a. Dependent Variable: GIP_mean

MC - mean centered

Note. The results for the regression output for moderation. Own work.

Table L84 – Multicollinearity diagnostics for moderation GIfC

Collinearity Diagnostics ^a							
Model	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	GIfC_MC	GMV_MC	Interact_3	
1	1	1.392	1.000	0.00	0.30	0.30	
	2	1.000	1.180	1.00	0.00	0.00	
	3	0.608	1.514	0.00	0.70	0.70	
2	1	1.638	1.000	0.04	0.15	0.16	0.16
	2	1.162	1.188	0.43	0.12	0.09	0.10
	3	0.630	1.613	0.21	0.64	0.22	0.25
	4	0.570	1.695	0.31	0.10	0.53	0.50

a. Dependent Variable: GIP_1

MC - mean centered

Note. The results for multicollinearity for moderation. Own work.

Table L85 – Regression output for GCuO path c

OUTCOME VARIABLE: GP (path c)

Model Summary

Model	R	R Square	MSE	F	df1	df2	p
1	0.6028	0.363	0.315	213.4599	1.0000	374.0000	0.0000

Coefficients

Model	coeff	se	t	p	LLCI	ULCI
(Constant)	1.9401	0.129	15.0423	0.0000	1.6865	2.1937
GCuO	0.4784	0.0327	14.6103	0.0000	0.4140	0.5428

Note. The regression output results for the independent variable path c. Own work.

Table L86 – Regression output for GCuO path a

OUTCOME VARIABLE: GIP (path a)

Model Summary

Model	R	R Square	MSE	F	df1	df2	p
1	0.6217	0.387	0.452	235.6072	1.0000	374.0000	0.0000

Coefficients

Model	coeff	se	t	p	LLCI	ULCI
(Constant)	1.1375	0.1546	7.3598	0.0000	0.8336	1.4414
GCuO	0.6023	0.0392	15.3495	0.0000	0.5251	0.6794

Note. The regression output results for the independent variable path a. Own work.

Table L87 – Regression output for GCuO path b and c'

OUTCOME VARIABLE: GP (path b and c')

Model Summary

Model	R	R Square	MSE	F	df1	df2	p
1	0.7235	0.524	0.236	204.8593	2.0000	373.0000	0.0000

Coefficients

Model	coeff	se	t	p	LLCI	ULCI
(Constant)	1.4641	0.1196	12.2462	0.0000	1.229	1.6992
GCuO	0.2263	0.0362	6.2502	0.0000	0.1551	0.2976
GIP	0.4185	0.0374	11.1942	0.0000	0.3450	0.4920

Note. The regression output results for the independent variable path b and c'. Own work.

Table L88 – Regression output for GCuO total, direct, and indirect effects

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
0.4784	0.0327	14.610	0.000	0.4140	0.5428	0.6028

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
0.2263	0.0362	6.250	0.000	0.1551	0.2976	0.2852

Indirect effect of X on Y

Model	Effect	BootSE	Boot LLCI	BootULCI
GIP	0.252	0.0308	0.1937	0.3137

Completely standardized indirect effect(s) of X on Y

Model	Effect	BootSE	Boot LLCI	BootULCI
GIP	0.3176	0.0362	0.248	0.3883

Note. The regression output results for the independent variable. Own work.

Table L89 – Calculation of the mediating effect for GCuO

Calculating Mediating Effect - Significance and Extent

	Predictor => Outcome Customer Orientation => Performance c	Predictor => Mediator Customer Orientation => Internal Practices a	Mediator => Outcome Internal Practices => Performance b	Predictor => Outcome Controlling for Mediator c'
	Model 1	Model 2	Model 3	Model 3
unstandardised B coefficient	0.4784	0.6023	0.4185	0.2263
standard error of coefficient	0.0327	0.0392	0.0374	0.0362

EQ1 mediated effect = $a * b = 0.6023 * 0.4185 = 0.25206255$

EQ2 std error term = $b^2 * sa^2 + a^2 * sb^2 + sa^2 * sb^2$ where a and b are unstd reg coeff and sa and sb are their std errors See lines 16-22 for this calc

	b2	sa2	a2	sb2	
b2*sa2	0.17514225	0.00153664	0.36276529	0.00139876	
a2*sb2	0.000269131				
sa2*sb2	0.000507422				
sa2*sb2	2.14939E-06				
b2*sa2+a2*sb2+sa2*sb2	0.000778702				
SQRT(b2*sa2+a2*sb2+sa2*sb2)	0.027905225				

EQ3 z score of mediated effect = mediated effect/standard error
 9.032808532

9,03 is greater than 1.96 so mediation effect is 'significant'

EQ4 To describe amount of mediation
 $ab/c = 0.526886601$ i.e. about 52,69% of the total effect of customer orientation on performance is mediated by internal practices

Confidence around estimate of indirect effect

product of path a and b +- s(ab) z.975 where z.975 is equal to constant 1.96 and s(ab) is standard error term calculated earlier.

a*b	se (a*b)	constant	se(a*b) * constant		
0.25206255	0.027905225	1.96	0.05469424	+	0.197368
				-	0.306757

range does not contain 0 i.e. indirect effect is not 0, so there is mediation

Note. The calculation results for mediation. Own work.

Table L90 – Regression output for GCoO path c**OUTCOME VARIABLE: GP (path c)****Model Summary**

Model	R	R Square	MSE	F	df1	df2	p
1	0.6072	0.369	0.312	218.4081	1.0000	374.0000	0.0000

Coefficients

Model	coeff	se	t	p	LLCI	ULCI
(Constant)	2.324	0.1024	22.6918	0.0000	2.1227	2.5254
GCoO	0.4206	0.0285	14.7786	0.0000	0.3647	0.4766

Note. The regression output results for the independent variable path c. Own work.

Table L91 – Regression output for GCoO path a**OUTCOME VARIABLE: GIP (path a)****Model Summary**

Model	R	R Square	MSE	F	df1	df2	p
1	0.5863	0.344	0.483	195.9506	1.0000	374.0000	0.0000

Coefficients

Model	coeff	se	t	p	LLCI	ULCI
(Constant)	1.7373	0.1275	13.6297	0.0000	1.4866	1.9879
GCoO	0.4958	0.0354	13.9982	0.0000	0.4262	0.5655

Note. The regression output results for the independent variable path a. Own work.

Table L92 – Regression output for GCoO path b and c'**OUTCOME VARIABLE: GP (path b and c')****Model Summary**

Model	R	R Square	MSE	F	df1	df2	p
1	0.7235	0.524	0.236	204.8593	2.0000	373.0000	0.0000

Coefficients

Model	coeff	se	t	p	LLCI	ULCI
(Constant)	1.6037	0.1075	14.9223	0.0000	1.3924	1.8151
GCoO	0.2150	0.0301	7.1355	0.0000	0.1558	0.2743
GIP	0.4146	0.0356	11.6344	0.0000	0.3445	0.4847

Note. The regression output results for the independent variable path b and c'. Own work.

Table L93 – Regression output for GCoO total, direct, and indirect effects

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
0.4206	0.0285	14.779	0.000	0.3647	0.4766	0.6072

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
0.215	0.0301	7.136	0.000	0.1558	0.2743	0.3104

Indirect effect of X on Y

Model	Effect	BootSE	Boot LLCI	BootULCI
GIP	0.2968	0.0351	0.2297	0.3659

Completely standardized indirect effect(s) of X on Y

Model	Effect	BootSE	Boot LLCI	BootULCI
GIP	0.2968	0.0351	0.2297	0.3659

Note. The regression output results for the independent variable. Own work.

Table L94 – Calculation of the mediating effect for GCoO

Calculating Mediating Effect - Significance and Extent

	Predictor => Outcome Competitor Orientation => Performance c	Predictor => Mediator Competitor Orientation => Internal Practices a	Mediator => Outcome Internal Practices => Performance b	Predictor => Outcome Controlling for Mediator c'
	Model 1	Model 2	Model 3	Model 3
unstandardised B coefficient	0.4206	0.4958	0.4146	0.215
standard error of coefficient	0.0285	0.0354	0.0356	0.0301

EQ1 mediated effect= $a*b=0.4958*0.4146=$ **0.20555868**

EQ2 std error term = $b^2*sa^2+a^2*sb^2+sa^2*sb^2$ where a and b are unstd reg coeff and sa and sb are their std errors See lines 16-22 for this calc

	b2	sa2	a2	sb2	
b^2*sa^2	0.17189316		0.00125316	0.24581764	0.00126736
a^2*sb^2	0.00021541				
sa^2*sb^2	0.000311539				
$b^2*sa^2+a^2*sb^2+sa^2*sb^2$	0.000528537				
$SQRT(b^2*sa^2+a^2*sb^2+sa^2*sb^2)$	0.022989939				

EQ3 z score of mediated effect = mediated effect/standard error
8.941245241

8,94 is greater than 1.96 so mediation effect is 'significant'

EQ4 To describe amount of mediation
ab/c **0.488727247** i.e. about 48,87% of the total effect of competitor orientation on performance is mediated by internal practices

Confidence around estimate of indirect effect
product of path a and b +/- s(ab) z.975 where z.975 is equal to constant 1.96 and s(ab) is standard error term calculated earlier.

a*b	se (a*b)	constant	se (a*b) * constant		
0.20555868	0.022989939	1.96	0.04506028	+	0.160498
				-	0.250619

range does not contain 0 i.e. indirect effect is not 0, so there is mediation

Note. The calculation results for mediation. Own work.

Table L95 – Regression output for GIfC path c**OUTCOME VARIABLE: GP (path c)****Model Summary**

Model	R	R Square	MSE	F	df1	df2	p
1	0.6051	0.366	0.313	216.0029	1.0000	374.0000	0.0000

Coefficients

Model	coeff	se	t	p	LLCI	ULCI
(Constant)	2.3757	0.0996	23.8545	0.0000	2.1798	2.5715
GIfC	0.3929	0.0267	14.6970	0.0000	0.3403	0.4454

Note. The regression output results for the independent variable path c. Own work.

Table L96 – Regression output for GIfC path a**OUTCOME VARIABLE: GIP (path a)****Model Summary**

Model	R	R Square	MSE	F	df1	df2	p
1	0.7434	0.553	0.330	461.9529	1.0000	374.0000	0.0000

Coefficients

Model	coeff	se	t	p	LLCI	ULCI
(Constant)	1.3486	0.1021	13.2039	0.0000	1.1477	1.5494
GIfC	0.5892	0.0274	21.4931	0.0000	0.5353	0.6431

Note. The regression output results for the independent variable path a. Own work.

