CONSUMER CONCERNS FOR THE ENVIRONMENT AND THE EXTENT TO WHICH IT INFLUENCES THE PURCHASING OF GREEN PRODUCTS IN THE GREATER eTHEKWINI REGION

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APPROVED FOR EXAMINATION

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DECLARATION

I, Ashvir Ramessur, declare that this dissertation originates from my own work, except where otherwise referenced. All the sources used or quoted have been cited and acknowledged by means of complete references. This dissertation has not been previously submitted to any tertiary educational institution.

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ABSTRACT

With the escalating threat of global warming, pollution, and climate change, organisations worldwide are compelled to rethink their business practices. As a result, green marketing has emerged as a vital strategy, with an increasing focus on the study of consumer behaviour related to sustainability. In light of these developments, the aim of this study is to investigate the impact of green marketing on the purchasing behaviour of South African consumers.

As the study of green marketing is still in its early stages in South Africa, a cross-sectional and descriptive research design was adopted. A quantitative approach was utilised, and data collection was conducted through survey questionnaires. Convenience sampling was employed to recruit a sample of 250 respondents, as they needed to be easily accessible at the chosen shopping mall for data collection. The collected data were analysed using SPSS.

The study found that South African consumers, particularly those in the eThekwini region of the province of KwaZulu-Natal, have a significantly high knowledge of issues affecting the environment. Many respondents demonstrated a concern for the environment by exhibiting a preference for products that were environmentally friendly. However, the findings indicate that they were also sensitive to price, which had a significant impact on their purchasing decisions, particularly in relation to their income levels. The study revealed that there was no significant difference between low and high-income earners, as well as lower and higher qualified respondents, regarding their knowledge and awareness of environmental degradation and green marketing.

DEDICATION

This study is dedicated to my grandmother, Mrs Thara Dwarika, who is the epitome of everything green and beautiful in the Universe.

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LIST OF ABBREVIATIONS

ASBM	Associative Sustainable Business Model
CEO	Chief Executive Officer
CSR	Corporate Social Responsibility
DUT	Durban University of Technology
EU	European Union
FREC	Faculty Research Ethics Committee
FSSD	Framework For Strategic Sustainable Development
GSC	Green Supply Chain
ISO	International Standard for Organisation
MSW	Municipal Solid Waste
NGO	Non-Governmental Organisation
NPO	Non-Profit Organisation
PBC	Perceived Behavioural Control
PET	Polyethylene Terephthalate
SPSS	Statistical Package for the Social Sciences
StatsSA	Statistics South Africa
TBL	Triple Bottom Line
TLBCM	Triple Layer Business Canvas Model
TRA	Theory of Reasoned Action
UK	United Kingdom
UNEP	UN Environment Programme
USA	United States of America
VBN	Value Based Norm

CHAPTER 1:
OVERVIEW OF THE STUDY

1.1 Introduction and Background

Concern for the environment has burgeoned in the 21st century. The growing global population suggests that humankind will have greater infinite needs as they move into the future (Raiten and Combs 2019: 69). This, coupled with the decrease in the use of non-renewable resources, accompanied by the surge in the use of non-biodegradable waste products amongst the world's population, has collectively had a crippling effect on the environment. The escalating use of fossil fuels, plastic, and the pollution of water, air and soil has also led to greenhouse gas emissions and what has been described as a ground water crisis of the earth (Chien *et al.* 2022: 207).

Amoiradis and Stankova (2020:17) argued that the natural ecological environment has disintegrated, leading to multiple effects for inhabitants and the earth's surrounding atmosphere, such as a decline in popular foods, as well as global warming. According to Kostadinova (2016: 224), the earth has a limited supply of natural resources, and humankind is using the resources that are there at a pace faster than the earth can replenish them. This is evident in the rising sea levels, the increase in the frequency of droughts, flooding, cyclones, and typhoons, and the common occurrence of unstable weather conditions (Attfield and Beattie 2019: 1). This has coalesced into other issues such as heat-related illnesses; polluted air that causes respiratory diseases, and water borne diseases and scarcity; a reduction in land, animal, and sea food supply; and the easy spread of infections and diseases, all of which have exacerbated current mortality rates. Aside from the myriad negative effects on the natural environment, these burdens have led to enormous distress related to people's physical and mental well-being (Krawisz 2020: 132).

Across the globe, people and ecosystems are constantly confronted with environmental and other physical, psychological, and social stressors daily. In a study conducted on the Yak people in Bhutan India, it was found that due to the tremendous physical strain placed on their livestock, their herd size had to decrease which means that their livelihood was impacted negatively in order to adapt to climate change (Wangchuk and Wangdi 2018: 50). This ideally should lead to proper strategies being implemented, to alleviate the strain placed on the environment. Despite the

enormity of threats posed to the sustainable future of the coming generations, there has surprisingly been little emphasis placed on prioritising the environment (Krawisz 2020: 132).

Within the African context, Nikulin *et al.* (2018: 1) reported that there could be a major shift in the African climate, should temperatures continue to increase from 1.5 to 22 degrees Celsius. Atwoli, Muhia and Merali (2022: 86) noted that poor income countries in Africa are amongst the global hotspots for high vulnerability to climate change. Dube, Nhamo and Chikodzi (2022: 453) asserted that extreme weather conditions induced by climate change have gotten worse across Africa over the past decade, leading to significant flooding in the urban areas of the Western Cape.

Scholars have attributed rapid economic growth as a factor that has spurred the exploitation and excessive consumption of natural resources, leading to environmental degradation, with widespread consequences such as global warming, deterioration of the environment (soil, air, and water), ozone depletion, and life-threatening health hazards (Gasimli *et al.* 2023: 13640). There has also been an escalation in energy consumption and carbon emission in the business sector (Choi, Luo and Shrestha 2021: 5), which has created an additional burden on the environment.

Most of the ecological burdens have been linked to manufacturing industries, who through production and manufacturing activities have contributed to the destruction of the environment. However, these growing environmental concerns can be remedied when consumers exhibit responsible purchasing behaviours and make use of green, or ecofriendly products. Consequently, an increasing number of manufacturers are now being compelled to produce eco-friendly products using green technologies due to factors such as low greenhouse gas emissions in their production and disposal, as well as their recyclability and biodegradable ability (Paul, Bhole and Chaudhari 2014: 1645).

According to Paul, Bhole and Chaudhari (2014:1645), several international firms have begun producing green products to reduce environmental pollution. This includes Toyota's manufacture of the Prius, a hybrid car that has emission dipping gasoline, which decreases the discharge of carbon dioxide and nitrogen dioxide into the environment. It is also a fuel saver, thereby bringing additional positive factors for consumers. PepsiCo and Coca-Cola have also begun to use recyclable plastic as containers for their soft drinks, which serves as a substitute of corrugated materials, thereby decreasing pollution and the pricing of green products. Amoako *et al.* (2020: 1)

asserted that the pricing of green products has also become a significant area of focus amongst manufacturers, as consumer environment awareness has influenced green product use. Furthermore, according to these authors, customers who are environmentally conscious are now also more willing to pay higher prices for eco-friendly products.

Green consumption has been portrayed as a feasible way to alleviate the strain on the fragile environment caused by resource utilisation, while also facilitating the sustainable development of the social economy (Ali and Onur 2020: 27). In recent years, stakeholders have strongly advocated for a green lifestyle, leading to an increase in public awareness regarding green consumption. As a result, green products have become more popular among consumers due to their environmental protection factors, energy saving, health, and other positive characteristics (Zhang *et al.* 2018: 287). Nevertheless, existing studies show that consumers' favourable attitude towards green products does not always translate into actual purchasing behaviour (Babutsidze and Chai 2018: 294; Kollmuss and Agyeman 2002: 240).

According to Pomering (2017: 159), sustainability is linked to developing products that meet the needs of consumers without threatening or jeopardising the environment and future generations. Amoako *et al.* (2020: 1) added that green brand engagement should promote brand trust among environmentally conscious customers. The purchase of environmentally friendly products has been suggested as one strategy to minimise the negative impact of consumption on the environment (Liobikienė, Mandravickaitė and Bernatonienė 2016: 38).

In the typology of pro-environmental consumer behaviours within product-oriented purchasing, Kreczmańska-Gigol and Gigol (2022:2077) identified the following strategies: (1) boycotting certain products that harm the environment, e.g., not buying aerosols; (2) sustainable consumerism, e.g., avoiding buying certain products considered to be harmful to the environment; (3) positive buying, which includes purchasing only energy-efficient products or those marked with a unique label for green products (Young *et al*. 2010: 22; Harrison, Shaw and Newholm 2005: 157). In green consumption, consumers are aware of the environmental impact of purchasing, using, and disposal of different products and consider their impact on the environment (Moisander 2007: 403). It is against this backdrop of literature that the current study has positioned itself to look at consumers' views of the environment and their use of and support of green products in the eThekwini area of KwaZulu-Natal, in South Africa.

1.2 Green Marketing in Context

There is a growing global recognition that a new "green" market is emerging as a means of safeguarding the environment. The concept of a "green market" entails companies striving to manufacture products or provide services that do not harm the natural environment, and consumers actively seeking out such products, including those that are recyclable, reusable, and produced responsibly (Lotfi, Yousefi and Jafari 2018: 2). Asha and Rathiha (2017: 1) asserted that consumers form the overall market for the production and consumption of goods and services, and their consumption and post-product usage behaviour collectively contribute to a vast array of elements that are harmful to the natural environment. The emission of greenhouse gases, which leads to global warming, is one of the most notable factors (FuiYeng and Yazdanifard 2015: 21).

Kaur, Sharma and Chawla (2017: 371) noted that more and more consumers are taking an interest in the concept of “going green”, especially in developing countries like India, China, and Brazil. FuiYeng and Yazdanifard (2015: 17) attributed this to the awareness of global warming and climate change. South Africa has seen three major droughts in its eastern geographical region, with 2016 being the harshest between 1973–2019 (Chikoore and Jury 2021: 7). As a developing market, there is the potential for South Africa to make progress in decreasing its carbon footprint. Sustainability goals can only be achieved if the individual consumer, leading all the way up to companies and governments play an active role in reducing their carbon footprint. The success story of the town of Chattanooga, which can be lauded for its reduction in carbon footprint and complete turnaround from being one of the most polluted cities, to one of the most sustainable and environmentally progressive cities in the United States of America (USA), is noteworthy. This has proven that with the support of the people within the nation, transformation towards achieving sustainability goals can be reached (Kitheka *et al.* 2016: 195). The significance of this study lies in the fact that by investigating consumer perspectives on green issues, it can lead to the development of approaches to educate manufacturers and marketers.

In actuality, businesses that have a detrimental effect on the environment have witnessed a global decrease in their market share due to damage to their reputation and image (Epstein and Buhovac 2014:2). The majority of businesses aim to serve a customer in order to make money. The fact that consumers may feel more favourable to products, businesses, brands, and services that are green, essentially sets a strong foundation for the notion of green marketing (Govender and Govender 2016: 79). Liobikiene and Bernatoniene (2017: 117) noted that over the past few

decades, there have been numerous studies on the market trend of purchasing eco-friendly products. Green products often get a price premium because of the green value they provide to consumers. Consumers who purchase green products are therefore not always direct beneficiaries and the green value can be found in the improvement of the whole social environment, which often results in a significant reduction in consumers' willingness to pay a premium for green products (Schuitema and Groot 2015: 59; Joshi and Rahman 2015: 132).

Recent research reflects various issues related to eco-friendly products, such as their cost and quality (functional value) (Suki, Suki and Azman 2016: 264; Khan and Mohsin 2017: 67); the purchase process of the same (emotional value) (Wang, *Huang and Wei* 2015); the need to seek knowledge of the green products (cognitive value) (Biswas and Roy 2015: 465); the effect of promotional activities and subsidies (conditional value) (Gonçalves, Lourenço, and Silva 2016: 1485), all of which are linked to a desire to promote environmental protection (environmental value) (Laroche, Habibi, and Richard 2013: 80), which in turn predicts green consumption behaviour. Hence, although consumers' green purchasing behaviour is mainly fuelled by the value of the product, it is also influenced by internal factors such as individual values, beliefs, attitudes, and social norms (Cheung and To 2019: 149; Lin and Niu 2018: 1680), as well as external factors.

This current study is linked to some of these issues, and investigates consumers' concern for the environment in eThekwini, KwaZulu-Natal, South Africa, and whether this influences their purchasing decisions. The research problem is described next.

1.3 Research Problem

The growing global population has placed a tremendous strain on the earth's limited natural resources (Christelis 2013: 8). The greater the population, the greater the demand for products and services, which, in some way or another, requires the utilisation of the earth's natural resources. Global warming, deforestation, as well as the extinction of plants and animals are some of the effects caused by the strain put on the natural environment (Chen and Chai 2010: 28). A study done by Darkoh (2009: 93) in the South African context indicated the consequences that these factors will have, and will continue to have, viz. droughts, floods, food and water shortages, the loss of biodiversity and ecosystems, diseases such as malaria, as well as many other issues if radical changes are not made.

Liebenberg (2015: 43) as well as Braga *et al.* (2015: 107) found that although many consumers are aware of environmental issues, this does not necessarily lead to green behaviour. Hence, the value of exploring consumer attitudes towards the purchasing of green products is critical. Moreover, findings from such an inquiry will have the potential to influence organisations that do not produce and package green products to do same.

Moreover, the rapid advancements in technology have fuelled the massive development of innovative green products to address global warming issues (Sarkar, Ullah and Sarkar 2022: 332). Green marketing has caught the attention of business academics and practitioners as the increasingly complex business world urgently prioritises controlling environmental damage and protecting future generations. The emergence of global markets then requires greater attention to aspects of sustainability, namely the environment, society, and economy, in marketing decisions, whilst trying to meet the demands of customers (Vilkaite-Vaitone, Skackauskiene and Díaz-Meneses 2022: 718). Consequently, green marketing has attracted significant attention amongst marketing scholars and practitioners.

While there is a growing body of literature on this topic abroad (Yadav and Pathak 2017: 114; Rizwan *et al*. 2013: 87), there is limited empirical investigation thereof in the South African context, revealing a paucity of research on consumers' attitudes and purchase intentions towards green products. The researcher came across a study conducted by Shimul, Cheah, and Khan (2022: 37) which explored the attitudes and purchase intentions of female shoppers towards green cosmetics in South Africa. The study collected data from 408 shoppers and discovered that consumers' attitudes towards green cosmetics are influenced by their ecological motivation and environmental knowledge. The study recommended the implementation of an integrated marketing communication approach that utilises campaigns, advertisements, and public relations to educate and inform consumers about the benefits of green cosmetics. Herein lies the research gap as there has been no prior research study undertaken in eThekwini, KwaZulu-Natal. In fact, local researchers, Govender and Govender (2016: 77), have stated that there is a dearth of research on the attitudes, perceptions, and behaviours of South African consumers on green marketing, which further justifies the need for this study.

This study is important as it investigates consumers' concern for the environment in the eThekwini district, of KwaZulu-Natal, investigating whether concern for the environment influences consumer

purchasing behaviour, and whether consumers intentionally purchase green products. Important recommendations for the marketing of green products are made later in the study.

Preliminary research by Sidhu (2018: 55), for example, found that 33% of Unilever customers prefer green brands that align with socio-environmental values, as green consumers represent mass untapped markets valued at around 2.7 trillion dollars globally. The significance of this study lies in identifying potential marketing strategies that can promote sustainability awareness amongst consumers (Amoako *et al.* 2020:1). The study is also important because it will help marketers create and promote sustainable consumption habits that promote green behaviour.

1.4 Aim of the Study

The aim of the study was to explore consumers' concern for the environment and the extent to which it influences their purchase of green products in the greater eThekwini region.

1.5 Objectives of the Study

The objectives of the study were to:

1. Investigate consumers' concern for the environment in the eThekwini district of KwaZulu-Natal.
2. Investigate whether concern for the environment influences consumers' purchasing behaviour.
3. Investigate the extent to which consumers intentionally purchase green products.
4. Make recommendations for the marketing of green products.

1.6 Research Questions

The following research questions were formulated:

1. What are consumers' concern for the environment in the eThekwini district of KwaZulu-Natal?
2. How does concern for the environment influences consumers' purchasing behaviour?
3. How does concern for the environment influence consumers' intentional purchase of green products?
4. What recommendations can be made for the marketing of green products?

1.7 Significance of the Study

In contemporary times, issues related to the protection of the environment have become paramount to manufacturers, businesses, and consumers. Aligned with this is the notion of green consumerism, which is linked to protection of the environment and has begun to dominate discussions in the literature both in an international and local context (Moisander 2007: 405; Govender and Govender 2016: 78). Green consumerism has received considerable interest due to its focus on sustainability concerns and growing consumer attention with regards to environmental degradation (Sadiq *et al.* 2022:65521; Casalegno, Candelo, and Santoro 2022: 1010). Consequently, consumers have begun to engage in environmental ethics by choosing to purchase eco-friendly products (Nimse *et al.* 2007: 135; Paul, Modi and Patel 2016: 123) and showing a preference for eco-conscious organisations (Han and Kim 2010: 657).

Moreover, growing concerns about environmental protection and compliance with the 2030 Agenda, have significantly influenced consumer behavior (Toukabri and Youssef 2023:31). It is against this backdrop that sustainable consumption is a practice, aimed at reducing the negative environmental and social impacts generated by consumption (Lopes, Gomes, and Trancoso 2023: 136092). Green consumers therefore are aware of environmental issues in their purchasing decisions and seek products and brands that minimize damage to the environment and society (Lopes, Gomes, and Trancoso 2023: 136092). Currently, consumers are also starting to indicate their commitment towards sustainability, through their green consumption decisions, which, consequently compels companies to adhere to sustainability principles (Dabija and Bejan 2019:5; Legere and Kang 2020 :120699). These factors support the need for the current study.

Do Paco and Raposo (2009: 370) noted that although consumers were aware of environmental challenges and argued for policies to protect the environment, this “concern” did not translate into actual purchasing behaviour. Green purchasing inconsistency is also evident within different contexts related to pro-environment consumption choices, such as the purchase of green beauty products by non-green consumers (Munerah *et al*. 2021 : 124192). The reasons reported for this inconsistency includes less knowledge, a lack of trust, lack of awareness with regards to eco-labels, the non-availability of products, pricing issues and accessibility (Sharma, Aswal and Paul 2023.:2078). Whilst extensive literature has emerged regarding factors influencing green purchase behavior (GPB), research for exploring the specific factors, that explain this attitude behavior gap is minimal (Saxena, Kumar, Singh, Bisht, Chaudhary, Semwal, Chaudhary 2023; Panda, Kumar, Jakhar, Luthra, Garza-Reyes, Kazancoglu, Nayak 2020: 118575).

Whilst green consumerism has garnered momentum in developed countries abroad (Riva *et al.* 2022: 2807; Hazaea *et al.* 2022: 5009), it is still emerging in developing countries like South Africa, making the study timeous. There are very few research studies in the South African context that have focussed on consumers' purchase of green products, except for the work of Govender and Govender (2016: 78).

The current study is especially significant for a developing country like South Africa, as affirmed by the United Nations Development Program, who asserted that for developing countries ignorance of the issues and problems related to the environment is of concern (Shukla 2019 : 325). South Africa as a developing country faces an extensive array of environmental problems, which are linked to land, water, and air pollution. Moreover, it is characterised by significant environmental problems that include inadequate sanitation facilities, desertification, and deforestation. Even in urban areas, the collection and disposal of refuse has become challenging and undoubtedly poses a risk to human life and property. Consequently, it becomes imperative that environmental considerations be prioritised into aspects of marketing, especially the development of new products and communication,

Green marketing approaches have begun to be embraced by many businesses both locally and abroad to enhance their commitment to green initiatives. Hence, a study that can shed light on how businesses can develop eco-friendly products and services, through the lens of consumers, in terms of the use of those that are recyclable and adhere to pollution prevention and a more efficient use of energy is critical.

Organisations are, looking for insight into sustainable marketing initiatives, and hence will benefit from exploring customers' sentiments and purchasing intent toward sustainable and organic goods (Nafees *et al.* 2022: 104375). According to Frommeyer *et al.* (2022: 210), because public awareness about sustainability has increased, businesses must prioritise what they can market and strive to produce environmentally friendly products (Gulzari, Wang and Prybutok 2022: 10287).

Moreover, Loebnitz, Frank, and Otterbring (2022: 1045) asserted that whilst green advertising has the potential to boost eco-conscious clients, consumers have expressed greater concerns that manufacturers may mislead the public about environmental issues to bolster their sales and reputation (Isaac and Grayson 2020: 466). This study concerns itself with a range of issues from

consumer concern for the environment, to consumer views on green products, green packaging issues, organisations that have an environmentally friendly focus, and eco-labelling, thus making it valuable.

The core objectives of this study are to explore consumers' care for the environment and how it influences purchasing decisions in the greater eThekwini region. There are numerous studies that propose various reasons or factors for the ways in which a consumer's attitude or intention towards something influences their behaviour (Makhdoomi and Nazir 2016: 558; Imbambi 2018: 269; Straughan and Roberts 1999: 558; Chen and Chai 2010: 27); however, the field remains under-researched. There is still no concrete solution to fill this gap (Kostadinova 2016: 231). It should also be mentioned that to date, no research was found to have been done in the eThekwini region of KwaZulu-Natal.

In terms of stakeholder impact the study is also significant. It will draw attention to consumers concerns for the environment, thereby compelling businesses to develop products and services that are more sustainable. Findings from the study may also urge companies to adopt more sustainable business practices and adopt green marketing more vigorously so as to become more appealing to environmentally conscious consumers. As the government and other stakeholders demand that businesses became more responsible in their operations and supply chains, they in turn will strengthen their commitment to sustainability. This study sheds light on the promotion of products and practices, that are eco-friendly which consequently reduces the environmental burden brought by businesses and contribute to a huger societal shift towards sustainability. Finally, the study can be potentially valuable to environmental advocacy groups. By highlighting the crucial role that businesses play in sustainability, there can be green alliances forged between both these stakeholders. This type of collaboration can further the agenda to protect the environment.

Since South Africa is a comparatively new market for green products, managers lack insights into the issues, that should be given priority to identify the market demand for green products. Prior research, as discussed in the preceding sub-sections, found that customers with environmental knowledge have a positive attitude toward green products and green purchasing intentions. This is important and affirms the need for managers to highlight the constant environmental degradation and its harmful consequences on humankind, within their green marketing drives,

which should reflect the dire consequences if corrective measures are not implemented and how green products can contribute.

The present study then contributes to the body of green marketing knowledge in the context of developing countries like South Africa. Understanding the buying behavior of consumers products is imperative, as it will shed light on important factors such as green product quality, and how environmental sustainability builds green value and becomes a driving factor, in choosing and purchasing green products. Findings from the study, can inform business owners regarding the salience of green marketing strategies and can bolster initiatives related to green behaviour and green marketing.

1.8. Definition of Concepts

This section defines the key concepts used in this study.

1.8.1 Global warming

Sharma and Gahlawat (2017: 71) defined “global warming” as the entrapment of heat in the ozone layer, thus increasing the temperature across the world which is regarded as one of the root causes for a number of environmental issues.

1.8.2 Green

The definition of a green product can be complex and is dependent on the manner and context in which it is used (Sdrolia and Zarotiadis 2019: 150). With this being said, there is no one unified accepted definition when it comes to the term “green” (Ranjan 2016: 49).

This study has differentiated between definitions as follows:

1.8.3 Green products

A green product is a sustainable product designed to minimize its environmental impacts during its whole life-cycle and even after it is discarded (Tezer and Bodur 2020: 25; Ansu-Mensah 2021: 1).

1.8.4 Green business

"Green businesses" are defined as businesses that have taken a sustainability approach in their modelling (Joyce and Paquin 2016: 1474).

1.8.5 Green marketing

Yusuf and Fatima (2015: 140) mentioned that "green marketing" entails the marketing of products that are not detrimental to the earth's natural habitat.

1.9 Theoretical Framework of the Study

The current study was guided by the *theory of planned behaviour* framework to better understand South African consumers' views and attitudes towards purchasing green products. This model was developed by Ajzen in the early 1990s and is predicated on the assumption that human behaviour is guided by three factors, namely behavioural beliefs, normative beliefs, and control beliefs, which consequently lead to certain outcomes such as attitude towards a particular behaviour, subjective norms, and perceived behavioural control, respectively. The theory of planned behaviour was selected because it has been described as one of the most relevant theories due to its applicability in the field of environmental psychology (Stern 2005: 10785). A search of the literature reveals that theory of planned behaviour has been used to guide purchase intentions related to a diverse range of eco-friendly products and services (Chan and Lau 2002: 15; Yadav and Pathak 2016) and has displayed efficacy in measuring eco-friendly purchase intention and behaviour. An overview of this theory is presented in the sub-sections that follow.

Behavioural beliefs, according to Ajzen (1991:180), refers to individual beliefs about the consequences of engaging in a particular behaviour. He added that normative beliefs are individual perceptions about how others, particularly significant others, would expect one to behave in a certain situation, whilst motivation includes an individual desire to comply with the opinions of significant others. Perceived behavioural controls are a person's individual beliefs towards the presence of certain factors that either support or hinder the performance of a particular behaviour. Ajzen (1991: 182) added that behavioural intentions are linked to a person's readiness to perform a given behaviour. Hence, the more positive an individual's attitude is towards a behaviour, the more favourable the subjective norm and the stronger the perceived behavioural control, the stronger their intention to perform the behaviour will be.

Theory of planned behavior is premised on the notion that the greater the intent is towards a particular behavior, the more likely it is that one will engage in the desired behavior (Ajzen 1991 : 185). Using the theory of planned behavior researchers have identified a significant relationship between purchase intention and behavior (Liobikiene *et al*. 2017 :111; Minbashrazgah *et al*. 2017 : 908). Kanchanapibul *et al.* (2014 : 530) asserted that green purchase intention often catalyses purchasing behavior due to human health and environmental reasons.

The theory of planned behaviour has been used in several studies to measure pro-environmental intention. Park and Ha (2012:1630) described pro environmental behaviours as behavioural activities that include the use of green or environmentally friendly products, the use of environmentally friendly goods and services, organic products, and waste disposal and recycling. Since this study looks at consumer views, and intentions, and behavioural patterns related to the aforementioned, this model is deemed appropriate to guide the current study. This model is relevant because all the variables of the theory of planned behaviour, namely attitude, subjective norms, and perceived behavioural control, influence consumers' intentions to purchase green products. The perceived value of products is important in green purchase decisions, as consumers will not compromise on the product itself, merely because of the environment. Moreover, willingness to pay a premium price can influence the purchase of green products for price sensitive consumers. Manufacturers and businesses can therefore enhance the purchase intention of customers by improving product values. Within the context of the present study, when consumers have a choice between product attributes and greenness of the product, they will most likely choose product attributes, as opposed to its green attributes. Hence green marketing strategies are crucial to enhance the perceived value of their products in relation to the environment (Chen and Chang 2013: 503). Thus far, perceived green value has been positively correlated with the purchase intention of green and environmentally friendly products (Chen and Chang 2013: 502; Chen *et al.* 2012: 163). Studies undertaken by Yadav and Pathak (2017: 114) as well as Han and Kim (2010: 659) support the role of the variables embedded in the theory of planned behaviour framework, in determining consumers' intention and behaviour towards the green products. They found that the perceived value of a green product had the most significant positive influence on consumer green purchase intention, which supports other studies (Rizwan *et al.* 2013: 87). Given that the objectives of the study were to investigate consumers' concern for the environment, and whether this personal concern for the environment influenced consumer purchasing behaviour, made this theory relevant and useful to guide the current study.

1.10 Brief Overview of the Methodology

The study was guided by a quantitative research paradigm. Survey research was used to collect data from consumers in eThekwini, KwaZulu-Natal, using an exploratory descriptive design. Convenience sampling guided the recruitment of participants who were shoppers/consumers at a large shopping mall in eThekwini. Given that this is an emerging area of interest in South Africa, a descriptive design was deemed most appropriate. The survey questionnaire was based on the work of Braga *et al.* (2015: 99). Data were analysed using the most recent version of SPSS (Statistical Package for the Social Sciences).

1.11 Outline of Chapters

Chapter 1: Introduction and Background

This chapter described the background of the study, the research problem, purpose of the study, objectives of the study, significance of the study, the theoretical framework that guided the study, and defined key concepts used in this study.

Chapter 2: Literature review

This chapter contains a detailed literature review on green issues at the interface of marketing.

Chapter 3: Research methodology

This chapter describes the research design and methodology that was used in this study.

Chapter 4: Data analysis

This chapter presents the data analysed, interpretation of the data, and a discussion thereof.

Chapter 5: Conclusions and recommendations

This chapter presents a summary of the main findings and provides recommendations based on these.

1.12 CONCLUSION

Chapter 1 introduced the topic of the study along with the background, research problem, research questions, objectives, and methodology. In addition to explaining the significance of the study and

defining the key concepts, the forthcoming chapters were outlined. The literature review is presented next.

CHAPTER 2:
LITERATURE REVIEW

2.1 Introduction

A literature review emerges from reading and reviewing, engaging with and interrogating the literature, establishing important issues linked to the objectives of the study, determining contradictions, and collating diverse viewpoints in articles. It involves connecting similar ideas from a wide range of articles and journals, and finally, through one's own reasoning and analysis, incorporating literature into a review of pertinent issues (Badis 2019: 32). The review of literature is a crucial part of any empirical inquiry as it allows the researcher to gain a deeper understanding of the topic under study, what prior research has been undertaken, and allows the researcher to thread together the most critical issues.

Essentially, a literature review provides a researcher with more insight into the nature and meaning of the problem being studied (de Vos *et al.* 2005: 123). It enables the researcher to gather information about the current theoretical and scientific knowledge about particular phenomena under study; it also allows deductions to be made about what is and what is not known (Burns and Grove 2007: 135). Literature reviews assist researchers to identify gaps in research, prevent duplication of research, and justifies one's research as contributing to the existing body of knowledge (Botma *et al.* 2010: 64; Babbie and Mouton 2001: 565). Hence, a literature review threads together a critical summary of research on a topic of interest, which puts a research problem into its context, thereby enabling the researcher to make a constructive critique of previous research. Furthermore, it also allows one to explore the strengths and weaknesses of previous studies (Polit and Beck 2021: 732; de Vos *et al.* 2005: 87).

A researcher then proceeds to analyse, test, find opportunities, and build on these studies in order to advance the current level of understanding, with regards to the particular chosen topic (Xiao and Watson 2017: 16). Finally, a search of the literature helps to discover what the current theorising about the subject is, identifies the most recent empirical findings, and places the current study within its context (Babbie *et al.* 2001: 565).

This chapter reviews pertinent literature aligned with the research objectives. It uses key themes and ideas in the literature to validate the research study, and bears evidence regarding the important issues linked to the topic (Hart 2018: 2).

Literature on this topic was gathered from several databases, including Google Scholar, DUT Scholar, EBSCOhost, and Greenfiles, using key terms pertaining to the aim and objectives of the study. Terms used in the questionnaire were also extracted and explored.

This chapter begins by placing green marketing in its context, before discussing green marketing.

2.2 Understanding Green Marketing

2.2.1 Rationale for green marketing

The global world in contemporary times is facing unprecedented challenges related to the sustainability of the environment. The increasing population and rates of industrialization have created a burden on the environment, infrastructure and existing natural resources (Al-dmour, Hadad, and Al-dmour 2023 :15). Environmental issues, such as the deposit of poisonous waste materials, ozone consumption, global warming, deforestation and reduced resources, have become rampant (Dangelico and Vocalelli 2017:1264). Degradation of the environment, pollution, and the uncontrolled use of natural resources, have therefore placed a huge burden on long-term sustainability. The environment has therefore reached a breaking point with researchers saying that that if consumption levels persist, then the future of humankind is at risk (Kaur and Kaur 2018 :29).

In response to this, initiatives such as green revolt, environmental safety, sustainable developments, going green and protecting our earth have emerged. These programs have responded to make people aware of the deteriorating environment (Kaur and Kaur 2018:30). The term “sustainable” has become a popular notion in recent literature, with most businesses being urged that to fulfil human needs and wants they must strive to protect the environment (Awan and Wamiq 2016:2960). Hence, organizations have been tasked to formulate strategies that control pollution and protect natural resources.