Table L97 – Regression output for GIfC path b and c'**OUTCOME VARIABLE: GP (path b and c')****Model Summary**

Model	R	R Square	MSE	F	df1	df2	p
1	0.7022	0.493	0.251	181.4179	2.0000	373.0000	0.0000

Coefficients

Model	coeff	se	t	p	LLCI	ULCI
(Constant)	1.7871	0.108	16.5504	0.0000	1.5748	1.9994
GIfC	0.1357	0.0358	3.7925	0.0000	0.0653	0.2061
GIP	0.4364	0.0451	9.6666	0.0000	0.3477	0.5252

Note. The regression output results for the independent variable path b and c'. Own work.

Table L98 – Regression output for GIfC total, direct, and indirect effects

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
0.3929	0.0267	14.697	0.0000	0.3403	0.4454	0.6051

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_cs
0.1357	0.0358	3.793	0.0002	0.0653	0.2061	0.2090

Indirect effect of X on Y

Model	Effect	BootSE	Boot LLCI	BootULCI
GIP	0.2571	0.0357	0.1902	0.3315

Completely standardized indirect effect(s) of X on Y

Model	Effect	BootSE	Boot LLCI	BootULCI
GIP	0.396	0.0485	0.3018	0.4960

Note. The regression output results for the independent variable. Own work.

Table L99 – Calculation of the mediating effect for GlfC

Calculating Mediating Effect - Significance and Extent

	Predictor => Outcome Inter-functional Orientation => Performance c	Predictor => Mediator Inter-functional Orientation => Internal Practices a	Mediator => Outcome Internal Practices => Performance b	Predictor => Outcome Controlling for Mediator c'
	Model 1	Model 2	Model 3	Model 3
unstandardised B coefficient	0.3929	0.5892	0.4364	0.1357
standard error of coefficient	0.0267	0.0274	0.0451	0.0358

EQ1 mediated effect = a*b = 0.5892 * 0.4364 = **0.25712688**

EQ2 std error term = $b^2 \cdot sa^2 + a^2 \cdot sb^2 + sa^2 \cdot sb^2$ where a and b are unstd reg coeff and sa and sb are their std errors See lines 16-22 for this calc

	b2	sa2	a2	sb2	
b2*sa2	0.19044496	0.00075076	0.34715664	0.00203401	
a2*sb2	0.000142978				
sa2*sb2	0.00070612				
sa2*sb2	1.52705E-06				
b2*sa2+a2*sb2+sa2*sb2	0.000850626				
SQRT(b2*sa2+a2*sb2+sa2*sb2)	0.029165486				

EQ3 z score of mediated effect = mediated effect/standard error
8.816135541

8,82 is greater than 1.96 so mediation effect is 'significant'

EQ4 To describe amount of mediation
ab/c **0.654433393** i.e. about 65,44% of the total effect of inter-functional orientation on performance is mediated by internal practices

Confidence around estimate of indirect effect

product of path a and b +/- s(ab) z.975 where z.975 is equal to constant 1.96 and s(ab) is standard error term calculated earlier.

a*b	se (a*b)	constant	se (a*b) * constant		
0.25712688	0.029165486	1.96	0.057164353	+	0.199963
				-	0.314291

range does not contain 0 i.e. indirect effect is not 0, so there is mediation

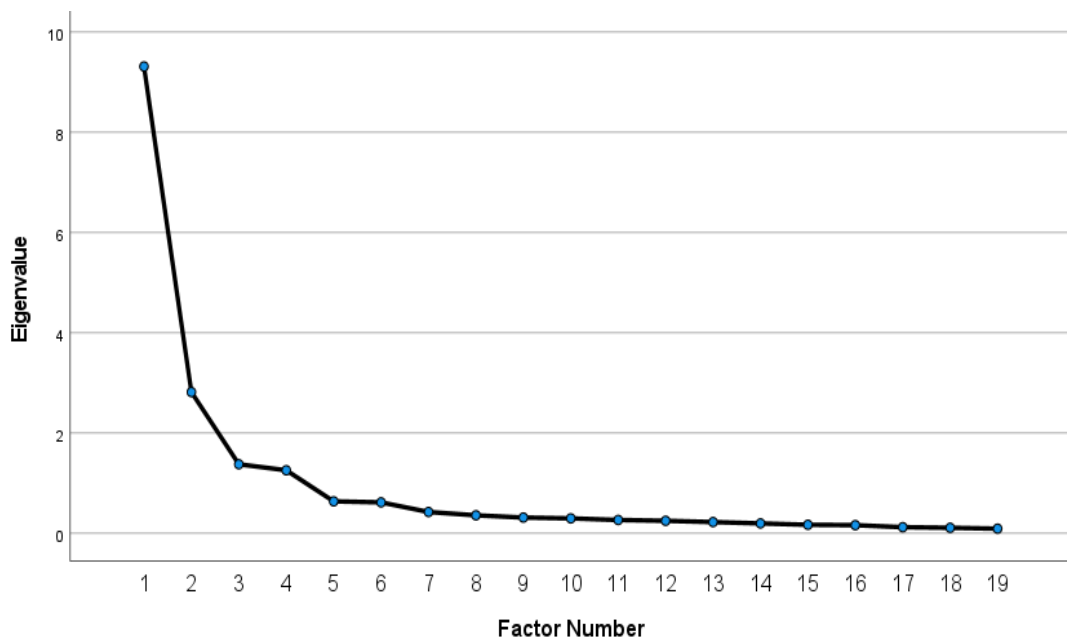
Note. The calculation results for mediation. Own work.

Table L100 – Summary of hypotheses

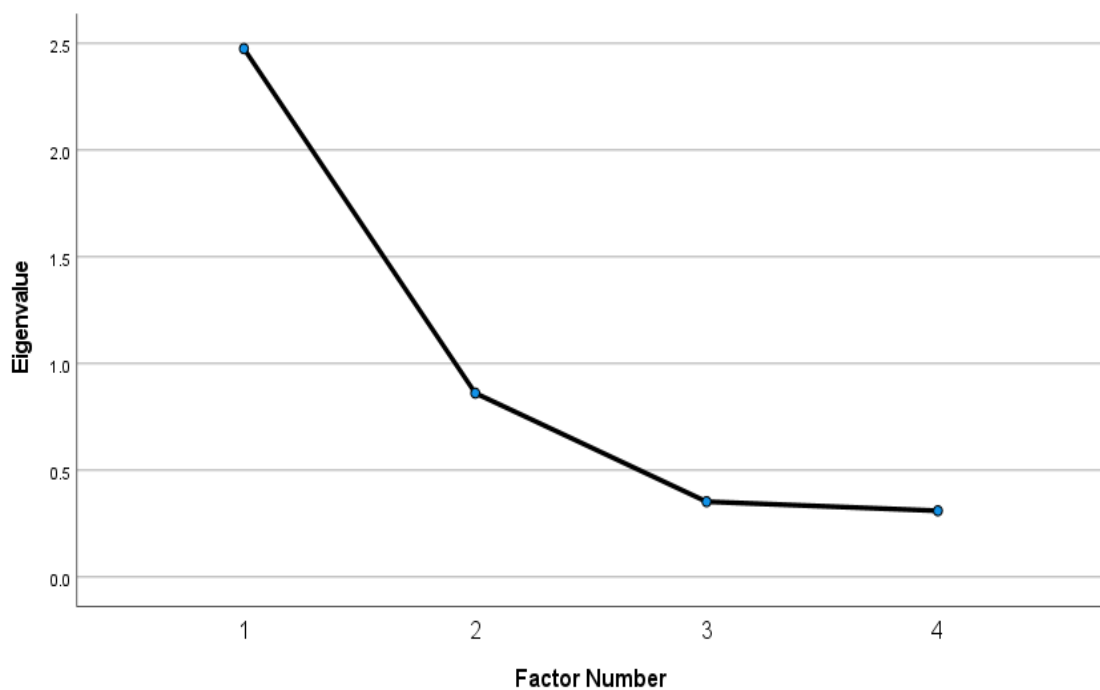
No.	Supplementary Research Question	No.	Hypothesis	Finding section	Outcome
RQ1	Supplementary Research Question 1 (RQ1) – What is the relationship between green market orientation and green performance in F&B SMMEs in South Africa?	H1a	Green customer orientation is directly and positively related to the green performance of F&B SMMEs in South Africa	6.6.1.1	Supported
		H1b	Green competitor orientation is positively related to the green performance of SMMEs in South Africa	6.6.1.2	Supported
		H1c	Green inter-functional coordination is positively related to the green performance of SMMEs in South Africa	6.6.1.3	Supported
RQ2	Supplementary Research Question 2 (RQ2) – What is the relationship between F&B SMMEs' green market orientation and their implementation of green internal practices?	H2a	Green customer orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa	6.6.1.4	Supported
		H2b	Green competitor orientation is positively related to the implementation of green internal practices by F&B SMMEs in South Africa	6.6.1.5	Supported
		H2c	Green inter-functional coordination is positively related to the implementation of green internal practices by F&B SMMEs in South Africa	6.6.1.6	Supported
RQ3	Supplementary Research Question 3 (RQ3) – What is the relationship between the implementation of green internal practices and green performance in F&B SMMEs in South Africa?	H3	Green internal practices is positively related to the green performance of F&B SMMEs in South Africa	6.6.1.7	Supported

No.	Supplementary Research Question	No.	Hypothesis	Finding section	Outcome
RQ4	Supplementary Research Question 4 (RQ4) – What is the possible moderating influence of green management values in the relationship between green market orientation and the implementation of green practices in F&B SMMEs in South Africa?	H4a	<i>The relationship between green customer orientation and the implementation of green internal practices is moderated by the green management values of SMMEs in South Africa</i>	6.6.2.1	Supported
		H4b	<i>The relationship between green competitor orientation and the implementation of green internal practices is moderated by the green management values of F&B SMMEs in South Africa</i>	6.6.2.2	Not supported
		H4c	<i>The relationship between green inter-functional coordination and the implementation of green internal practices is moderated by the green management values of F&B SMMEs in South Africa</i>	6.6.2.3	Not supported
RQ5	Supplementary Research Question 5 (RQ5) – What is the mediating influence of the implementation of green internal practices in the relationship between green market orientation and green performance in F&B SMMEs in South Africa?	H5a	<i>The relationship between green customer orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa</i>	6.6.3.1	Supported
		H5b	<i>The relationship between green competitor orientation and green performance is mediated by the green internal practices of F&B SMMEs in South Africa</i>	6.6.3.2	Supported
		H5c	<i>The relationship between green inter-functional coordination and green performance is mediated by the green internal practices of F&B SMMEs in South Africa</i>	6.6.3.3	Supported

Note. The summary results of the hypotheses. Own work.

Appendix M – Figures from Chapter 6**Figure M 1 – First-order Scree plot for independent variables**

Note. The first-order scree plot results for the independent variables. Own work.

**Figure M 2 - Second order scree plot for independent variables**

Note. The second-order scree plot results for the independent variables. Own work.

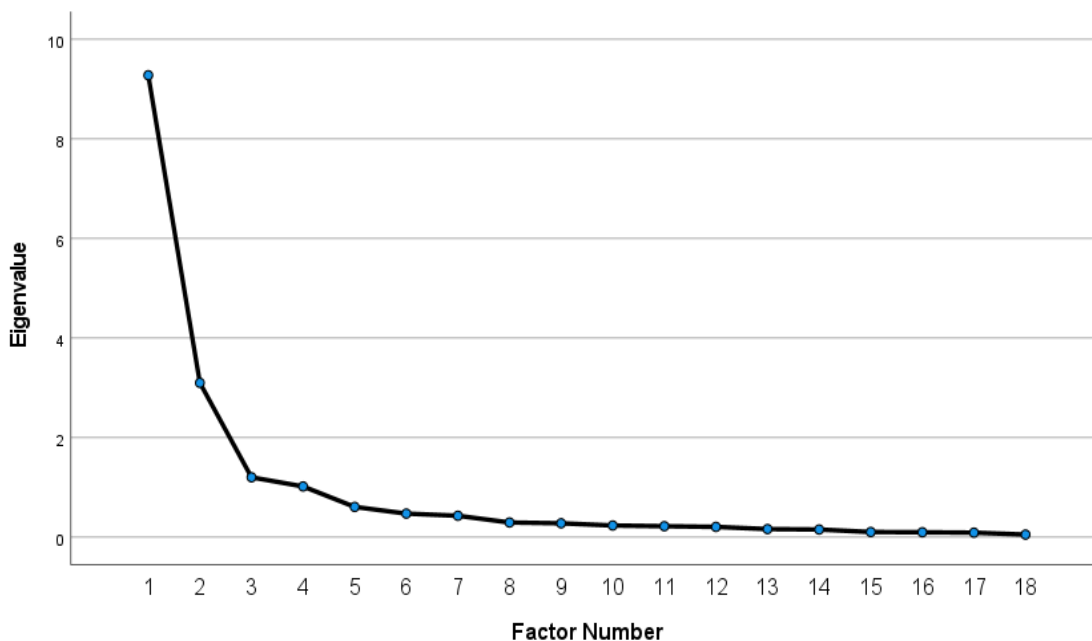


Figure M3 - First order scree plot for the mediator variable

Note. The first-order scree plot results for the mediator variables. Own work.

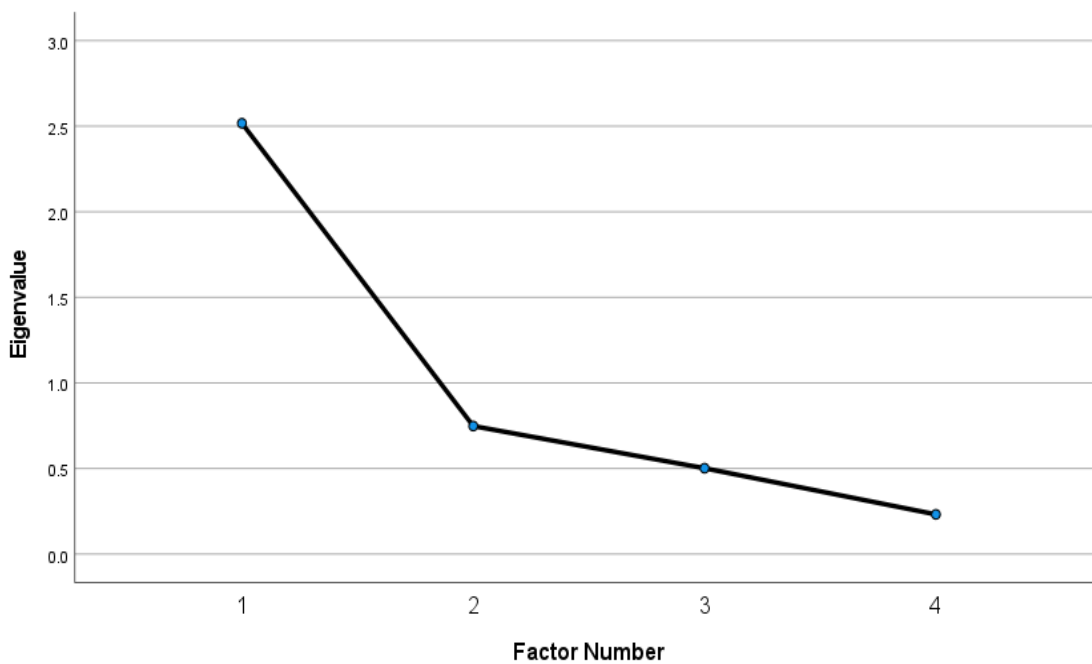


Figure M4 - Second order scree plot for the mediator variable

Note. The second-order scree plot results for the mediator variables. Own work.

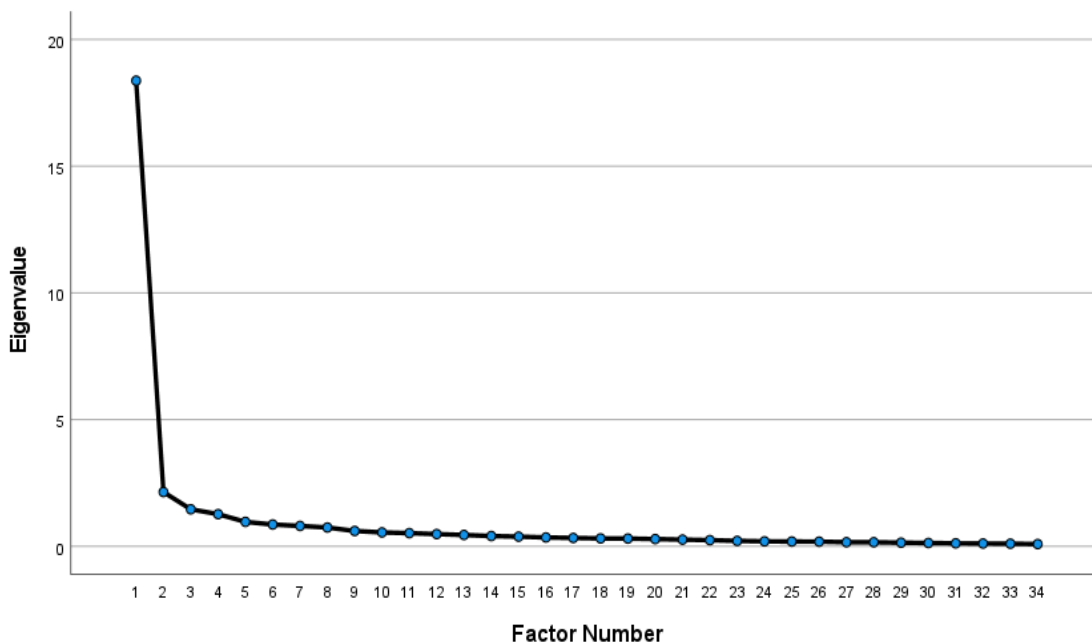


Figure M5 - First order scree plot for dependent variable

Note. The first-order scree plot results for the dependent variables. Own work.

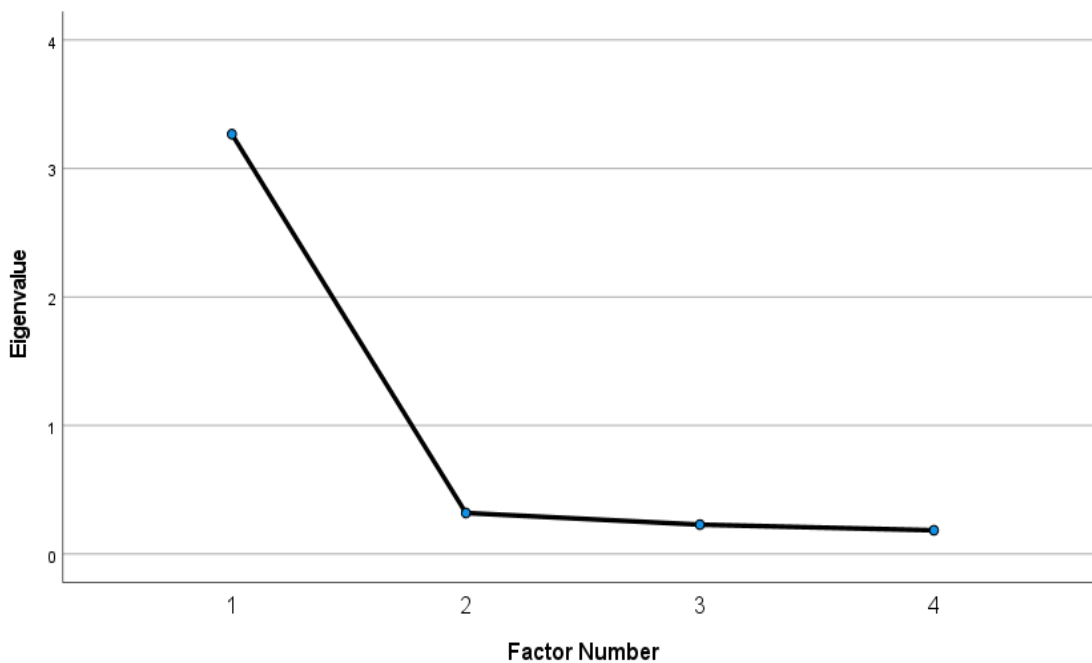


Figure M6 - Second order scree plot for the dependent variable

Note. The second-order scree plot results for the dependent variables. Own work.