Deep rooted environmental problems have compelled businesses, customers, and governments to recognize the consequences of their practices on the environment (Szabo and Webster 2021:721). In contemporary society many consumers consider the environment in their purchasing attitudes and many of them have added “company social responsibilities” to their brands-choosing criteria (Braik, Saleh, and Jaaron 2023:33). The power of consumers has therefore stimulated businesses and governments to place greater efforts in keeping up with the environmental movement. Thus, many governments have reconsidered and increased their environmental regulations (Groening *et al.* 2018 :1850; Simão and Lisboa 2017:187). Since it has been well documented that environmental deterioration is linked to industrial organizations, these businesses are obliged to ensure that their sustainable practices strike a balance within their environmental, economic, and social performance (Shabbir and Wisdom 2020 : 39950).

Marketing can be seen as one key functional area within any business or organization as it creates an interrelationship between a business and its customers and has a significant influence on the product portfolio and the product development process from the beginning to the end of life of a product (Braik, Saleh, and Jaaron 2023:34). Hence, green marketing has become critical, in advancing sustainable businesses (Szabo and Webster 2021:720). Green marketing is not just about promoting green products and services, but rather it has developed as a philosophy and set of practices that contributes hugely to enhancing the reputation of a business and its market performance (Simão and Lisboa 2017 : 188).

The term green marketing emerged in 1970 and since then literature on green marketing concepts, strategies, functions, and green marketing mix elements has grown substantially (Gelderman *et al.* 2021 :2065). Dangelico and Vocalelli (2017 :1265) reported that there was a rapid growth in studies that explored the notion of green marketing thereby concluding that green marketing, was not just a passing trend, but an important issue, that is deserving of consideration in the process of designing, developing, and marketing of new products. This literature as attested to within this review, exists mainly in an international context, with little being done locally. Green marketing has therefore evolved as a response to the threat to humanity in order to minimize effects on the environment. Green-marketing strategies have been adopted by many business organizations to enhance their corporate image and business performance. It has been described as the commitment of a business or an organization to the development of safe, eco-friendly goods and services by utilizing recyclable and easily decomposed packaging, enhanced anti-pollution methods and efficient use of energy.

The term “sustainable” has also become a popular notion in recent literature, with most businesses being urged that to fulfil human needs and wants they must strive to protect the environment (Awan and Wamiq 2016: 2960). Organizations have therefore been tasked to formulate strategies that control pollution and protect natural resources. As a result, businesses and other organizations, including non-profitable organizations, are being compelled to incorporate environmental thinking into their vision strategies (Sadiku *et al.* 2018:18). Kaur and Kaur (2018 :29) wrote that the green marketing concept motivates organizations to create new strategies directions, to develop new and innovative products and environmentally friendly products. This means that green marketing includes all activities that are designed to create and facilitate transactions, that satisfy human needs and demands, having minimum harmful and destructive effects on the environment.

Ishaq and Di Maria (2020:17) argued that because of increased sustainable consumption, consumer environmentalism and ecological issues in society, many companies have therefore focused their efforts on offering eco-friendly products and services to meet environmental needs. As such consumer knowledge of green marketing has grown, and they are becoming responsive to brands that promote environmental responsibility, given that companies environmental initiatives are being viewed as part of their corporate social responsibility (Wyszomirski and Olkiewicz 2020:1146). Hence, businesses recognize that if they provide products and services that address their consumers’ environmental concerns, these consumers are more likely to choose their products or services (Lavuri, Jindal, Akram, Naik and Halibas 2022: 281). Hence in this new environmental era, there are opportunities for corporates to nurture their products’ environmental credentials to strengthen their brand equity and strive toward sustainable marketing strategies, such as green marketing (Dangelico *et al*. 2022:1264).

Purchasing green products for daily use, is one good example of environmentally responsible behaviour, which can minimise and solve many current environmental threats (Correia, Sousa, Viseu, and Larguinho 2023 :1356). Over the past few decades, the role of sustainability in the corporate world, has become more prominent and several businesses have contributed immensely to the promotion of sustainable consumption ((Dangelico *et al*. 2022:1264). Moreover, companies have increasingly adapted their activities within a more sustainable approach, due to both stronger sustainability requirements and the implementation of new technologies aimed at

improving environmental, social, and economic business impacts (Ahmad, Yaqub, Lee 2024:2970).

The drive then is to integrate green marketing" into contemporary business practices, which is evident by the growing interest of marketing researchers and practitioners interested in environmental issues and their impact on marketing activities (Ng, Butt, Khong, and Ong 2014 :205). Although green marketing initiatives have become popular (Dangelico and Vocalelli, 2017:1264), almost all green marketing research has been initiated in the West.

Table 2.1 in the sub-section that follows presents an overview of the key terms that inter-relate to green marketing. This will not only highlight the key issues unpacked within this review but provide some conceptual clarity around them.

TABLE 2.1: OVERVIEW OF KEY CRITICAL TERMS

Term	Definition	Reference
Green environment	A green environment refers to external conditions in the environment that affects consumer behaviour. When consumer behaviour towards the environment is favourable it influences their purchase decisions thereby contributing to environmental sustainability. Consumer concerns makes them more responsible to make environmental decisions related to consumption.	(Joshi and Rahman 2015:128)
Green attitudes	Green attitudes refers consumer's tendency to respond consistently in a positive or negative way with regards to issues about the environment.	(Coşkun, Vocino, and Polonsky 2017:120; Ahmed, Streimikiene, Qadir and Streimikis 2023 : 11475).

Green product	Green products are those that are preferred by consumers because of their low environmental impact throughout the product's life cycle. Green products are those that are organic, environmentally friendly, recyclable and efficient.	(Moslehpour, Chau, Qiu, Lin and Batbayar 2022:7); Zhao and Chen 2019: 63). Correia, Sousa, Viseu, and Larguinho, 2023 :1356).
Green brand	A green brand can be described as a specific group of brand benefits and attributes related to minimizing the brand's impact on the environment and its perception of being environmentally healthy	(Simão and Lisboa 2017 :185; Dinh, Nguyen-Viet, Vo 2023 : 825).
Green pricing	Greening pricing refers to pricing for green products, that offset consumer's sensitivity towards price against their interest in paying more for the environmental performance of a product.	(Henryks, Cooksey, and Wright 2014: 453; Ghosh Datta, Barai 2016 : 624).
Green marketing	"Green marketing" refers to the promotion of goods and services that are thought to be harmless to	(Reddy, Chandu, Srilakshmi, Thagaram, Sahyaja, and Osei 2023 : 5;

	the natural world. In comparison to traditional marketing, green marketing stands out for its emphasis on promoting goods that do not affect the environment. Another term for this is ecological marketing.	
	Eco marketing refers to the rising demand for "eco-friendly" items, which can be linked to the growing awareness of the need of protecting the environment amongst consumers and business owners. This has compelled businesses to improve their manufacturing processes to provide more environmentally friendly products as a way to respond to shifting consumer preferences.	(Reddy, K.P., Chandu, V., Srilakshmi, S., Thagaram, E., Sahyaja, C. and Osei, B. 2023)
Green satisfaction	Is a level of consumption-related to the fulfilment of a customer's environmental desires,	(Gelderman *et al.* 2021).

	sustainable expectations and green needs. Exceeding or matching prior expectations is critical for green satisfaction.	
Green trust	Green trust is defined as the willingness to depend on a product, service or brand based on the belief or expectation resulting from its credibility, benevolence and ability about its environmental performance.	(Martınez, 2015 :899; Toke and Kalpande 2019: 417).
Green loyalty	Refers to a consumer's commitment to repurchase or continue using a green brand. It refers to the repeated purchase of a green product or service. A benefit of loyalty is the customer's willingness to pay a higher price for a brand than for another	(Chaudhuri and Holbrook 2001: 85; Chen 2013 :296)

	brand offering similar benefits	

The sub-section that follows, presents key topic topics related to green marketing. This includes, namely green manufacturing; the green consumer; green products; green marketing mix; green businesses; green marketing tools; green advertising; green product positioning; green product and marketing benefits; green washing; and green scepticism.

2.2.2 Green manufacturing

Green manufacturing has been described as one of the strategies classified under green supply chain management (Lahane and Kant 2021: 5). It includes green design, green purchasing, and green distribution (Sezen and Cankaya 2018: 120). Scholars have defined and interpreted green manufacturing in a myriad of ways. Alayón, Säfsten, and Johansson (2017: 694) defined it as actions, initiatives, and techniques that have a positive effect on the various performances of an industry, including its environmental, social, and economical dimensions. Seth, Rehman, and Shrivastava (2018 : 1382) asserted that it covers 6Rs, namely reduce, reuse, recycle, recover, redesign, and remanufacturing, and includes practices that use green products, eco-designing, and end of-life management. Toke and Kalpande (2019: 417) similarly defined green management as a strategy that focuses on minimising environmental impact by reducing toxic waste, pollution, and optimising the use of raw materials and energy.

2.2.3 The green consumer

A *green consumer,* according to Boztepe (2012: 14), is someone who is concerned about the environment and therefore displays environmentally friendly behaviour, as well as supports and purchases eco-friendly products. Govender and Govender (2016: 78) argued that due to increased awareness of environmental destruction, consumers are more inclined to engage in environmentally friendly behaviour and support businesses that adopt green strategies. Goh and Balaji (2016 :630) described green purchase intention as a consumer's motivation to acquire green products specifically, as opposed to easily available goods. Green purchase intention is linked to consumers' preference to purchase green products and use green services (Al-Majali and Tarabieh, 2020 ;432). Ansar (2013) explained that the positive attitude of environmentally aware consumers translates into their shopping habits, particularly with regard to

their concerns regarding chlorofluorocarbon products and product recycling. Researchers have in fact documented a significant relationship between environmental knowledge and attitudes toward green products (Jaiswal and Kant 2018:60; Lavuri 2022:1507). Lavuri and Susandy (2020) reported that environmental knowledge and environmental attitudes are significantly correlated, reflecting that the greater the environmental knowledge, the stronger the tendency for environmentally friendly performance.

Green marketing is focussed on all consumers, with the aim that they become increasingly green and value companies that are eco-friendly and choose to buy their products. In this vein, Hailes (2007), then defined the green consumer as one who links the act of buying or consuming products with the possibility of acting in accordance with environmental protection.

Green consumers can be seen to have green attitudes. Gifford and Sussman (2012: 65–66) defined green attitudes as “concern for the environment or caring about environmental issues (sometimes referred to as pro-environmental attitudes)”. Ugulu, Sahin and Baslar (2013:415) asserted that it is also important to investigate possible negative environmental attitudes, as individuals with negative attitudes towards the environment often underestimate environmental problems and therefore adopt environmentally unfriendly behaviours.

The relevance of green consumerism as reflected in the literature, is depicted in Figure 2 that follows:

FIGURE 2: THE RELEVANCE OF GREEN CONSUMERISM

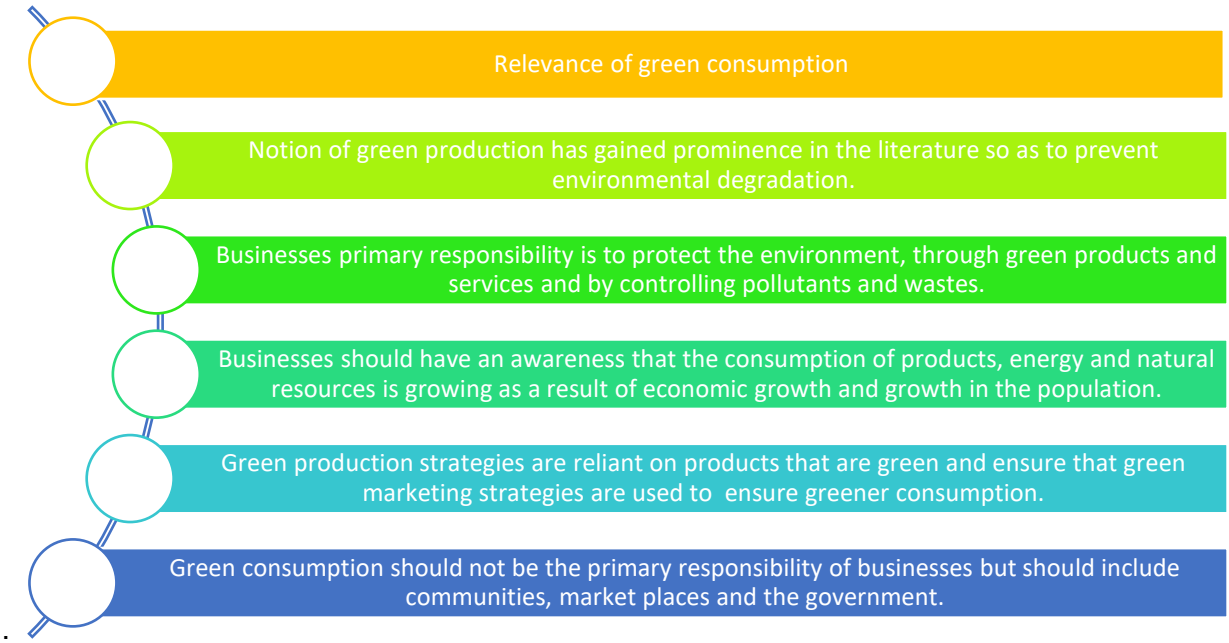

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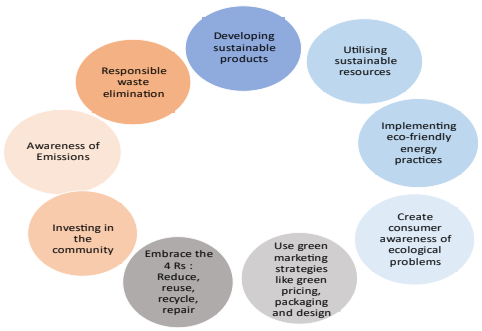
FIGURE 3: Key issues in the green cycle



2.2.4 Green products

According to Yusuf and Fatima (2015:141), a *green product* is a product manufactured in a way that has little or no negative impact on the environment, and or which utilises green technology during its production. FuiYeng and Yazdanifard (2015: 19) argued that for a product to be called 'green', it should not cause harm to the environment during its production phase and should not negatively affect natural resources or result in contamination. Sharma, Kaur and Chawla (2017: 317) further defined a green product as one that is recyclable, reusable, biodegradable, non-toxic, energy-efficient, water efficient, made from natural ingredients, be unharmful to the environment, not tested on animals, and has eco-friendly packaging.

Hong and Guo (2018: 2) highlighted the importance of considering all components that make a green product relevant to its use, as well as its potential effects on the environment during the construction phase. Sdrolia and Zarotiadis (2019: 171) proposed the following comprehensive definition following a thorough literature review: "[G]reen is a product (tangible or intangible) that minimises its environmental impact (direct and indirect) during its whole life cycle, in accordance with the present technological and scientific status".

Fraccascia *et al.* (2018:1079) further described green products as those that are generally produced from materials which create lesser negative impact on the environment and are easy to dispose of and recycle. Sdrolia and Zarotiadis (2019: 172) similarly argued that green products, which have a tolerable negative effect on the environment during production, and after usage, which are supported by environmentally friendly technologies. The environmentalism 3 Rs: Reduce, Reuse, and Recycle serves as a benchmark for the production strategies of green products (Mishra and Sharma, 2014 :1). This means that green products need to be less toxic, more durable and their qualities more valuable and perceivable (Dangelico and Vocalelli 2017 :1265). Green products can be identified by virtue of certain characteristics, they are recyclable, have minimal pollution and toxicity levels, and conserve resources (including energy and water) (Sun and Wang 2020:860). Liao Wu and Pham (2020 :7462), opined that environmentally conscious consumers prefer to purchase environmentally friendly products only. In fact, an increased number of consumers are keen to know if the product they like or want to purchase was manufactured by a company that respects the environment and embraces ethical principles and whether the raw materials were sourced in a sustainable way (Paço *et al.* 2021:375). Hence, consumers are more satisfied with manufacturing companies that promote and practice

environmental sustainability (Khandelwal *et al.* 2019:85). Gelderman *et al.* (2021 : 2062) further argued that green products are at the heart of satisfying requirements for green marketing and play a huge role in customer satisfaction, regarding the environment. Hence manufacturing firms have paid strong attention to green product innovation.

FuiYeng and Yazdanifard (2015: 20) noted that green products will have a premium price due to the processes and materials involved in manufacturing the actual green product. It has further been opined that understanding the consumer is extremely important when deciding to produce a green product (Moser 2015: 172). References, as to the 6Rs mentioned above, in marketing should be undertaken in order to plan and strategize holistically when implementing greener approaches (FuiYeng and Yazdanifard 2015: 21).