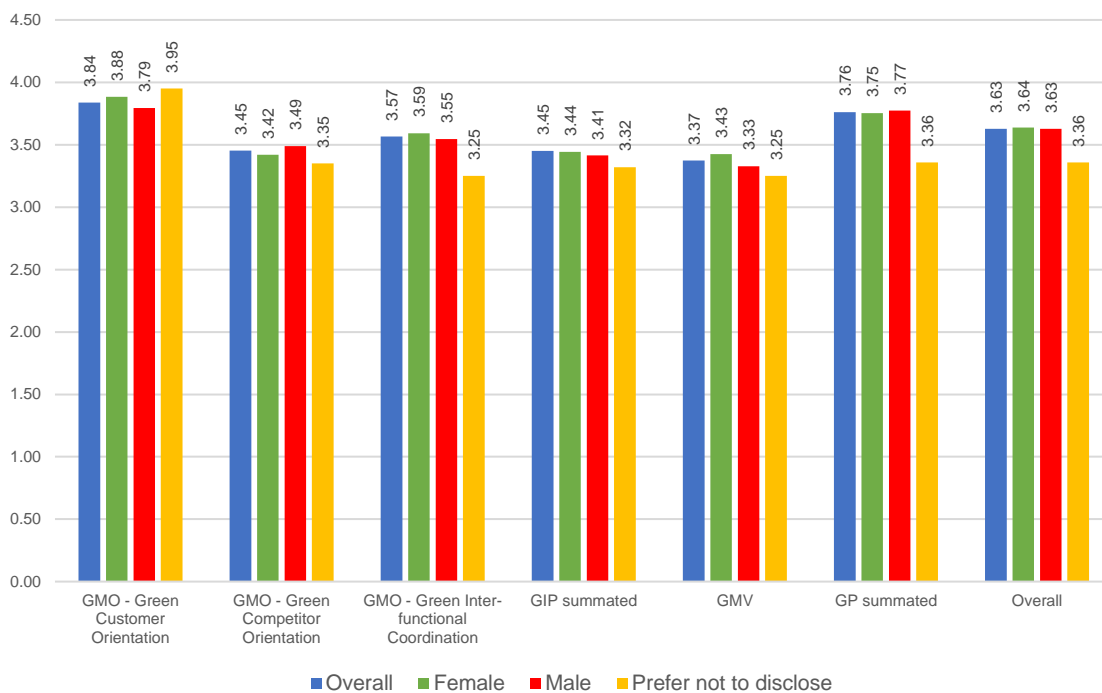


Figure M7 – Summary of the Means of the Major Constructs

Note. The summary results of the means of the major constructs. Own work.

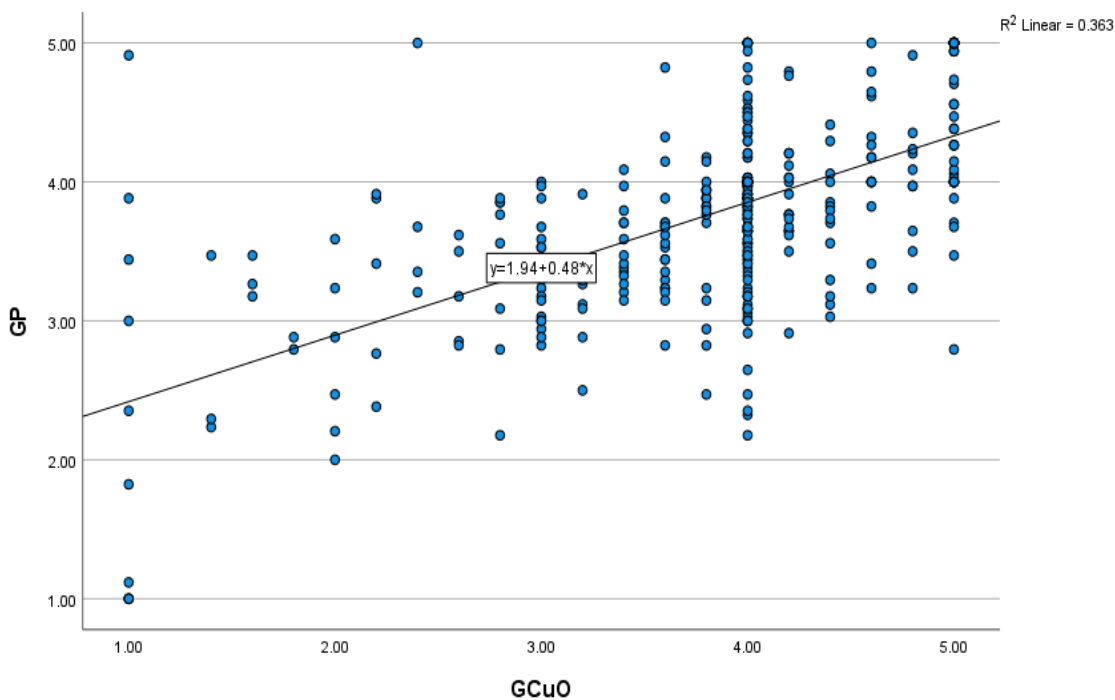


Figure M8 - Scatter Plot of GCuO and GP

Note. The scatter plot for the independent and dependent variables. Own work.

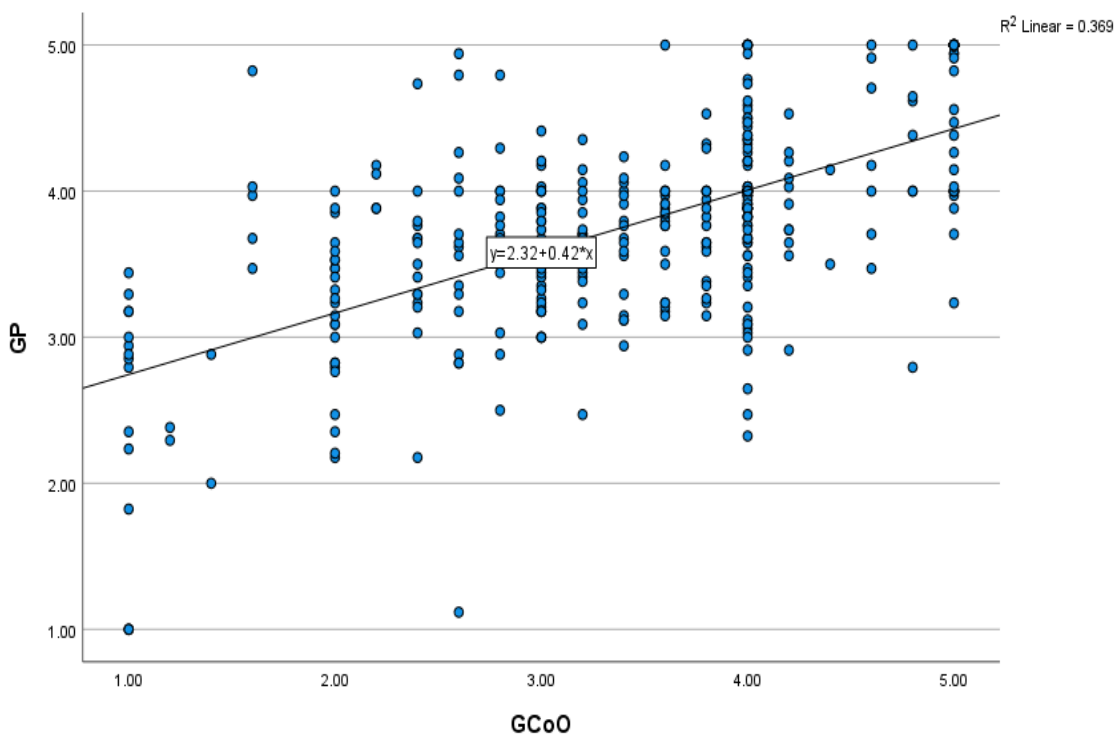


Figure M9 - Scatter plot of GCoO and GP

Note. The scatter plot for the independent and dependent variables. Own work.

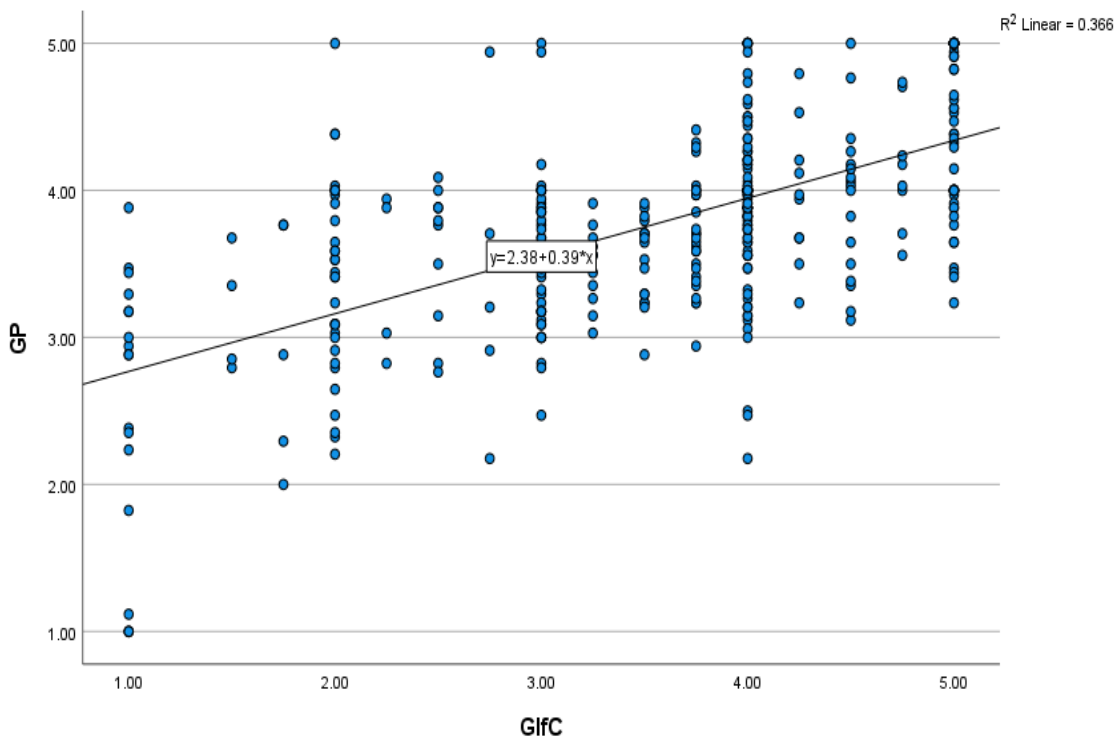


Figure M10 - Scatter plot for GIfC and GP

Note. The scatter plot for the independent and dependent variables. Own work.

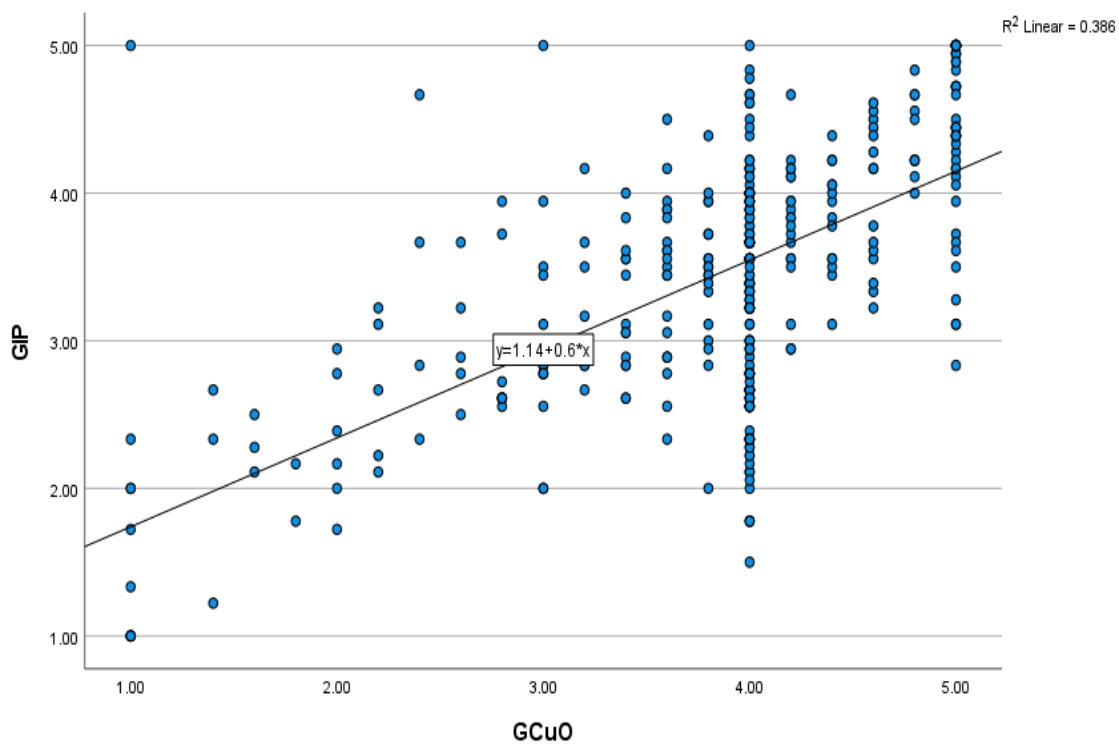


Figure M11 - Scatter plot for GCuO and GIP

Note. The scatter plot for the independent and mediator variables. Own work.

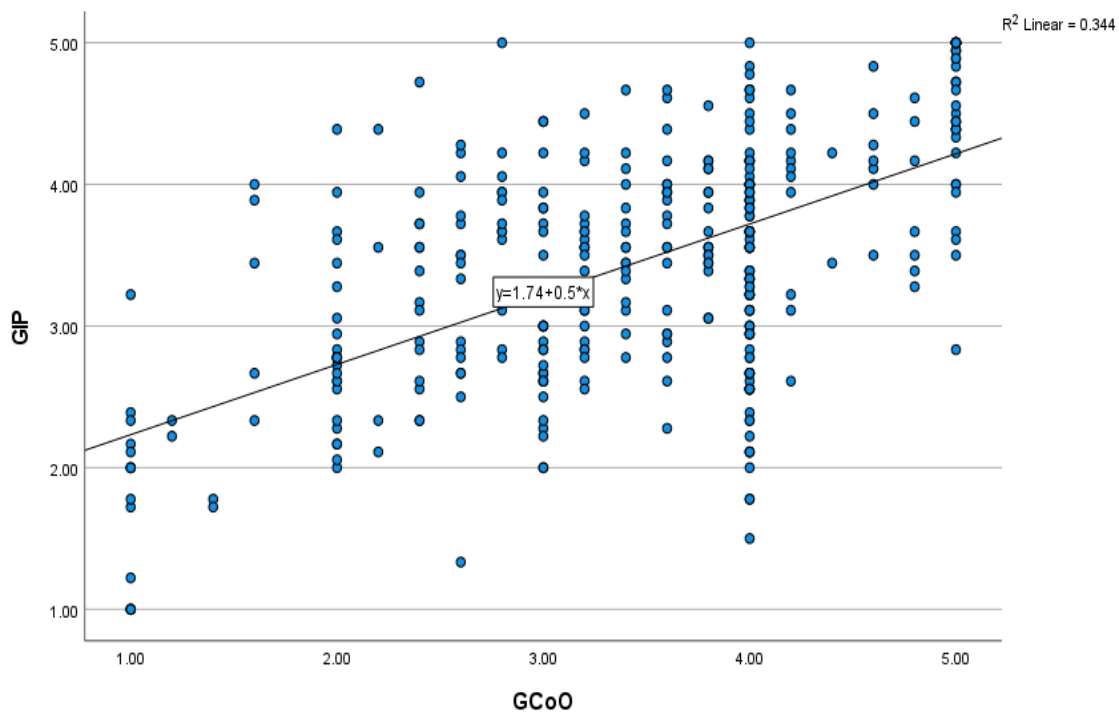


Figure M12 - Scatter plot for GCoO and GIP

Note. The scatter plot for the independent and mediator variables. Own work.

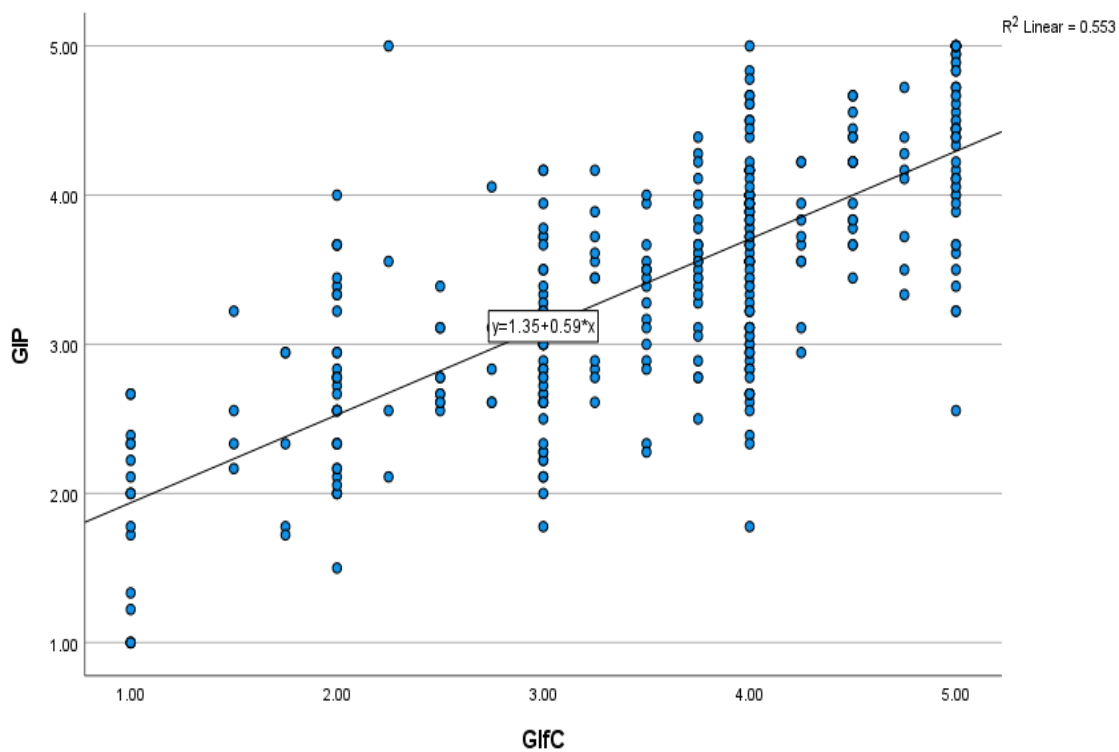


Figure M13 - Scatter plot for GfC and GIP

Note. The scatter plot for the independent and mediator variables. Own work.

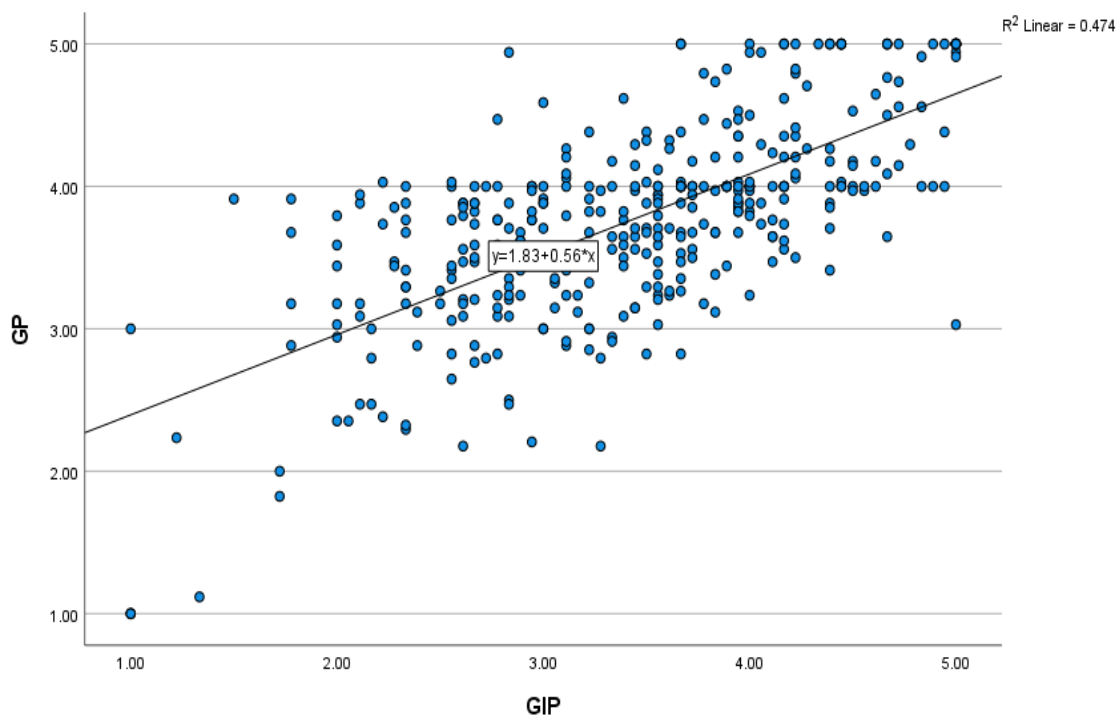


Figure M14 - Scatter plot for GIP and GP

Note. The scatter plot for the mediator and dependent variables. Own work.