The intention to buy and consume green products are thus important indicators in investigating green consumption behavior, as it represents consumer's will to buy the product based on its value (Al-Gasawneh and Al-Adamat 2020: 1702), as within the current study. After analysing several studies, it has been concluded that the green value of a product serves as the core element that influences green purchase intention and green consumption behavior (Suki, Suki and Azman 2016 :265 ; Ahmad and Zhang 2020 : 1472 ; Liao Wu and Pham 2020 : 7461). Consequently, it becomes necessary to have basic or initial knowledge about this.

On the opposing end of the premise, is that green activities yield a positive return. Hong and Guo (2018: 6) found that the retailer did not exhibit profits when it came to sharing the cost of green marketing activities in their study. One reason for this could be the overall price of the product increasing to incorporate the budget for additional green marketing.

Epstein and Buhovac (2014: 3) recommended that green strategists learn from companies that have already successfully implemented green strategies, rather than inventing their own from scratch. Green marketing has evolved significantly since the 1900s, when the environment was discussed in terms of its relevance compared to present times, where it is seen as an essential factor to consider in businesses today. Many studies have been conducted on this phenomenon, focusing on topics such as sustainability goals, corporate social responsibility, eco-labels, eco-branding, functions, strategy, competitive advantage and values, which have been explored in green sector research (Govender and Govender 2016: 78; Masocha 2021: 175). It would be of

great value therefore for businesses to familiarise themselves with existing literature on green marketing research developments and use it to shape their company's dynamic marketplace (Kumar 2016: 150).

Green advertising helps customers make informed decisions about the products they consume and their impact on the environment. Therefore, environmental advertisements can help to enhance motivation towards buying green products. Harnessing these promotional strategies is likely to attract consumers and contribute to their green purchase decisions. Mokha (2018:170) whose research investigated the effects of eco-labelling, eco-branding, and environmental advertising on customer purchasing decisions, found that environmental marketing strategies, that use eco-labels and eco-brands have a favorable impact on consumers' propensity to make purchases.

2.2.5 The green marketing mix

Govender and Govender (2016: 76) described the green marketing mix as encompassing "product development and the implementation of pricing, promotional, and distribution strategies specifically designed to promote and preserve environmental welfare". Companies have been compelled to implement green polices when it comes to developing a product, establishing its price, creating and displaying an advertisement, and placing a product in the market (Davari and Strutt 2014: 565).

Green promotion can be effectively implemented using green advertising of products and services, as it is deeply connected with influencing consumers' behaviours toward the preservation of the natural environment (Shabbir and Wisdom 2020 : 39948). Green promotion then revolves around promotional messages that may appeal to the needs and desires of consumers who are environmentally concerned (Braik, Saleh, and Jaaron 2023 :33). Hence, when businesses communicate environmentally friendly images, through advertisement, promotions, and corporate social responsibility, they acquire consumers who are more satisfied. This is linked to the notion of green brand image.

Green brand image has been defined as a set of perceptions of a brand in a consumer's mind which is related to environmental commitments and environmental concerns. Green brand image satisfies the consumer's environmental wants and reduces problems that may arise (Khandelwal

et al. 2019 :85). A study by Zaman and Kusi-Sarpong (2024: 498), in Pakistan was undertaken to identify and explore the relationship between sustainability and consumer behaviour. Consumer behaviour refers to the method of identifying, purchasing and using goods and services with an attachment to needs and wants. Given that consumers have become increasingly aware of sustainability, they have become more proactive in making purchase decisions that focus on the environment and that are beneficial to society and also increases economic growth. According to the findings made, green culture and green brand were the most significant influential or causal factors, which exerted a substantial amount of influence over other factors in terms of achieving organizational performance and sustainability.

2.2.6 Green businesses

Green businesses are defined as businesses that have taken a sustainability approach in their modelling (Joyce and Paquin 2016: 1474). This primarily includes the triple bottom line (TBL) objectives, which encompass environmental, social, and economic objectives (Gallo, Antolin-Lopez and Montiel 2018: 5; Joyce and Paquin 2016: 1474). Others keep these three factors and adjust it in order to reach a more defined and fine-tuned approach. One of the key milestones in the past that gave birth to the concept of sustainable development, was the summit held in Rio de Janeiro. Agenda 21 was the name given to the plan of action which was to move forward in this field. New ideas, concepts, and models yielding positive economic gains were implemented in the business sector stemming from this agenda (Witek 2019: 31). In their study, Small-Warner, Abuzeinab, and Taki (2018: 85) analysed the Framework for Strategic Sustainable Development (FSSD) and concluded that it successfully balances social factors and achieves environmental protection while remaining profitable. According to Meszaros's (2018: 9) research in Hungary, promoting a circular economy requires the participation of not only producers but also legislators and consumers, as all have a role to play in achieving sustainability objectives.

Green businesses should then endeavor to attract clients by delivering eco-friendly or green products in response to the growing trend of environmental protection. However, green production can only be understood by linking client purchasing intentions with environmental protection objectives (Simao and Lisboa 2017:185) as highlighted within this review. In Taiwan and Mongolia, businesses that utilized ecological friendly innovation in the production processes and applied ecologically friendly features to their products and services, were found to be

successful in satisfying customers who have green buying intentions and consequently increasing their marketing (Moslehpour, Yin Chau, Du, Qiu, Lin, and Batbayar 2023 : 2).

Correia, Sousa, Viseu, and Larguinho(2023 :1356), supported this saying that customers who are environmentally aware often purchase products and services based on green material and green design. Hence, businesses should incorporate in their policies innovation in the quality and designing of their products and services and adopt innovative technologies, resources, and modes of production, to reduce environmental impacts of production and provide ecological friendly products and services. This type of innovation ultimately creates customer satisfaction and motivates consumers to buy these products. Jaiswal and Mojahid (2020: 39) concurred arguing that ecologically-friendly innovation, within business operations helps to fulfil consumers ecologically-friendly needs within the products they have purchased.

Choi and Johnson (2019:147) that when consumers have an awareness of environmental concerns and hardships that they may have to endure and encounter businesses that engage in eco-friendly practices to overcome such environmental concerns, then they are satisfied. Specifically Zhang *et al.* (2018:289) contended that consumers who are aware of environmental issues such as greenhouse gas emissions, toxic wastes, water pollution, global warming, waste disposal and loss of biodiversity, often seek to purchase only green products and services so as to bolster the environmental performance of the businesses.

Chien *et al.* (2022:210) further opined that when businesses adopt ecological friendly innovation in the business process, resources, and products, consumers develop a more positive attitude towards such organizations. Consumer positive attitudes firms motivates them to purchase green products and services. Thus, consumers' attitudes creates a link between eco-innovation and customer green purchase intention.

2.2.7 Green marketing

Anvar and Venter (2014: 183) explained that *green marketing* was born as a consequence of the deterioration of the environment. This is in line with Yusuf and Fatima (2015: 140) who mentioned that green marketing entails the marketing of products that are not detrimental to the earth's natural habitat. At the onset, green marketing was initially touched on in relation to achieving sustainability goals in the early 1990s, and was generally imposed upon businesses through

regulations and the market. It then progressed into gaining effective functionality in the greening of businesses in the early 2000s, and has now emerged as a priority in the informed and responsible companies of today striving to remain relevant in the marketplace (Kumar 2016: 138).

Organizations that adopt green marketing are recognized as socially responsible (Dhar *et al.* 2014 :48). This is when environmental issues are aligned with the firm's corporate culture. In this situation, institutions can take two perspectives: they can become responsible without promoting this fact, or they can use the fact that they are environmentally responsible as a marketing tool (Correia, Sousa, Viseu, and Larguinho 2023 :1356).

According to Amoiradis and Stankova (2020: 18) environmentally committed organizations may initiate projects that decrease their detrimental effect on the natural environment and push their beneficiaries to act in a more environmentally "responsible" way. A study investigation conducted by Mahmoud (2018:127) found that green marketing can make a massive revolution in our world and change societies. He recommended the revolution of green marketing strategies, to reshape the business contribution of our society. Green marketing then is focussed on all consumers, with the aim that they become increasingly green and value companies that are eco-friendly and choose to buy their products. Hailes (2007: 258), described the green consumer as one who links the act of buying or consuming products with the possibility of acting in accordance with environmental protection.

Green products should consist of the basic functions of a normal/brown conventional product, whilst not causing any harm to society and the environment (Yusuf and Fatima 2015:141). Sharma, Kaur and Chawla (2017: 371) reiterated this by stating that green marketing can be viewed as the intersecting point between businesses, individuals, society, and the natural environment. In a nutshell, green marketing then involves cutting down the usage of natural resources as well as decreasing the harmful impacts caused by the production processes in organisations. FuiYeng and Yazdanifard (2015: 17) stated that it is here that the gap between economic and ecological interests are bridged. Some firms may use green marketing to leverage their positioning in the market, by gaining the upper hand against their competitors which is discussed under green washing.

Sharma, Kaur and Chawla (2017: 372) explained that by greening a business, there may be initial additional costs, however, in the long run, this can save the business money, as well as aid the company and its products to be favoured by the market. FuiYeng and Yazdanifard (2015: 19) reiterated this by advising that an improvement in sales will be noted by businesses that take the green route. Companies should not adopt this as a strategy solely to increase sales, but to understand that each company sector would have different pros and cons to measure when taking the initiative to go green (FuiYeng and Yazdanifard 2015: 21). Romani, Gappi and Bagozzi (2016: 19) further stated that by being transparent when it comes to green practices by businesses, it is more likely for consumers to support them in seeing positive social outcomes aside from the businesses making profits. Interestingly, Čerkasov *et al.* (2017: 1867) have noted that only a mere 23.34% of consumers were found to understand the term "green marketing" in their study conducted in the Czech Republic. This calls for greater public awareness regarding the terms "green marketing" and "green products". Hosseinil *et al.* (2015) noted that the tools of green marketing, include environmental labelling, environmental brand, and environmental advertising which make the awareness of green products attributes more easy to comprehend.

Green marketing can therefore further be described as the integration of organizational efforts to promote environmental causes and develop solutions to mitigate, prevent, or eliminate environmental issues. In fact, it has been characterised as the "organization's participation in strategic, tactical and operational marketing activities and processes that have a holistic objective of creating, communicating and delivering products with minimum environmental impact" (Vilkaite-Vaitone, Skackauskiene and Díaz-Meneses 2022: 3). There are two types of green marketing, namely: internal and external. *Internal green marketing* strategies involve promoting environmental awareness with the organizational setting, employee training and environmental leadership (Papadas, Avlonitis, and Carrigan 2017: 236). However, *external green marketing* targets customers, government institutions, and business competitors at the strategic, tactical, or operational level (Chung 2020: 722).

Green marketing then relates to business practice which focuses on the marketing of goods and services that are eco-friendly and that promote the preservation of the environment in a sustainable way. Green marketing has therefore merged to influence consumer and business activity (Govender and Govender 2016: 83). Green marketing has developed into an area of

interest for marketers. This study is important as it addresses the dearth of research on the attitudes, perceptions, and behaviour of South African consumers related to green marketing. The study will be beneficial to marketers, as it will identify the factors influencing consumer purchase decisions related to green products.

The intent behind green marketing is to sell products that are harmless to the environment, whilst influencing consumers to support and protect the environment (Stern and Ander 2008: 75). This implies that businesses need to change the way in which they operate and to provide products that are beneficial to both consumers and the environment. Green products share some common features as described already. However in essence they are :

- Goods that are safe or healthy;
- Biodegradable or made of recyclable resources;
- Durable or long-lasting products;
- Those that degrade naturally
- Products that are sustainable and recyclable

(Reddy, Chandu, Srilakshmi, Thagaram, Sahyaja, and Osei 2023:2).

Zafar, Aziz, Hainf (2020:1), argued that green marketing is a marketing practice that raises environmental issues. Dangelico and Vocalelli (2017 : 1265), described green marketing as a set of activities, that aim to ensure that product exchange have the smallest negative impact on the environment. Green marketing then intends to bring companies' activities into a closer and positive relationship with the environment. In this context, green marketing refers to the inclusion of a broad range of activities and trends in marketing activities, such as the modification of products, production processes, packaging, and labelling, and advertising strategies that can meet human needs, without having extensive environmental impact (Dangelico and Vocalelli (2017:1265).

Hence green marketing endeavours to develop different strategies, to target consumers who are concerned for the environment (Iqbal, Kazmi, Anwar, Ramish and Salam 2023: 978) . Despite this green marketing has become one of the key developments in modern business, which has been more applied in developed countries than developing countries (Riva *et al.* 2022: 2807). Businesses who are engaging in green marketing may therefore strategize using multiple ways, such as advertising, corporate public relations, visual identifications, green labels and packaging, and sustainability reports etc. (Romani, Gappi, Bagozzi 2016:258). This may be implemented

using a wide number of social network platforms, websites, newspapers, brochures, television commercials magazines (Chan 2004:429). These methods create messages that will compel consumers that their decision to be greener, benefits both the environment and their own well-being (Moser 2015:168).

There have been many studies on green marketing which have investigated different aspects. A survey with 384 consumers who purchased food from retail chains in Babol city, found that consumers' awareness of green marketing, corporate social responsibility, consumers' mental image of the product, and the company's reputation had a positive and significant relationship on their purchase intentions (Gholitbar and Jelodar 2023 : 18). Another study by Al-dmour, Hadad, and Al-dmour, (2023:15) investigated the effects of green marketing on the performance of companies in Jordan. The data was collected using self-administered questionnaires that were distributed to 183 respondents. The study found that the extent of green marketing adoption by organizations in Jordan, was relatively moderate and that the corporate performance of these organizations, were positively linked to the extent of adoption of green marketing dimensions, particularly environmental and social responsibility aspects.

Lopes, Gomes, and Trancoso (2024:136092), analyzed the influence of consumers' green orientation on their environmental concerns and green purchase decisions with a sample of 927 consumers of green products in Portugal. The study also investigated the mediating role of consumers' environmental concerns in the relationship between pro-sustainable orientation and green purchase decisions. Using quantitative methodology, through an online survey the study found that the perceived benefits and perceived quality of products played a positive and significant role in influencing green behaviour, particularly where consumers had huger environmental concerns. Moreover, consumers' awareness of the prices of green products influenced this.

Other studies however have reflected that despite greater environmental awareness and consumers' willingness to adopt more sustainable lifestyles, they still remained reluctant to purchase green products (Boivin *et al.* 2016:29). This is indicative of the disjuncture between consumer attitudes toward the environment and their actual use of green behaviour. Wei, Ang and Jancenelle (2018:234) however argued that consumer concern and behavior do not cohere, arguing that environmental concern does not always translate into green purchasing behaviours.

Furthermore, Chen *et al.* (2012:163168) emphasised that whilst consumers are willing to support green products, it does not necessarily translate into actual purchases. This makes it necessary to investigate the factors that underpin decisions to buy green by consumers so that companies can understand how their products and services link towards customers desires and needs.

Researchers contend that despite the growth in research studies, in recent years, regarding green purchasing decisions, there remains opportunity for more empirical work (Sharma 2015:259; Hazaea *et al.* 2022:5008). Whilst many studies focus on business strategies and the transformation of sustainability-oriented business models, greater research must be directed towards understanding the factors influencing consumers' green purchasing behavior (Sharma *et al.* 2023 : 2078).

The research discussed here emphasised the role of environmental concerns in influencing green consumers' decisions to purchase green products. It stressed the importance of green consumers' environmental consciousness when selecting eco-options, which coheres with the empirical research available (Sarkar, Ullah and Sarkar 2022 :335).

Zelezny *et al.* (2000: 450) conducted an international survey that covered 14 countries, related to gender differences in pro-environmental attitudes and behaviours. They found a significant difference between genders and concluded that women present stronger pro- environmental attitudes and behaviours than men, and higher levels of socialisation and social responsibility.

Particularly with regards to green purchase behaviour, several researchers have explored the relationship between individuals' attitudes, intentions, and actual green purchase behaviour (Berger 2019: 235; Biswas and Roy 2015: 467; Borghesi, stefanini and Vignali 2022: 187). Urban and Kaiser (2022: 875419), reported that the environmental attitudes of people with low, moderate, and high propensities for green consumption differed systematically across the 28 European countries, reviewed in their research study. With these findings, they concluded that people's environmental attitudes (i.e., their commitment to protecting the environment) can be linked with their protective engagement. This reflects a generalisable positive relationship between environmental attitude and engagement in environmentally protective behaviour, across a large group of countries.