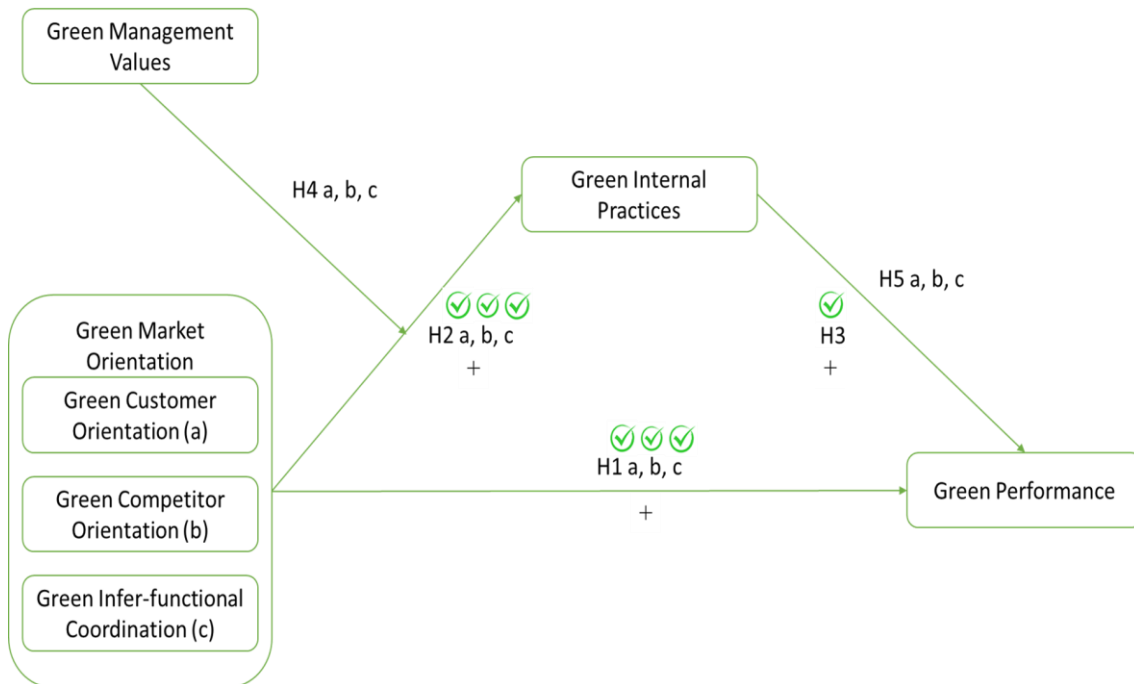


Figure M15 – Results of direct effects

Note. The summary results for the direct effects. Own work.

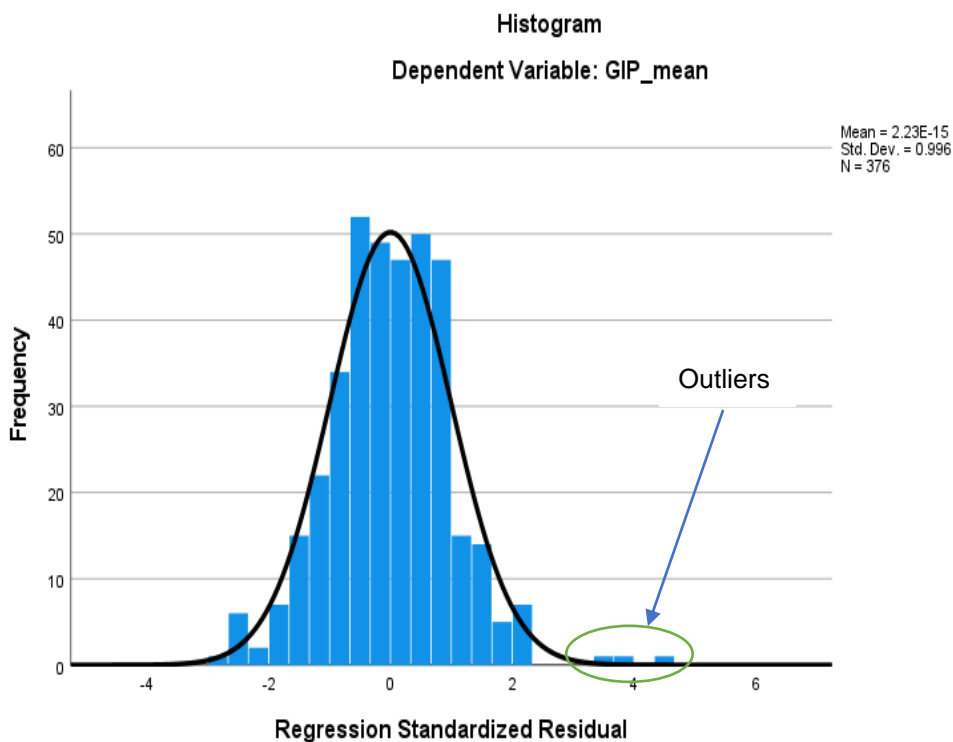


Figure M16 - Outliers for GIP in moderation GCuO GMV interaction

Note. The histogram results showing the outliers. Own work.

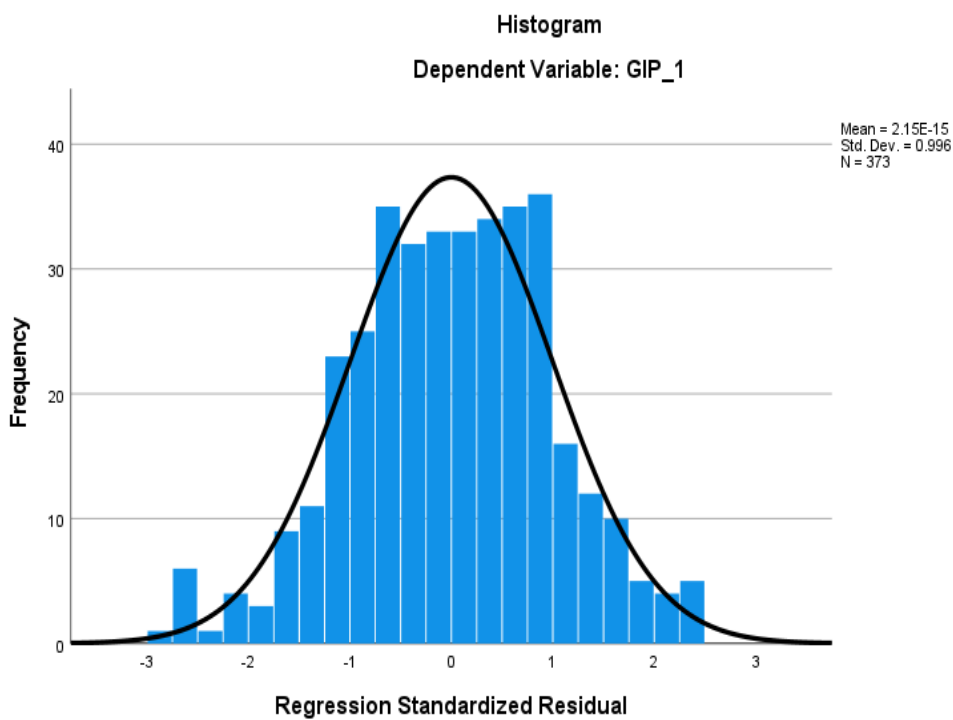


Figure M17 - Outliers removed for GIP in moderation GCuO GMV interaction

Note. The histogram results showing no outliers. Own work.



Figure M18 - Interaction between GCuO and GMV on GP

Note. The interaction for moderation. Own work.

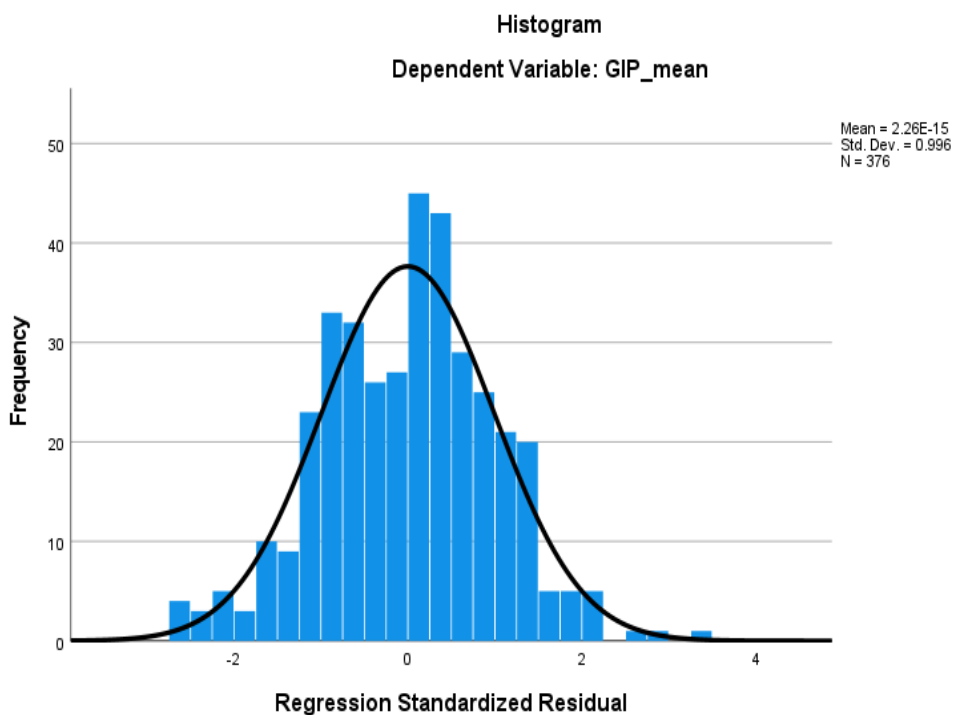


Figure M19 – Outliers for GIP in moderation GCoO GMV interaction

Note. The histogram results showing the outliers. Own work.

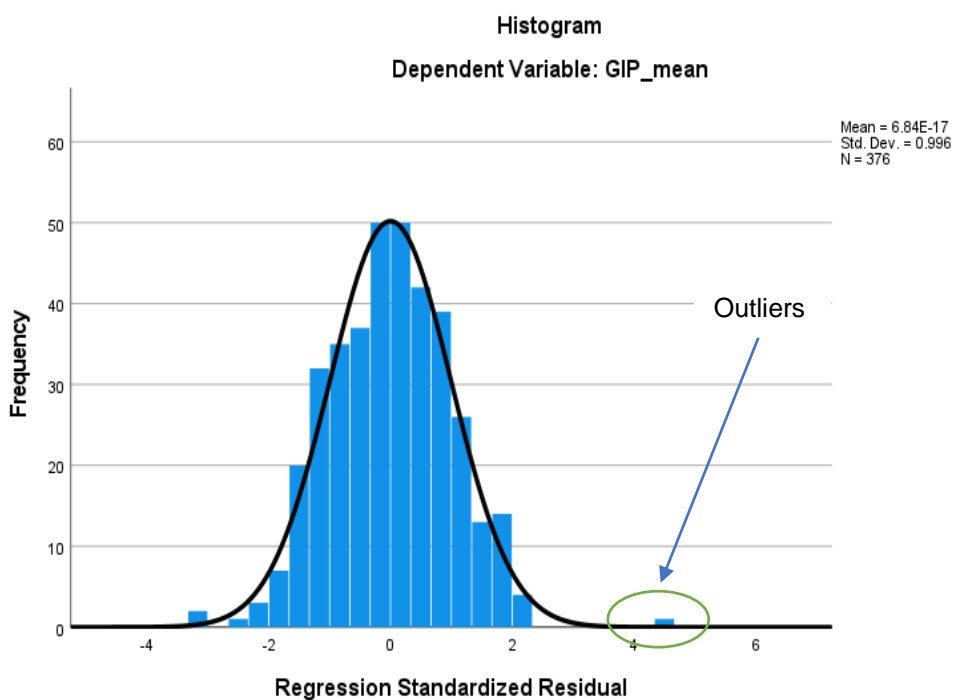


Figure M20 - Outliers for GIP in moderation GIfC GMV interaction

Note. The histogram results showing the outliers. Own work.

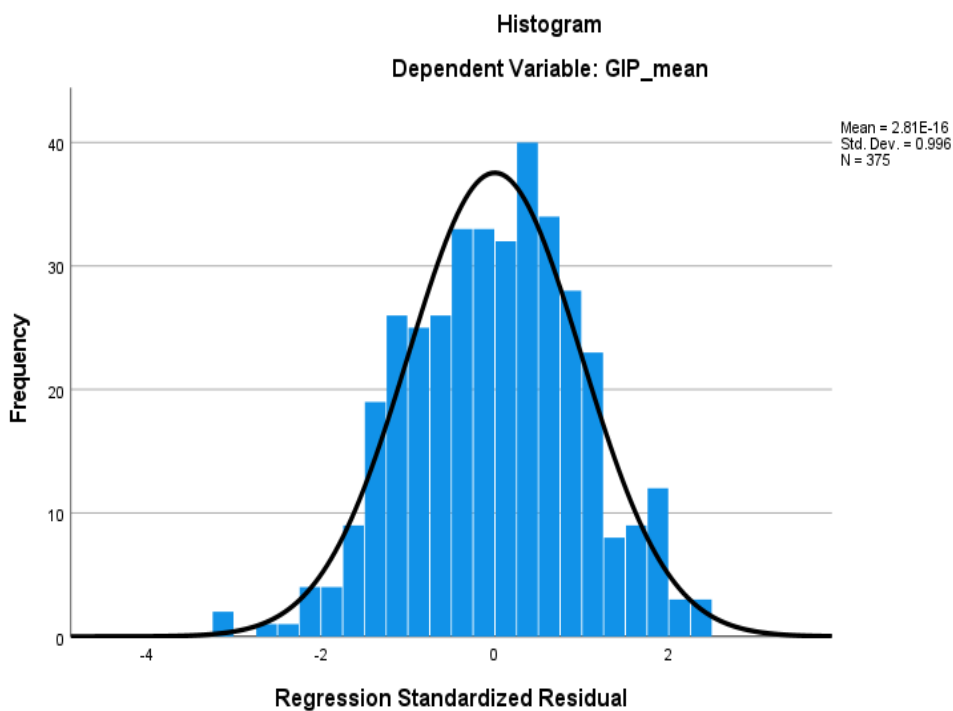


Figure M21 - Outliers removed for GIP in moderation GIfC GMV interaction

Note. The histogram results showing the outliers. Own work.

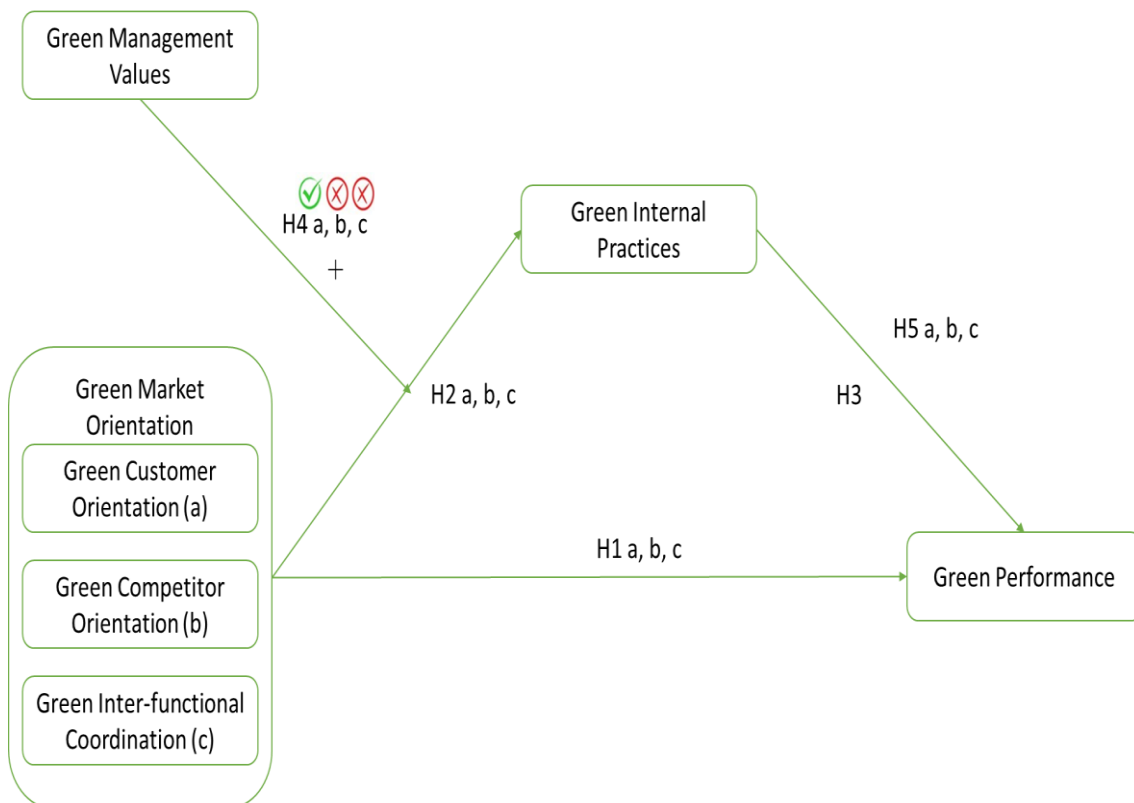


Figure M22 – Results of moderation effects

Note. The summary results for the moderation effects. Own work.

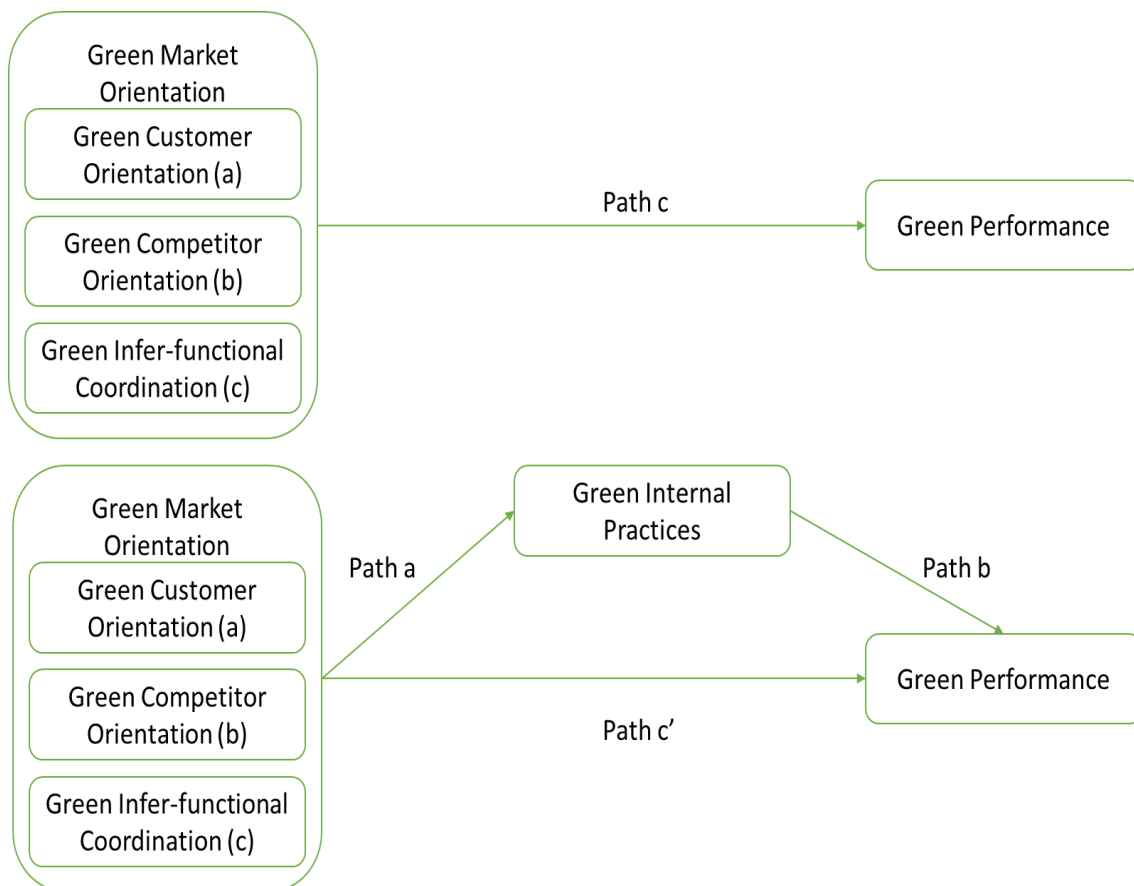


Figure M23 - Mediation analysis – GMO GP relationship

Note. The summary results of the mediation analysis. Own work.