2.2.8 Green marketing tools

FuiYeng and Yazdanifard (2015: 18) have separated marketing tools into three aspects, namely: eco-labels, eco-brands, and green advertisements. These can be used to identify, position, as well as influence consumers to shift from conventional to green products. Many countries have implemented their own eco-labelling schemes which aid consumers in their purchase decisions. There is also what is known as the International Standard for Organisation (ISO) which can be quite helpful when purchasing products. The challenge here is that many consumers are not familiar with the different codes under this heading and hence do not know what the label means. In a study conducted by Do Paço, Shiel and Alves (2018: 20), it was found that consumers who are more concerned with the social well-being of others and themselves will be more accepting of green communications.

Eco-branding operates under the same concept as branding in general, with the point of differentiation being that it is environmentally sustainable. This means that consumers will be able to identify these brands in contrast to its competitors by looking at the label, logo, product attributes, etc. Consumers should be able to recognise and interpret the meaning of an eco-brand. Brand equity is said to be strong when there is a higher emotional relation between the brand and the consumer (FuiYeng and Yazdanifard 2015: 18).

Green advertising has been used widely as a means of introducing consumers to green companies and green products. Popular ways of green advertising include newspapers and media. By being constantly exposed to this advertising, consumer behaviours are chiselled towards more green product purchases (FuiYeng and Yazdanifard 2015: 19). In a separate study conducted by Do Paço, Shiel and Alves (2018: 1), it was found that the link between green advertisements and green purchases was weak, and that this in turn could therefore be seen as an opportunity for improvement in bridging the attitude behaviour gap. Witek (2019:1126) further mentions that the way in which the green message is presented to the target audience should be done in a manner that is easy to fathom, thus enhancing the effectiveness of the desire to impress upon green values. This will then lead to green purchases by consumers.

Huang *et al.* (2022: 6) indicated that purchasing behaviour is influenced by eco-friendly products that are associated with environmental concerns and environmental knowledge. Sharma *et al.* (2022: 1028) analysed green buying behaviour in relation to eco-innovation and found that it was

dependent on the process, products, and business methods used to minimize the impact on the environment, by reducing the ecological footprints. Eco-innovation then is responsible for preventing waste and reuse of waste during the beginning of the production process.

2.2.9 Green advertising

Green advertising has come a long way over the years and has proved to be an effective tool in imbuing information on products, going green, as well as sustainability into the minds of consumers (Wang and Li 2022 : 13248). Green marketing and advertising should be given greater importance in emerging nations due to the increased consumption levels and the potential for environmental destruction (Mahmoud 2018: 135). Accepting and embracing this sustainable lifestyle accounts for the ever-expanding green market. However, getting the green message across has not been without its challenges. As will be discussed at a later stage, false claims, ambiguity, and fabrication have led to the scepticism of many consumers (Sreen, Purbey and Sadarangani 2018: 186). These consumers now constitute a new potential market, whereby marketers can communicate their green messages via advertising in order to lure consumers into a more sustainable green lifestyle (Do Paço, Shiel and Alves 2018: 10). In a study conducted amongst the youth in India, it was acknowledged that the more communication there is around the positive attributes of green products and processes, the more motivated the consumer may be to act upon purchasing it. Essentially, the goal is for consumers to take steps towards a greener future by showing their concern through sustainable consumption and behaviours (Uddin and Khan 2018: 6). After reviewing 80 studies that were published between 2011 and 2017, it was concluded that it was salient to separate products and green products into categories, so as to differentiate the antecedents leading up to the purchase. This will ensure that the strategy used to promote sustainable consumption is concrete (Liobikiene and Bernatoniene 2017: 117).

A study by Iqbal, Kazmi, Anwar, Ramish, and Salam (2023 : 978) shed further light on green advertising. They undertook an investigation to address the issue of how purchase intentions related to eco -friendly products, would develop through the utilisation of green marketing tactics and how the overall consumption behavior of consumer translated to green consumption. In order to explore the phenomena four independent variables green products, green value, perceived consumer effectiveness, environmental sustainability was considered and green consumption

behavior was linked to the dependent variable. Green purchase intention was identified as the mediating variable whereas green concern was considered as the moderating variable. The study was guided by a quantitative explanatory research design with the use of a self-administered questionnaire, designed to collect data from 383 customers. They found that green product quality and green value contributed significantly to green purchase intention and green consumption behavior. The findings further suggested that green product quality, green value, and environmental concern were precursors of green consumption behavior. The researchers concluded that it was important to educate Pakistani citizens about the salience of environmental education and to put forward initiatives to boost green behavior and promote green marketing.

2.2.10 Green product positioning

As recent literature points towards green products being favoured by society (Witek 2019: 1119), unlimited opportunities are created for firms to produce or convert their products to green/eco-friendly products. This will not only assist by meeting the demand of green consumers, but it will also allow for consumers that may not be as environmentally orientated to still however make the greener purchase (FuiYeng and Yazdanifard 2015: 17). It was mentioned in Moser's (2015: 172) conclusion that businesses can gain the favourability of customers whilst enhancing business productivity by taking the green route.

Kwong and Balaji (2016: 22) advised that it would be in the best interest for the company to reference their green claims. This could be done through various ways such as labelling or posting this information on the company's online website. One of the barriers to purchasing green products was found to be labelling. It was noted that this hindrance to green purchases could be overcome by strengthening the knowledge of customers (Witek 2019:1119). It was further mentioned that businesses that take the green route are profitable in the long run despite possibly inflated start-up costs. Some of the measures that can be taken in gaining a greener position, include utilising and creating; biodegradable products, recyclable products, as well as products that can be used more than once (Asha and Rathiha 2017: 7).

2.2.11 Green product and marketing benefits

Green benefits constitute closing on a healthy bottom line in business whilst satisfying the needs of a green customer and preserving the environment (Čerkasov *et al*. 2017: 1870), thus tapping

into a blooming market segment, and creating an emotional connection with customers which heighten a company's brand value. Certain countries may offer tax benefits for decreasing negative effects and increasing environmental sustainability. Subsidies by government may also be offered to green businesses as well as green product innovators (FuiYeng and Yazdanifard 2015: 21).

The packaging of a product allows brands to gain favourability and stand out through their catchy designs. In a study conducted by Chen *et al*. (2017: 10) it was found that over packaging creates a negative connotation towards the brand and its image, as green consumers view the brand as wasteful and hence avoid its products. On the opposing end of this, the utilisation of green materials in the packaging of a product creates favourability towards the brand by green consumers. A brand that adheres to these orders is more likely to be successful when dealing with a green consumer. Furthermore, they may still sell to conventional customers whilst keeping their packaging costs down, as well as aid in a sustainable future. Straughan and Roberts (1999: 575) reiterated the above by stating that a green consumer looks for more ecologically friendly products, and it is simply the duty of the business to provide what the green customer is looking for if the business wants to remain relevant. Another study indicated that eco-design, pertaining to the material make-up of products by undertaking green production practices, has proven to be gaining prominence in the market. This, in turn, affects the colours, fit, weight and design of products (Wang and Shen 2017: 9).

Eco-marketing refers to the rising demand for "eco-friendly" items, which can be linked to the growing awareness of the need of protecting the environment amongst consumers and business owners. Hence, companies have improved their manufacturing processes to provide more environmentally friendly products as a way to respond to shifting consumer preferences (Reddy, Chandu, Srilakshmi, Thagaram, Sahyaja, and Osei 2023:2). Consequently, several eco-friendly strategies have emerged namely changes in manufacturing processes; packaging variations and advertisements which collectively are green marketing strategies.

2.2.12 Green washing

Several studies indicate that many firms adopt the "going green" concept as a means of gaining a competitive advantage in the marketplace (Paul, Modi and Patel 2016: 124; Sharma, Kaur and Chawla 2017: 4; Asha and Rathiha 2017: 2). They do this so as to remain relevant when filling the

green gaps desired by consumers (Halverson 2018: 12). This is referred to as green washing. Green washing is the practice of a firm releasing incomplete or incorrect information in order to present an environmentally responsible public image. In today's world, brands need to do more than just offer a simple or average product. In order to establish a point of differentiation, an environmental element can be added to a marketing strategy in order to gain emotional favourability to the brand (Aggarwal and Kadyan 2014: 61).

The "green-washing concept" was adopted by many businesses stemming from the lack of clarity around the term "green" (Sdrolia and Zarotiadis 2019: 150). Over time, various companies have been exposed in that they have used the term green to gain a competitive advantage in the marketplace. While this may not be entirely wrong, due to the ambiguity of the term "green", consumers have become sceptical when it comes to purchasing green products. This scepticism hinders growth in the green economy (Jakubczak and Gotowska 2020: 178).

Halverson (2018: 14) has elaborated on the following flaws to understand what constitutes greenwashing:

- *Hidden trade-offs*: where only a particular quality is green
- *No Proof*: labelled as green but no certification
- *Vagueness*: does not specify what the exact benefit is but rather takes advantage due to a lack of properly defining the green quality
- *Irrelevance:* does not offer a beneficial differentiating quality in its marketing as compared to others which hinders sales of beneficial products
- *Lesser of two evils*: a product which contributes negatively to health or the environment is marketed as green
- *Fibbing*: a product that is not green which is marketed as green
- *Worshiping false labels*: the utilisation of false labels or certifications in order to project the green image of a product.

Hence, in order to ensure proper green marketing and sales, these must be avoided.

2.2.13 Green scepticism

The term *green scepticism* emerged due to the abundance of claims made by organisations when marketing their products under green contexts and categories. Scepticism deters consumers from intending to purchase green products (Kwong and Balaji 2016: 2; Asha and Rathiha 2017: 2). It

has been mentioned by FuiYeng and Yazdanifard (2015: 18) that by placing too much emphasis on the green concept of a business, consumers become suspicious that green washing is taking place. Halverson (2018: 58) concluded that the green-washing phenomenon is more acknowledgeable by younger consumers and environmentalists. Christelis (2013: 7) explained that many green claims seem to be self-prophesised in varying context, in the South African market, and this is the reason that consumers have become sceptical. Contrary to the above, other businesses may however, seek to genuinely add value to society and the environment, and thus factor the green concept into their business as a value proposition (Agyeman 2014: 189).

Green scepticism, however, is a phenomenon that has jeopardised the willingness to buy both energy-efficient and pro-environmental products (Leonidou and Skarmeas 2017: 401). Green scepticism may be influenced by greenwashing, which is linked to competition, whereby companies endeavour to appear to be more environmentally friendly than they are (Chen and Chang 2013: 490). As a result, consumers' trust in the sincerity of manufacturers' green approach to the products on offer often decreases. Several high-profile corporate scandals, such as the falsification of emissions from Volkswagen engines, have contributed to this scenario (Siano *et al.* 2017: 30).

The following section unpacks the concept of “sustainability”, differentiating between sustainability and the term “green”.

Factors influencing green purchase intention, pro-environmental consumer behavior, eco-conscious consumer behavior and green loyalty have been discussed in the green consumption behavior literature. The role of environmental knowledge, environmental concern, eco-labels, green perceived knowledge and have been discussed by several authors (Santi Palupi Arianti 2020; Song *et al.* 2019; Taufique *et al.* 2017).

2.3 Environmental Sustainability

Sharma, Aswal and Paul (2023:2078), argued that the terms “green” and “sustainable” products are used interchangeably in the literature and is linked to manufacturing techniques that can create stability for future generations. Epstein and Buhovac (2014: 2) described “sustainability” as the ability to reach financial goals by satisfying the needs of a consumer without causing harm

to the natural environment so that the current, as well as future generations to come, do not run out of resources. This is in line with Kostadinova (2016: 225), who differentiated the term "sustainability" from the term "green", in that *sustainability* deals with consumption in a manner that is in harmony with the environment, compared to the term *green*, which refers to precise items and practices that mitigate harm upon the environment. Results from a study done in Chattanooga also coincide with this meaning, whereby sustainability alludes to the various efforts put into maintaining the environment rather than a single practice (Kitheka *et al.* 2016: 195). On the opposing end, Amoiradis and Stankova (2020: 17) found that there appears to be a contradiction between achieving financial goals by meeting the needs of the population whilst not over-extracting natural resources from the environment, which will impede the fruitfulness of future generations. This could be attributed to the rapidly growing population. It was, however, also suggested that proposing sustainability as an objective, be it an end goal or practices adopted by businesses, in order to protect and preserve the ecological, social, and economic environment could suffuse the business with a more lucrative structure. This means that companies can minimise the use and wastage of natural resources, such as water, land, and energy, while striving to maximise profits and sustainably growing their business (Amoiradis and Stankova 2020: 22).

Essentially, one of the major global issues facing humankind, is the imbalance between the overconsumption by the minority and the under-consumption by the majority. Efforts should be made to encourage more and more people to change their habits, so that citizens will have enough resources for a sustainable future (Kostadinova 2016: 231; Amoiradis and Stankova 2020: 22). However, the literature shows that more efforts have been put into targeting green customers rather than marketing sustainability and sustainable consumption (Kostadinova 2016: 231).

A huge success story in terms of creating a sustainable environment is that of Chattanooga. This is a town in the USA that hit rock bottom but was then transformed into an exemplary sustainable green community. The key to this town's success was the involvement of all its citizens, including the government, who together created a holistic approach to tackling their goals for a total city turnaround. As a result, not only was their environment and quality of life improved, but their economy continues to thrive (Kitheka *et al.* 2016: 196).

This brings us to concept under the term sustainability, which was found in a study investigating the similarities and differences between resilience and sustainability. Sustainability was described as constituting environmental, social, and economic facets which are considered the 'triple bottom

line' in business (Marchese *et al.* 2018: 1275). In their literature review, Marchese *et al.* (2018: 1279) found that sustainability is generally an end goal and is enforced by objectives to sustain the environment, people, and the monetary side of the organisation. By adhering to resilient and sustainable practices, businesses will have a more solid grounding amidst turbulent trading times as well as a higher chance of long-term survival, which will, in turn, be able to meet the needs of future generations.

Likhitkar and Verma (2017:152) asserted that environmentally friendly or green activities often lead to increased efficiency and reduced costs, which lend itself to the organization's ability to remain sustainable. Sustainability involves improving the quality of people's lives, together with the help of social and ecological improvements. The idea of sustainability has evolved recently and has changed the behavior of the people by growing concerns about natural resources (Kuchinka *et al.* 2018:998). Sustainability is underpinned by three key dimensions, namely, economic, social and environmental. The economic dimension of sustainability is in place to protect businesses and their income. It helps to grow the business and generate profits as well. Although the environmental dimension of sustainability protects the environment and protects natural resources, it has the potential to reduce global issues (Van Doorn and Verhoef 2015:436). The social dimension of sustainability refers to the desire of product usage and its disposal by consumers, to eliminate harmful effects and provide maximum benefits to society (Frank and Brock 2019:598). It is now mandatory for companies to obtain input from a wide range of their internal and external stakeholders by taking into account, the economic, social and environmental effects (Mariappanadar 2019:104).

The following section looks at the catastrophic consequences of plastic on the environment.

2.4 Plastic as a Hazardous Material

Plastics are one of the most hazardous and harmful substances that can affect the environment, causing catastrophic degradation to the earth. Due to the strength, durability, and cost, it is one of the most commonly used packaging materials globally (Babayemi *et al.* 2019: 2). There are various types of plastics, some of which are recyclable, such as PET (polyethylene terephthalate) bottles, while others, like polystyrene, are not. Unfortunately, after use, significant amounts end up in landfills, where they are usually burnt. This is harmful not only to the earth's atmosphere but

also to the air that humans breathe. The soil and land are inhabited by humans and animals, and constitute the ecosystems from which our food supply resources come (Gallo *et al.* 2018: 1). Due to their light weight, plastics can easily be carried by wind and eventually end up in rivers and oceans, where they break down and have a negative impact on both land and marine ecosystems.

Some of these plastics are ingested by marine species, which then become contaminated. Even though this contamination is not visible to the naked eye, they are still processed and consumed by humans, leading to various health issues (Gallo *et al.* 2018: 6). According to Babayemi *et al*. (2019: 10), approximately 630 000 tons of plastics are improperly disposed of each year, leaving room for improvement in terms of recycling and reuse. The case of Rwanda provides a successful example, as they have managed to reduce plastic consumption with a few simple steps, such as banning plastic bags, prohibiting the use of single-use plastic items, and using locally produced alternatives to plastic (Babayemi *et al*. 2019: 17).

The topic of food waste and the impact of the environment is discussed next.

2.5 Food Waste

Around a third of food produced for human intake is wasted. This has an enormous impact on the social, environmental, and economic sustainability (Garcia-Garcia *et al.* 2016: 2209). Although each case must be looked at in a more isolated context due to the varying composition of waste, there are several alternatives to discarding waste products that can be considered, including reusing, composting, using as animal feed, and extracting compounds that can be used in other applications, such as manufacturing (Manfredi and Cristobal 2016: 957; Garcia-Garcia *et al.* 2016: 2215). Additionally, biodegradable packaging can be a viable alternative to managing waste more effectively. Products with specific logos indicating that they are biodegradable are suitable for anaerobic digestion (Garcia-Garcia *et al.* 2016: 2213).

Companies can make use of the various tools and guidelines that can help them manage waste in a more sustainable manner, which can have a positive impact on the environment, people, and economy (Manfredi and Cristobal 2016: 960). Most waste mitigation efforts can be implemented during the manufacturing and production stage, rather than at the store or consumer levels (Garcia-Garcia *et al.* 2016: 2224). Whilst these tools and methods to mitigate waste are considered somewhat appropriate in its function, it is mentioned that waste prevention is still the most effective concept in avoiding environmental harm (Manfredi and Cristobal 2016: 958).

2.6 Waste Management

According to Tsui and Wong (2019: 151), Municipal Solid Waste (MSW) is proven to be one of the biggest hurdles faced by governments today. Sakai *et al.* (2017: 1925) undertook a study based on presentations from the Kyoto International workshop on the 3R's (reduce, recycle, and reuse), where they found that economic and environmental policies should be separated in order to form a stronger socially sustainable environment. MSW management has come a long way since the 1700s, starting with basic clean-up of the environment to today's focus on implementing a circular system that safeguards the environment and conserves resources (Tsui and Wong 2019: 152).

Proper implementation of policies and laws related to the 3R's, waste prevention, and effective resource management can significantly help preserve the environment by slowing down the rate of deterioration. This is in line with Tsui and Wong's (2019: 152) argument that disposing of waste in landfills is not ideal, especially when there are new technologies, systems, and structures that can be implemented to ensure a more sustainable environment. Various tools have been developed to help make informed decisions, such as the holistic analysis of a products' entire life cycle, which is also a key factor in effective waste management. One of the most prominent issues addressed is food waste, which results in significant losses and has a major impact on the entire supply chain (Sakai *et al.* 2017: 1309).

With the rise of globalisation, Third World countries will eventually reach the level of MSW as First World countries, based on the rapid consumption patterns emerging. Municipalities and governments should ideally take a more proactive approach in planning to manage the MSW more effectively, as this intensifies the challenge of achieving sustainability. Options to convert portions of MSW into either energy or fuel are available. However, cost implications and detrimental by-products need to be carefully considered (Tsui and Wong 2019: 161).

2.7 Organic Residue

According to Bugge *et al*. (2019: 51), waste can either be considered valuable or useless to the consumer or business, depending on whether the by-products, offcuts, and leftovers can serve another purpose after their initial use. This sort of waste is termed "organic residue" and is biodegradable. It can be used again in agriculture, amongst its other uses, as key boosters by being nutritiously integrated into the soil. Most of this organic waste usually ends up in landfills,

along with the general non-reusable, recyclable, or compostable waste, which is unbeneficial to the environment, economy, and society alike.

Since 2005, Sweden has prohibited the disposal of organic waste in landfills by law, a practice that is common in many developed countries (Odlare 2005: 7). In the United Kingdom (UK), a study found that food waste can be converted into fuel and energy, instead of being disposed of as organic residue in landfills. A transition into this circular approach would allow for social, economic, and environmental upliftment within communities (Ng, Yang, and Yakovleva 2019: 248). The term “valorisation” is used when value is added to a waste product or material after serving its initial use. This can be done by altering its physical properties, and or possibly utilising it as an input in a different market (Bugge *et al*. 2019: 53).

2.8 Theories

2.8.1 Attitude-behaviour gap

The “attitude-behaviour gap” can be defined as the digression between what a consumer’s attitude is towards something, versus what they actually do when it comes down to purchasing a product (ElHaffar, Durif and Dube 2020: 1; Park and Lin 2020:624). This is referred to by Terlau and Hirch (2015:159) as a process where consumers get to opt between the average and the more responsible choice. Several studies have examined the gap in purchasing behaviour. One study at the green Wageningen University and Research Centre found that the Theory of Planned Behaviour can explain proenvironmental behaviour in the workplace (Blok *et al.* 2015: 62).

In their study, Straughan and Roberts (1999: 574) developed a tool that can be used to segment consumers based on their psychographic profiles. This tool, which entails factors such as *perceived consumer effectiveness, altruism*, and *liberalism,* is effective for predicting green consumer behaviour. The most prominent factor they found in predicting green consumer behaviour was *‘perceived consumer effectiveness’,* which essentially means that customers will act in an accordingly green manner, should they feel that their actions will make a difference. This is of great value to the current study as it forms a bridge between the attitude-behaviour gaps for certain consumers. ‘*Environmental concern’* was one of the factors that negatively correlated with green consumer behaviour despite consumers having a positive attitude, thereby alluding to one of the clear gaps in the attitude-behaviour theory (Straughan and Roberts 1999: 562; Moser 2015:

171). On the opposing end, '*consumer knowledge'* was found to play a role in green consumer purchase behaviours by being an antecedent to their attitudes (Uddin and Khan 2018: 6).

Antonetti and Maklan (2015: 51) conducted a study that explored the motives behind green purchases. They discovered that consumers may be motivated and behave differently, based on how green products are perceived at a specific given time. The study built on the extant literature findings that green consumer behaviour is based purely on ethical consumption efforts. There are four fundamental quadrants: *altruistic* and *self-interested,* each perceived within either a *private* or *public* context. These motivating factors have appeared to be situational, depending on the product being sought out. Constraints may play a role in certain contexts and may redefine the overall targeted purchase. For example, should one want to purchase a new car, they may not be able to afford the greener option, and hence, may have to make a compromising decision. By being able to categorise the influences, motives, target behaviours, and outcomes of consumer based on the dimensions above, marketers can tailor their efforts to reach the desired target market more effectively (Antonetti and Maklan 2015: 67).

2.8.2 Green product knowledge

It is vital for consumers to know the difference between a normal and a green product when it comes to making a more informed purchase. In a study done amongst students at the Aligarh Muslim University by Yusuf and Fatima (2015: 142), it was found that only 60% of the sample had knowledge of the difference between a green and conventional product. Some of the important factors that fall under green product knowledge are price, availability, and where to purchase these green products (Anvar and Venter 2014: 188). This is consistent with findings from Witek (2019: 1126) who reiterated that many did not pay much attention to the environment, more especially in the prior generations. To ensure the success of green businesses, it is crucial for green marketers to find innovative ways to make information about eco-friendly products easily accessible to consumers and at the forefront of their minds, thus influencing the greener purchasing decisions. While some consumers may already be knowledgeable about green products, creating a demand for new and innovative ideas and designs, it is essential for marketers to continue to promote and raise awareness of the benefits of these products to reach a wider audience (Hong and Guo 2018: 2; Hidalgo-Baz, Martos-Partel, and Gonzalez-Benito 2017: 6).

On the contrary, it would be of tremendous value to explore ways to convert the green product knowledge of conventional consumers into actual green purchases, as studies indicate that many

conventional consumers possess a significant amount of knowledge about green products but fail to make green purchases (Groening, Sarkis and Zhu 2017: 10; Zepeda and Deal 2009: 701).

Knowledge can be broken down into two basic facets, namely: subjective and objective. *Subjective* refers to the internal knowledge one has, which is based on past experiences and personal history, while *objective* is based on externally learned proven facts. While both of the above are important in influencing green purchase behaviour, they do not guarantee that consumers will make green purchases. Zepeda and Deal (2009: 701) stated that green activists are more likely to look for information and learn about how and why to remain green, which in turn increases their rate of green purchases.

A green consumer may experience cognitive dissonance when there is a shortage of information available when making a purchase. On the other hand, too much information can be overwhelming and lead to doubt in the consumer's mind. This uncertainty is often caused by ambiguous green labels and lack of transparency in companies, which are significant barriers to making greener purchase decisions. However, these barriers can be alleviated, and green purchases can be increased by providing clearer information and more transparency (Terlau and Hirch 2015: 164). Cognitive dissonance can occur when a customer is well-informed and knowledgeable about green products but chooses to purchase conventional products instead. This dissonance experienced causes discomfort for the customer, who is then led to act (or purchase) in a manner that is in line with their attitudes and beliefs (Hidalgo-Baz, Martos-Partel, and Gonzalez-Benito 2017: 2).

2.8.3 Care

One significant factor in examining the attitude-behaviour gap is the role of care. Care for the environment, especially when purchasing products in order to sustain the environment, has been explored. In their study, Shaw, McMaster and Newholm (2015: 12) found a lack of care for the environment. Possible reasons revolved around commitment, identity, ethics, and care, which inevitably shape an individual's purchasing behaviour. Shaw, McMaster and Newholm (2015: 13) break down the roles of care into the following:

Firstly, "*care of*" refers to the motivation/influence/drive/responsibility or duty to preserve the environment.

Secondly, *"care for"* is based on the feeling of interconnectedness (recognising that we part of the larger whole in society). This drives an individual to make positive/conservative choices, even though they may not be directly affected by the outcomes.
Thirdly, "*care about*" is where commitment (despite challenges) to the greater cause comes in.

Many ethical consumers may possess the caring characteristics mentioned above; however, conflict under these divisions of care is not uncommon, and may thus affect ethical consumption outcomes (Shaw, McMaster and Newholm 2015: 14). In certain instances, communities and governments have been motivated to take action when their environments are deemed unhealthy, and the health of their residents is jeopardised. Examples of such communities include Wuxi in China, Hamm and Wolfsburg in Germany, Givatayim in Israel, Gangneung in Korea, and Nizhnii Tagil in Russia (Kitheka *et al.* 2016: 199). Governments can play a significant role in encouraging their citizens to consider their communities when making purchasing decisions. By thinking about the potential impact of their purchases on the community rather than just themselves, individuals may make different choices that ultimately benefit their environment and their fellow residents (Sreen, Purbey and Sadarangani 2018: 185).

Merely considering demographics alone is not sufficient to understand the mind-set of a consumer. Marketers must also focus on the psychographics of a consumer to successfully create change as it accounts for their beliefs and values (Godin 2018: 29). Ecological deontology, also known as eco-deontology, takes into account an individual's knowledge and understanding of the environment and connects it to their ethical values.
The aim of eco-deontology is to mitigate harm to the environment that is caused by the human race (Matviichuk 2019: 219).

2.8.4 Green product awareness

Asha and Rathiha (2017: 1) argued that as the deteriorating environment becomes more evident, green environmental awareness increases. When it comes to green product awareness, it is imperative that consumers are made aware of the issues faced globally due to the harmful effects from the production, utilisation, and disposal of products. Without this exposure, there is less chance for consumers to behave in an environmentally sustainable manner (Anvar and Venter 2014: 188). FuiYeng and Yazdanifard (2015: 20) explained that information on green products

can be transferred to consumers via “direct marketing, sales promotions, advertising, and public relations”, which will improve green awareness. Consumers that become more orientated with organic products have a diminished attitude-behaviour gap, as they have an increased awareness about the benefits of these products (Hidalgo-Baz, Martos-Partel, and Gonzalez-Benito 2017: 6).

Consumers are increasingly recognising that their choices and product behaviours regarding products have significant implications for their environment as well as for future generations. These choices are to the detriment of the environment, which therefore motivates consumers to command green products and sustainable practices (Kostadinova 2016: 224). For example, climate change-induced weather patterns such as droughts and erratic changes in temperature; pollution leading to the death of fish and other wildlife, as well as human sicknesses resulting from exposure to harmful substances, are just a few consequences of exposure to harmful substances.

One of the respondents in a study conducted by Shaw, McMaster and Newholm (2015: 13) highlighted the importance of educating her children on ethical consumption under one of her responsibilities. It is felt that if more individuals in society can adopt this as a duty, there would be more hope for a sustainable future.

The following section focuses on factors that need to be considered in green purchasing decisions.

2.9 Factors Considered in Green Purchasing

Some of the factors considered in green purchasing include price; gender; green values; green beliefs; perceived behavioural control (PBC); green product perceptions; and green purchase behaviours.

2.9.1 Price

When it comes to consumers making a purchase, there is little to no avoiding the cost implications involved. Price is therefore discussed in this article as one of the factors that could influence purchasing behaviour. Hidalgo-Baz, Martos-Partel, and Gonzalez-Benito (2017: 1) found that the more orientated and knowledgeable a consumer is with regards to organic food, the less price becomes relevant in purchases. A similar study conducted by Agyeman (2014: 188) in India within the Kancheepuram District found that as people become more aligned with the green concept, the price factor becomes less relevant in purchase decisions. In yet another study conducted by Anvar and Venter (2014: 189), it was confirmed that millennial consumers are more environmentally

conscious and are more willing to choose greener products despite the higher cost. This finding is congruent with research by Sharma, Kaur and Chawla (2017: 373), which suggests that consumers who are more environmentally concerned are less likely to consider price when making purchasing decisions. In fact, another study found that the price factor is largely irrelevant when it comes to making greener purchases, regardless of whether the individual belongs to a higher or lower income bracket. Attitude, rather than price, is the primary driver of sustainable purchasing behaviour (Zepeda and Deal 2009: 700).

On the opposite end of this spectrum, Čerkasov *et al*. (2017: 1870) found that price, product quality, and a consumer's prior experience with a product plays a more significant role in trumping any cost implications when making a purchasing decision. From a business perspective, it is important to note that while many companies may plan to be green, there are often cost barriers associated with these initiatives. For example, switching from plastic bags to brown paper bags may be more environmentally friendly, but the cost of producing these bags could be higher, which could affect a company's profitability. Furthermore, due to the quantity required, the additional costs could mean the difference between profit and loss. Moreover, for its purposes, customers may prefer the plastic bag due to its durability (Epstein and Buhovac 2014: 7). Moser (2015: 171), however, concluded that price was a major influencing factor in the purchasing of green products, and hence suggested that future research be based on understanding whether the target market is willing to pay a premium price for the greener product, or whether discounted rates have to be applied to be opted over the conventional competitors. At the end, customer preferences must be fulfilled in terms of customer service.

Empirical research has found that consumers have a preference for eco-friendly products and demonstrate a more favourable attitude towards companies that follow green practices (Bhatia and Jain 2013: 50). A Nielsen global study found that 55% of global online consumers across 60 countries surveyed reported a willingness to pay more for products and services from companies that are dedicated to positive social and environmental impact (Rayapura 2014: 5). Consequently, there has been a huge increase in the demand for green products and services, as well as for green enterprises (Marccaci 2013: 50). Therefore, consumer demand for environmentally safe products is considered to be the primary motivation behind green marketing practices. This should inform green marketing practices in South Africa.

Campher (2013: 5) wrote that market research has found that consumers want greener products. Ottoman and Mallen (2014: 1) asserted that individuals choose green products because they perceive them to be healthy and organic, of a higher quality, and to help preserve the environment.

In a survey in Poland with 1 000 individuals, Kreczmańska-Gigol and Gigol (2022: 2077) found that women, people with higher education, and people in better financial situations accept higher prices for products that don't cause environmental damage.

2.9.2 Gender

Previous studies have found that female consumers tend to be more environmentally conscious. However, this may be attributed to the fact that females generally do most of the household shopping, and hence have completed more research surveys (Moser 2015: 173). This is in line with a study conducted in India by Sreen, Purbey and Sadarangani (2018: 185) who found that women may be more easily influenced than men due to societal and cultural norms that prioritise caring and nurturing behaviours in women.

Hong and Guo (2018: 8) argued in their study on green supply chain management that environmentally sustainable goals can only be achieved if environmentally conscious consumers put pressure on manufacturers and retailers by demanding green products to be introduced into the market. Plastic bottles and plastic shopping bags were identified as some of the most protested items that cause harm to the environment. Efforts have been made to reduce their damage by using recycled material in their production and making them recyclable (FuiYeng and Yazdanifard 2015: 20). In more recent times, some of the biggest shopping retailers in South Africa have introduced biodegradable packets as an alternative.