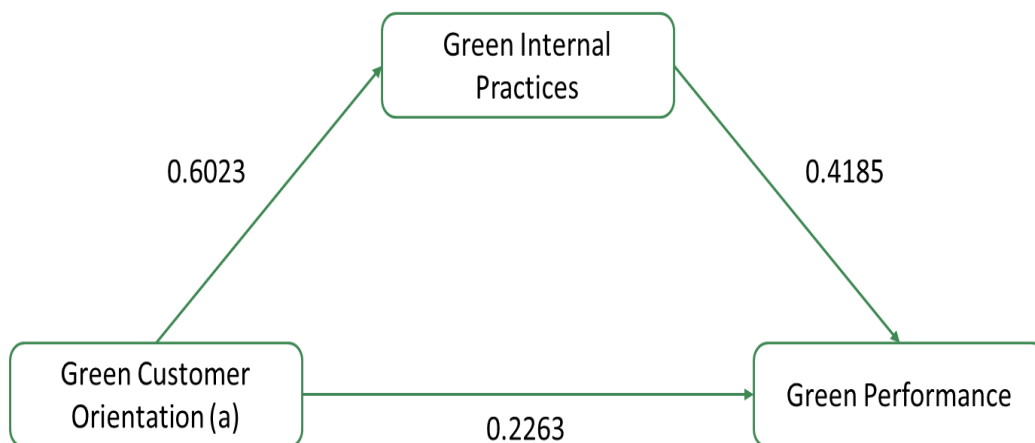


Figure M24 - Strength of direct and indirect effects of GCuO on GP

Note. The summary results for the strength of the direct and indirect effects. Own work.

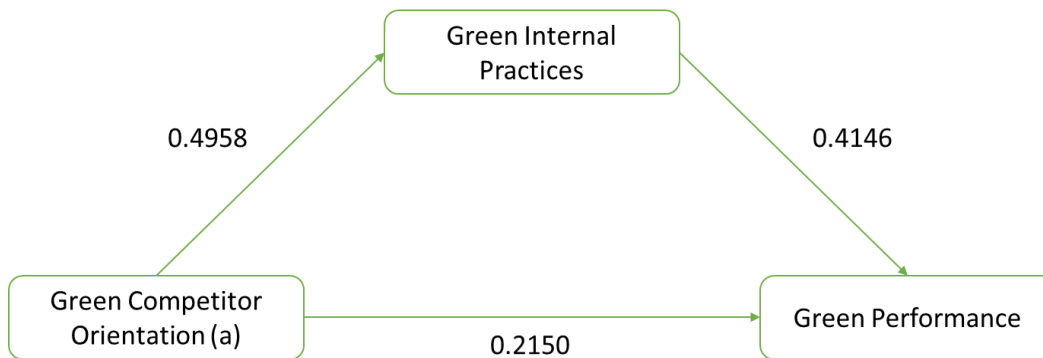


Figure M25 – Strength of direct and indirect effects of GCoO and GP

Note. The summary results for the strength of the direct and indirect effects. Own work.

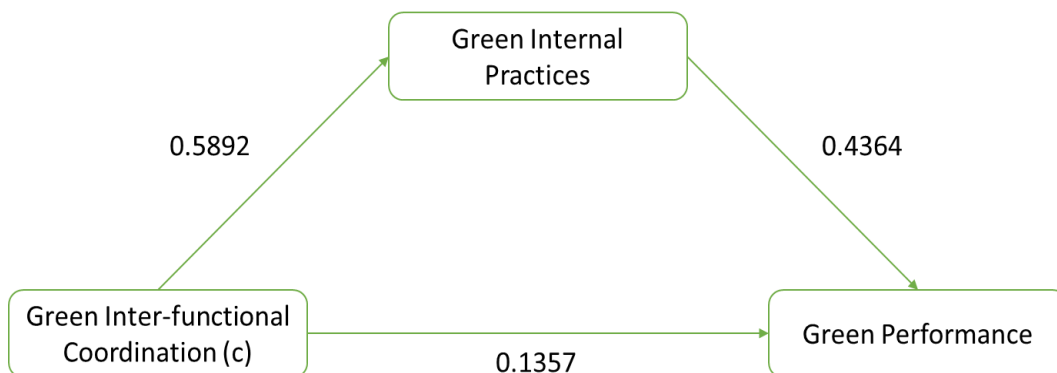


Figure M26 - Strength of direct and indirect effects of GIfC on GP

Note. The summary results for the strength of the direct and indirect effects. Own work.

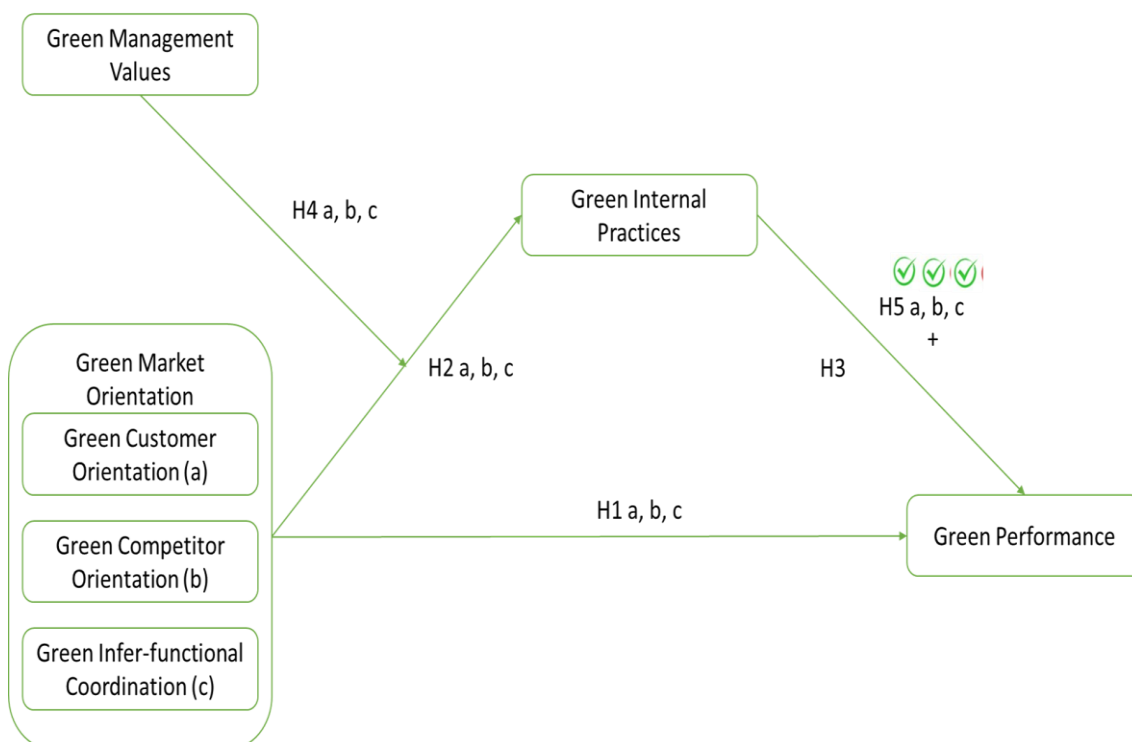
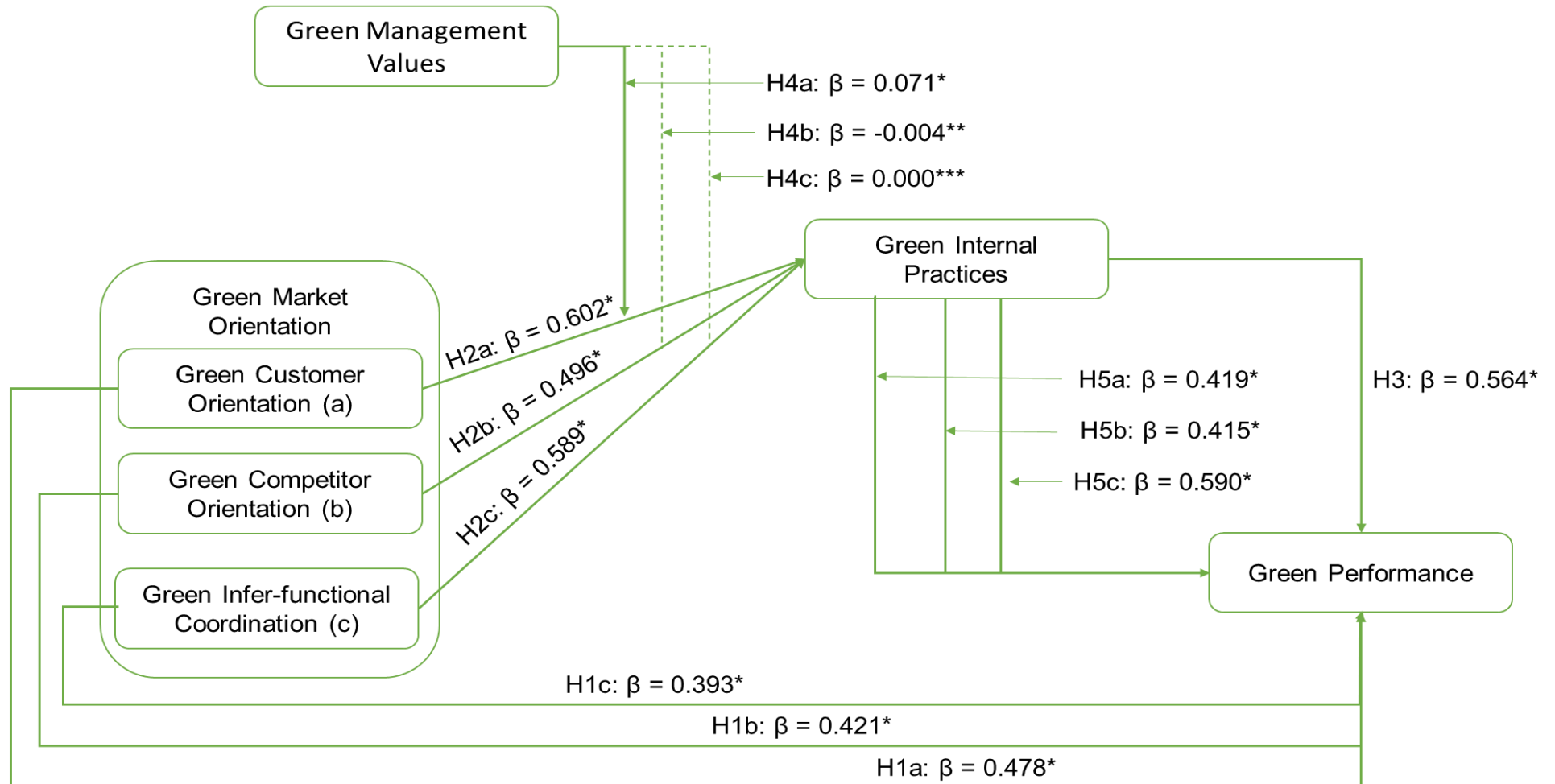


Figure M27 – Results of mediation effects

Note. The summary results for the mediation effects. Own work.

Appendix N – Conceptual Model



Note. The summary results for the conceptual model. Own work.