2.9.3 Green values

Green consumers are individuals who embrace green values by purchasing products that do not cause harm to the natural environment and are mindful of the resources used in the entire product life cycle, from production until the product is disposed of. They prefer products that are recyclable and that can be reused more than once, and even consider the packaging of the product when making purchasing decisions (Do Paço, Shiel and Alves 2018: 8). Garcia-Garcia *et al*. (2016: 2213) also support this idea by suggesting alternatives to reduce waste and prevent products from ending up in landfills. They propose recycling, recovery, reused, or biodegradable products and their packaging in line with sustainability goals.

Values can be viewed from two perspectives, one where an individual prioritises their own interests over the environment, and the other where they prioritise the environment over their own interests. In the case of purchasing, green values are considered by the consumer which leads to the greener purchase. The question arises whether it is possible to incentivise self-interested consumers to make more eco-friendly purchases by highlighting the long-term benefits of green behaviour for the individual (Groening, Sarkis and Zhu 2017: 9). Many studies have pointed out that green concern influences pro-environmental behavior either directly or indirectly (Zhang and Huang 2019:129). Jaiswal and Kant (2018:62) also found that individuals who believed in their positive attitudes towards the environment tend to hold high green purchase intentions. As such, green consumers actively participate in environmentally sustainable practices. As awareness of environmental issues increase, similarly consumer awareness about green products are also increasing (Qiu, Hu and Wang 2020:2697).

Green consumer purchasing behaviour is discussed further under green marketing.

2.9.4 Green beliefs

It has been argued that an individual's beliefs can influence their green purchase behaviour (Ajzen 1985: 206). This is considered to be true for both green and conventional consumers. According to the Value-Belief-Norm (VBN) system, most pro-environmentally green behaviour can be linked to this norm. According to Plummer (2017: 12), environmentally conscious consumers tend to prefer businesses that they perceive to have green standards and practices in place. They are more likely to make purchases from such businesses. In their review of various theories, Groening, Sarkis, and Zhu (2017: 11) found that the theory of planned behaviour is a useful framework for predicting consumer behaviour in the context of purchasing. This theory takes into account the beliefs and attitudes of consumers and explores three key factors that can influence their behaviour when making purchases.

The theory of planned behaviour was also used in a study conducted by Sreen, Purbey and Sadarangani (2018: 186), where results revealed that the three factors – attitude, subjective norm, and internal perceived behavioural control – did indeed affect purchase behaviour. The theory of reasoned action (TRA) is a model that is used to explain how consumers make their decisions when it comes to purchasing products. TRA was later expanded and evolved into the theory of

planned behaviour when the concept of 'perceived behavioural control' was added (Kostadinova 2016: 225). Due to the fact that this model is one of the most profound and common predictors in this field of research, it has been inserted below. It has also been described in Chapter 1 as the theoretical framework that was adopted for this study.

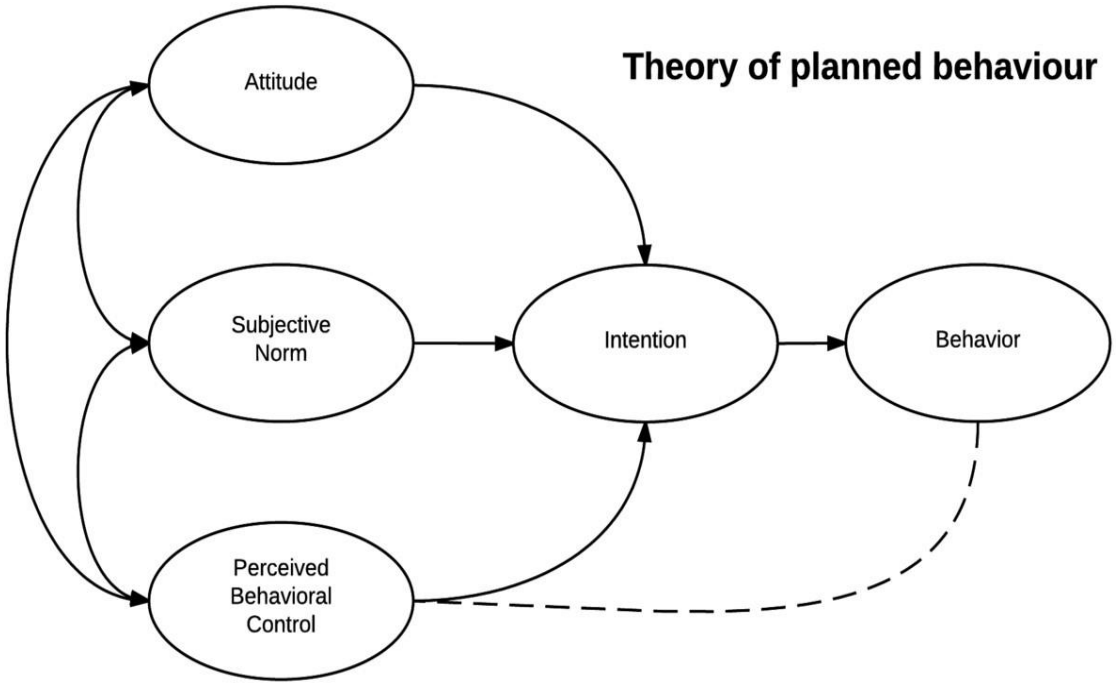


Figure 1: Theory of planned behaviour
(Source: Iceck Ajzen 1985)

A consumer may have green beliefs and opt for the greener choice in certain instances; however, in others, they may go for the more conventional product due to quality, price, or other more dominating factors such as family needs when purchasing. These choices fall under the construct of perceived behavioural control as their intentions may be clear. Additionally, various factors may either allow or distract them from the desired purchase (Shaw, McMaster and Newholm 2015: 11). The conflicts and inconsistencies in the attitude-behaviour gap are endless in terms of an individual's situational position. One of the recommendations made to translate customers' beliefs into a purchase is to encourage them to do so. This can be done through understanding their belief system and marketing green products in a way that appeals to these beliefs (Sreen, Purbey and Sadarangani 2018: 186).

2.9.5 Perceived behavioural control

Perceived behavioural control (PBC) is a construct used in the prediction of certain behaviours that takes into consideration whether the customer perceives that they have control over the behaviour that is aligned to their attitude, intentions, and beliefs. It is noted that PBC poses potential barriers in translating intention to actual purchases (Moser 2015: 171). A consumer who takes their health into consideration when shopping is more likely to make the greener purchase. Marketing products in a manner that expresses the benefits of organic products may allow for the customer to perceive the benefits of purchasing greener products to benefit their vitality (Witek 2019: 1125). PBC was found to play an insignificant role when it came to purchasing green sports apparel. This exposes a gap where marketing campaigns can be implemented in order to bridge the educational and awareness gap. This will in turn increase the chances of the green product being opted for when consumers make a purchase (Nam, Dong and Lee 2017: 15).

2.9.6 Green product perceptions

Green consumer perceptions play a pivotal role in any given industry where (green) products are concerned due to the fact that this may be the basis of whether they are favourable or unfavourable towards a product or service. This in turn generally translates into the purchases they make, as well as the influence they have on the purchase decisions of others (Yusuf and Fatima 2015: 124). In an ever-changing consumer-based market (Asha and Rathiha 2017: 2; Straughan and Roberts 1999: 575), marketers should strive to always have the latest information relating to the perceptions of consumers on green products. This is where the current study positions itself.

In a study conducted by Romani, Gappi and Bagozzi (2016: 7), it was explained that for a company to initiate and sustain corporate social responsibility (CSR) initiatives jointly with consumers, it is imperative that consumers understand that the motives of the companies are intrinsic rather than extrinsic. This will in turn prevent scepticism amongst consumers, and thus enable them to perceive green initiatives as favourable to not only the business, but society as a whole. Altruistic values have been identified as one of the most powerful factors in predicting green consumer behaviour. To encourage positive green perceptions, businesses should strive to be transparent about their practices and demonstrate that their motives are mutually beneficial. Additionally, it is essential to clearly communicate to customers how their green purchasing and behaviours can make a difference. This approach is one of the key drivers of the attitude-behaviour link (Straughan and Roberts 1999: 568).

2.9.7 Green purchase behaviours

Various factors can be taken into consideration when it comes to green purchase behaviours. Sharma, Kaur and Chawla (2017: 373) described three factors that influence green purchases, namely: personal, psychological, and social. Christelis (2013: 7) advised that the retail environment proves to be one of the best grounds for research due to its ability to measure views on the production to consumption patterns, as well as consumer behaviours. On the opposing end to this, Moser (2015: 173) has advised when studies are not specific, conclusions have to be drawn carefully as factors influencing and leading up to purchases may vary due to the vast array of product categories that fall under the green umbrella. This is linked to the findings of Liobikiene and Bernatoniene (2017: 109) who also found the same.

Witek (2019: 1126) noted that something as simple as the non-availability of the green product in the market can impede a greener purchase. It has been found that the more a consumer understands the impact that they have on the environment, the more favourable they will be towards green purchases. The higher the level of concern for the environment, the more emphasis is placed on the product being green rather than other aspects which lead to the purchase. This could mean that the product purchased may be of an inferior quality or even a more costly alternative, due to the fact that it is the greener choice. To fully understand the green purchase behaviours, it is important to relate to the theory of planned behaviours. This theory explains why individuals may choose certain behaviours despite holding contradictory attitudes towards green products (Anvar and Venter 2014: 183).

Agyeman (2014: 189) postulated that consumers can relieve some of the negative environmental impacts by merely adjusting their purchase behaviour. This can be further translated into the idea that the more eco-friendly purchases there are, the higher the level of environmental sustainability will be, as the world progresses into the future.

2.10 Factors that Influence Green Purchases

There are several factors that influence green purchases. These are discussed in this section.

2.10.1 Green purchase intentions

According to the theory of planned behaviour, an individual is more likely to purchase green products if their attitudes, social and personal norms, as well as their perception of whether they

can make a difference is positive (Ajzen 1991: 181). This is consistent with Agyeman (2014: 190) who mentioned that the higher degree of environmental knowledge a customer has, the more likely it is to translate into a green purchase. The environmental knowledge factor then influences the intention to purchase green products and is a factor in terms of the degree to which it influenced green purchases.

Kwong and Balaji (2016: 20) therefore advised that knowledge should be imbued within sceptical customers, in order to raise the level of green purchases as well as behaviours. Sreen, Purbey and Sadarangani (2018: 177) also support this idea, finding that individuals who prioritise collectivism, meaning people who act in an altruistic way, as well as nature orientated individuals, are more likely to purchase green products. Similarly, Mahmoud (2018: 133) found that by greening the general product, price, place and promotion elements of the marketing mix, a customer's intentions are positively influenced.

2.10.2 Green attitudes

According to Asha and Rathiha (2017: 2), consumer attitudes consist of a combination of feelings, beliefs, and intentions towards a particular brand, product, or retailer, which may either be favourable or unfavourable. Uddin and Khan (2018: 4) built a model considering factors, such as interpersonal influence, altruism, and environmental knowledge, which were found to form the basis of a consumer's attitude. This in turn influenced their green purchasing behaviour.

Anvar and Venter (2014: 192) have identified two facets of attitudes that have been explored in previous studies related to the purchase of green products. The first facet was the 'importance' of purchasing green products. It was found that consumers have a more positive attitude towards purchasing green products if they felt that the state of the environment was important to them. The second facet was the 'inconvenience' of purchasing green products. Consumers felt that they should not have to incur any inconveniences in order to be pro-environmental. Their concerns centred on the preservation of the deteriorating environment, as well as moving towards a future where resources do not run out. This notion involves a paradigm shift in the perceived responsibility from consumer to producer when it comes to green purchase behaviour (Anvar and Venter 2014: 192). It is therefore suggested that businesses should try to create a positive attitude towards green products amongst consumers by marketing their products in a way that expresses how they can contribute to the sustainability of the environment. A consumer can take the first

step with the transference of their intentions to purchase greener products rather than conventional ones (Nam, Dong and Lee 2017: 14).

FuiYeng and Yazdanifard (2015: 19) stipulated that businesses have the power to gain the favourability of consumers in terms of their attitude by merely playing a role in environmental sustainability. This however does not necessarily mean that products from this business will be purchased. Park and Lin (2020: 627) found that over a third of the people who gave feedback in their study had favourable intentions to purchase the greener product option but did not do so.

2.10.3 Social Influence

Pro-social behaviours have been understood to be the concept of acting in accordance with members of society in efforts to maintain or uplift the well-being of people. These efforts include acting in a green fashion. Pro-social behaviour may in some instances be hindered by the costs of acting upon the desired attitude, whereby it requires extra effort, inconvenience, monetary costs, etc. (Do Paço, Shiel and Alves 2018: 6), which is in line with most other factors that affect the attitude-behaviour gap.

Social influence has a strong correlation to substantive norms which fall under the theory of planned behaviour. It is said here that if one feels that an act is accepted by family, friends, society and people, which in turn is looked up to by the individual, then they are more likely to engage in this act (Oluwoye, Chembezi and Herbert 2017: 166). In relation to pro-environmental behaviours, if one sees recycling as a practiced norm amongst those in their social circle, they would be more inclined to do so themselves as well (Anvar and Venter 2014: 187). Moreover, Sreen, Purbey and Sadarangani (2018: 185) mention that women are generally more influenced by the discussions revolving around what's acceptable and what's not in their society, which could be a result from the role they fulfil in their respective communities.

The social dilemma theory looks at the purchasing of products from a view based on the individual's satisfaction or convenience in relation to society as whole. Consumers may feel that their individual efforts may not matter in the greater scheme of things due to the rest of society not behaving in a green manner. The social dilemma highlights the fact that consumers may limit their green standards due to various factors, i.e., monetary constraints or the extra effort required, which can be influenced by societal factors (Groening, Sarkis and Zhu 2017: 14). On the other

hand, Do Paço, Shiel and Alves (2018: 1) found that pro-social attitudes do lead to greener purchases, indicating that individuals who care about the society they live in are more likely to opt for the greener choices.

There are also several barriers to green purchases. These are reviewed next.

2.11 Barriers to Green Purchasing

There are several barriers to green purchases. In a study conducted by Terlau and Hirch (2015: 159) in the organic food segment, it was found that barriers to more responsible purchases consist of the cost of the product; how easily the product can be found and acquired; whether it meets the same sensory pleasures gained from the conventional choice; the excessive or diminished amount of information available pertaining to a consumer; their ability or willingness to change from their current purchasing patterns; as well as a consumers' faith or doubt in the accreditation of labels. Witek (2019: 1125) also found that a lack of knowledge and awareness with reference to labelling and certifications related to the environment and led to scepticism and distrust, hence forming a barrier to green purchases. An important finding reported by Ranjan (2016: 51) was that one of the barriers to green purchases was the fact that consumers often felt that their actions would not contribute largely to fixing environmental issues, thus they did not make any efforts to take action.

It has been found that despite consumers having a favourable attitude towards purchasing green products, they may not actually make the purchase. The discrepancy between attitudes and behaviours, also known as the attitude-behaviour gap, remains an unresolved challenge in the marketing world. This gap can create difficulties in developing effective marketing plans, particularly in terms of targeting specific markets and implementing strategies to appeal to those audiences (Anvar and Venter 2014: 183). Research studies, such as that conducted by Hidalgo-Baz, Martos-Partel, and GonzalezBenito (2017: 6), have confirmed the existence of the attitude-behaviour gap. For example, they explored factors such as knowledge and orientation towards organic products in the organic market, and found evidence of this gap. Supporting these findings, a study conducted by Anvar and Venter (2014: 192) among Generation Y consumers (also known as Millennials) in Johannesburg concluded that consumers with more positive attitudes towards green products were more likely to make environmentally friendly purchases. This is consistent with the research conducted by Oluwoye, Chembezi and Herbert (2017: 166), who also found that

attitudes were based on consumers discussing green activities and concepts with people in their social circles. This has led to the creation of subjective norms. In a slight contradiction to the prior two mentioned studies, Shaw, McMaster and Newholm (2015: 13) found that part of the gap between attitude and behaviour can be attributed to the lack as well as the nuanced inconsistencies between the role of care in ethical purchases and consumption.

One of the most outstanding theories mentioned in a study conducted by Groening, Sarkis and Zhu (2017: 14) is the alphabet theory formulated by Zepeda and Deal (2009: 703). This theory combines multiple facets in order to measure how behaviour is formed. Components of this model include: VBN – Value Based Norms; ABC – Attitude-Behaviour
Context; K – Knowledge; IS – Information Seeking; C – Context; H – Habits; and D – Demographics. It is felt that this is quite a holistic measuring tool when it comes to the study at hand, although it could be quite complex in terms of scoring due to the various factors concerned. Straughan and Roberts (1999: 558) postulated that demographics do not reach the heights that psychographics can reach in dealing with the topic of green consumer behaviour. Psychographics should therefore be included in research going forward on this topic, in order to gain a clear understanding behind the thinking of consumers despite their age, income, education, race, gender, etc.

The following section reflects on consumers' decision-making processes, and the section thereafter unpacks the concept of "corporate social responsibility".

2.12 Consumers' Decision-Making Process

The consumer decision making process that is used when making a purchase consists of need recognition, information search (internal and external), evaluation of alternatives, purchase, and consumption (in this context, green purchase behaviour occurs at this point), and post-purchase evaluation. If a consumer is happy with the product or purchase, repurchase will occur which relates to brand product loyalty (Anvar and Venter 2014: 184).

In a study examining the impact of age, gender, qualifications, and total monthly income on consumers' decision to choose environmentally friendly products, it was found that none of these factors had a significant influence. Instead, the study revealed that the extent to which consumers were satisfied with the product was the most critical factor in their decision-making process

regarding eco-friendliness. This formed the foundation for their purchasing behaviours (Makhdoomi and Nazir 2016: 1). Products can be categorised as either luxury and necessity goods, and this classification can affect the decision-making process in nuanced ways. Typically, the purchase frequency and level of involvement in the decision-making process are higher for necessary goods compared to luxury products (Liobikiene and Bernatoniene 2017: 114).

2.13 Corporate Social Responsibility

Suki, Suki and Azman (2016: 264) explained that although the term "corporate social responsibility" (CSR) can be vague in nature, it alludes to having a positive or reduced level of negative connotations towards people and the environment, whilst keeping the business profitable. This is similar to what Marchese *et al.* (2018: 1275) has noted to constitute their concept of sustainability.

It was further found that companies that indulge in CSR play a role in getting the consumer to become more aware about going green via green marketing, which influences a consumers' intention to purchase a product (Suki, Suki and Azman 2016: 266). In this study, the act of handing out flyers was a mutually beneficial initiative done to influence a consumer's "intention to purchase" by educating them on green products. This aided in reaching social responsibility objectives as well as assisting the company to increase sales when their green products were purchased (Suki, Suki and Azman 2016: 262). In line with the CSR concept, it was explained that the desired outcome of a green purchase is attributed to a consumer's level of green knowledge. This stems from manufacturers influencing consumers via their marketing campaigns (Hong and Guo 2018: 1).

In a study where a joint CSR initiative was embarked upon by companies and consumers, it was found that scepticism should be alleviated in order to gain favourability amongst consumers. The elevation of the community and environment should be evident in order to influence consumers to become more responsible in their purchases and behaviours. It was further noted that when consumers commit to a single green practice, it becomes easier and more likely for them to commit to and undertake other environmentally sustainable behaviours (Romani, Gappi and Bagozzi 2016: 17).

Epstein and Buhovac (2014: 2) made it known that whilst shareholders and chief executive officers (CEOs) may set CSR goals, getting upper management, staff, and consumers to carry out these

behaviours may not be an easy task. This could be due to a variety of reasons, such as the pressure on a manager to reach financial goals, which is generally a priority in business. De Villiers, Rouse and Kerr (2016: 19) built a conceptual model based on the influences driving corporate sustainability in a business, which shows the flow from stakeholders all the way down to the individual employees who are accountable for driving these initiatives. The two primary elements that flow into the sustainability reports of companies are the use of a balanced scorecard, which indicates the measures they wish to take, and focused management discussions. These reports are then used to show transparency in the business and whether outcomes of initiatives are favourable or not. Suggestions can be made to improve the sustainability outcomes of the business from all angles (employees, managers, stakeholders, etc.), whilst affirming that there is sufficient emphasis placed on these important goals (de Villiers, Rouse and Kerr 2016: 21). There are two ways to drive sustainable practices: first, a sustainable culture could be implemented through a softer approach, such as communicating the vision and goals to inspire passion and devotion. Second, a harder approach may involve managing performance based on sustainable goals which could ripple into remuneration being affected (Epstein and Buhovac 2014: 7).

In a study conducted in the Czech Republic, it was found that only 69.36% of respondents reported that they were familiar with the term “corporate social responsibility”. Further analysis showed that 68.48% of these respondents demonstrated a genuine understanding of the term (Čerkasov *et al*. 2017: 1867). Once again, the attitude behaviour gap presents itself in this study, where the findings show that businesses that adopt CSR activities do not always act as a major factor when it comes to green purchase decisions (Čerkasov *et al.* 2017: 1870).

Next, the role, function, and importance of green policies, rules, and regulations will be reflected upon.

2.14 Green Policies

Policies, rules, and regulations can be implemented by governmental as well as nongovernmental organisations (NGOs). This can go as far as to influence the price of products and services. An example of this can be noted where in certain countries, businesses that release excessive amounts of greenhouse gasses are fined by authorities. These rules and regulations can be seen as external barriers to achieving sustainable goals, which companies are forced to factor into their plans and strategies period in order to avoid fines (Epstein and Buhovac 2014: 2).

A standard should be set and publicised by the government in order to facilitate the understanding and reliability in terms of companies' green claims (Sreen, Purbey and Sadarangani 2018: 186). Companies that do claim without abiding strictly to the standard should be dealt with harshly (Kwong and Balaja 2016: 22). Rules and regulations are crucial in the adoption and adaptation of sustainability goals by companies. These rules do not only govern companies, but aid in the upliftment of society (Hong and Guo 2018: 8). Businesses that green their processes reap the rewards of a higher valued business even though they are required to do so by the government (Kim and Kim 2020: 1).

A truly green business goes beyond the realm of laws and policies and focuses on the extrinsic value that it can add to society and the environment (Sharma, Kaur and Chawla 2017: 372). Denmark's best practice case demonstrated that it is one of the most successful green-consuming countries in the organic food industry. The reasons for this success are multifaceted and can be adopted by marketers and governments to promote more favourable green market conditions. Similar to South Africa, Denmark's fertile lands allow for a robust organic farming industry. Their easily accessible green market offers an extensive selection of organic foods, which, through the collective efforts of governments, businesses, and consumers, has proven to be quite rewarding in terms of green purchases. Green labels were also introduced. Subsidies were offered to those producing greener products, thus lowering the price of their organic goods. Laws were also introduced, taxing the use of irresponsible practice in order to mitigate non-green practices. Last but not least, funding for improving the awareness and progression of an environmentally sustainable future was made available (Terlau and Hirch 2015: 165).

Rather than trying to reinvent the wheel each time, it is often beneficial to examine successful past green business initiatives as a source of inspiration. In this regard, some exemplary initiatives will be examined in the following section.

2.15 Green Business Initiatives

A case worth mentioning is Nestle Nespresso, which followed the TLBCM (triple layer business canvas model). This model integrates stakeholder perspectives (social bolstering) and the product life cycle (environmental bolstering) into the general sustainability model, in order to create a more innovative and value driven model (Joyce and Paquin 2016: 1477). To mention some of the few green aspects of the business, Nespresso has optimised energy efficient coffee machines that

use reduced energy, which falls under the environmental category. Under the social aspect of their business, they pride themselves on maintaining sustainable relationships with the farmers who produce the coffee beans, ensuring mutual benefits for both parties (Joyce and Paquin 2016: 147). A secondary social benefit can be seen where they make way for job creations, as well as offer opportunities for their employees to develop themselves. Last but not least, their end-user benefits by consuming a healthier and more refined version of coffee (Joyce and Paquin 2016: 1476).

The chocolate bean-to-bar industry was also examined with a slightly different model called the Associative Sustainable Business Model (ASBM), which is one of the industries where there is a break in equality between producers in developing countries and manufacturers and consumers in developed countries (Gallo, Antolin-Lopez and Montiel 2018: 5). This model looked at bringing together various inputs, functions, and elements of the business, where they were unified with the intention of creating valuable sustainability. Some of the initiatives taken in collaborating included providing buildings and even solar panels for the producers in their regions. They were given interest free loans to aid their business. Labourers were given insurance and health provisions. The farmers were given more insight into the business, aiding them in tailoring their activities to suit consumers' needs. All these initiatives by association lead to a stronger TBL, predominantly under the social aspect of the business. The most impressive part of it all was that consumers were enticed to pay more for these chocolate bars when educated in understanding the business behind their inflated prices (Gallo, Antolin-Lopez and Montiel 2018: 16).

The Green America Green Business Certification tool was used in a study to affirm that businesses indeed were providing some sort of environmental and social value to the community. This review was conducted under several different categories for multiple businesses. All businesses in this study were certified green under at least one of the categories. This included that businesses are value-driven; business is a tool for social change; business is environmentally sustainable in its supply chain, and how it runs and operates its facilities; businesses track their progress with transparency; business is socially equitable and is committed to extraordinary practices to benefit its workers, customers, community, and the environment, applying the sustainable community building criteria (Plummer 2017: 1). The businesses that were assessed could use this tool to strengthen their value by seeking opportunities across the categories mentioned above in cases where the respective criterion was not met. To mention a few of the specific activities that fell under the gridding are: social events being held to bring communities together; donations being

given to non-profit organisations (NPOs) to benefit the environment; educating customers on the importance of sustainability; utilising renewable energy systems; mitigating the effects of gentrification; forming social bonds in communities; providing food and drinks with health benefits; and from sourcing ingredients from businesses or that are produced in a sustainable manner (Plummer 2017: 16).

Based on these insights obtained from this literature review on themes related to going “green”, a brief conclusion follows next.

2.16 Conclusion

A thorough literature review on green issues at the interface of marketing was conducted in this chapter. The chapter reviewed the latest literature on green marketing, specifically green marketing tools such as eco-branding, eco-labels and green advertisements, understanding green products and how they advance sustainability and the green consumer. Relevant theories such as the attitude-behaviour gap theory and how it informs green product knowledge and green product knowledge was summarised. The factors that influence green purchases are also reviewed. The chapter that follows elucidates the research design and methodology of the study, along with the data collection methods used.

CHAPTER 3:
RESEARCH METHODOLGY

3.1 Introduction

The previous chapter discussed relevant literature on the topic of green attitudes, behaviours, products, marketing, and other related topics. As environmental concerns continue to grow and become more pressing, understanding green attitudes, behaviours, and products has become increasingly important in both academic research and real-world practice. In order to contribute to this body of knowledge, this study utilised quantitative research methodology to investigate the topic. This chapter provides an in-depth description of the research design, survey instrument, data collection process, and data analysis methods that were employed, as well as the validity and reliability of the research instrument and adherence to ethical considerations in the study. By providing a clear and detailed account of the research methodology, this chapter aims to offer insight into the study's findings and contribute to the larger conversation on environmental sustainability. According to Creswell and Creswell (2020:5), “research methodology” describes the steps and procedures followed to complete the research process. The research design is described in the next sub-section.

3.2 Research Design

The research design is a plan or blueprint that stipulates how the research study will be conducted. Moreover, it follows a logical sequence, which provides a pathway to how the study is planned, and the desired results achieved (Babbie and Mouton 2001: 74). Polit and Beck (2021: 58) summarised the design as the “architectural backbone” of a study. They argued further, however, that the research design provides answers to questions, assists the researcher to identify measures to reduce bias, stipulates the frequency of data collection, guides the comparisons that will be made, describes the place of the study, and brings to life the end product. The research design guides the selection of the research population, methods for sampling, measurement, data collection, and analysis (Burns and Grove 2007: 38).

3.2.1 Quantitative research approach

The quantitative research paradigm was the research paradigm used to implement this study. Quantitative research methodology, dominated social science research for decades and concerned itself primarily with investigating things that could be measured as within the current study. In fact during the early 1980s, the paradigm wars, ensued between both quantitative and qualitative researchers, with quantitative researchers holding the view that this paradigm was superior (Antwi and Hamza 2015: 217). The distinction between qualitative and quantitative research paradigms however rests more with their suitability to answer research questions as opposed to their superiority (Bryman 2001:106). Guba and Lincoln (1998:45) argued that a research paradigm is linked with ontology (way a researcher defines truth or reality), epistemology (the process by which a researcher comes to understand this truth or reality) and methodology (the method a researcher adopts to guide a study). The positivist paradigm which is linked to quantitative research holds the view that scientific knowledge consists of fact, while its ontology sees reality as independent of social construction (Walsham 1995:74). Where a research study as in the current study reflects an unchanging reality, then the researcher can assume an objectivist stance, based on the notion that people's perceptions and statements are either true or false, a belief based on a view of knowledge as real and acquired; they can then employ a methodology that is reliant on a control of reality (Mutch 2005:175).

Neuman (2003) asserted that positivists regard social science research as an organised method of placing deductive logic with precise empirical observations of individual behaviour so as to discover or confirm a set of probabilistic laws that may be used to predict general patterns of human activity. Positivists are of the opinion that empirical facts exists, they are influenced by laws of cause and effect, patterns of social reality are stable and knowledge of them is additive. As such, one basic assumption underpinning this paradigm is that the goal of science is to develop the most objective methods to acquire the closest approximation of reality. Hence, researchers who adopt a positivist paradigm as in the case of this study, explain quantitatively how variables interact, influence, shape events and create outcomes. Techniques for statistical analysis are among the classic contributions of this type of research.

A quantitative research design is a “formal, systematic process in which numerical data are used to obtain information about the world” (Burns and Grove 2007: 17). The quantitative research design emerges from a branch of philosophy referred to as logical positivism. Logical positivism is premised on strict rules of logic, truth, laws, and predictions. Proponents of quantitative research, therefore, believe that “truth is absolute and that a single reality can be defined by careful reality” (Burns and Grove 2007: 18). Researchers using the quantitative approach therefore describe variables, examine relationships among variables, and determine at times the cause-and-effect relationships amongst these variables (Burns and Grove 2007: 18).

A quantitative design was used so that the research was followed in a logical manner with minimal bias, and so that the findings could be generalised, as numerical data would be more meaningful (Polit, Beck and Hungler 2013: 739). Researchers who use a quantitative approach therefore assign numbers to the perceived qualities of things (Babbie and Mouton 2001: 49). Quantitative research has therefore been described as a “formal, objective, rigorous and systematic process for generating information about the world”, which is applied to give description to “new situations, events, or concepts in the world” (Burns and Grove 2007: 24). To achieve the manner of rigour required, the quantitative paradigm uses precise measuring tools, a representative sample, and a tightly controlled study design (Burns and Grove 2007: 28). Given that the intent was to establish consumers’ views regarding the environment and green products, and their purchase of the same, this approach was seen as the most appropriate methodological approach.

However, the quantitative design also has some limitations. One of the limitations of the quantitative design is that it may not capture the complexity and diversity of human experiences and meanings. For example, consumers’ views on the environment and green products may be influenced by various factors, such as their cultural background, personal values, emotions, social norms, and so on. These factors may not be easily measured or quantified by the numerical data collected in this study. Therefore, a complementary or alternative methodology that could address this limitation is the qualitative research design. This can be used in future studies. Qualitative research design is a type of research that uses non-numerical data, such as text, video, or audio, to answer research questions and understand phenomena (Creswell and Poth 2018: 4). Qualitative research designs seek to explore the meanings and experiences of people in their natural settings (Denzin and Lincoln 2018: 10). Qualitative research designs employs various methods, such as interviews, focus groups, observations, and document analysis, to collect rich

and detailed data that can reveal insights and patterns (Flick 2018: 3). Qualitative research design can therefore potentially provide a deeper and more comprehensive understanding of consumers' views on the environment and green products, as it could examine the factors that shape their perceptions, preferences, and behaviors in more depth and complexity. This however was not aligned with the current study objectives and can be used in another study. Moreover the study could not utilize qualitative research design for the following reasons: it is more resource-intensive and expensive compared to quantitative research designs due to the need for extensive data collection, transcription, coding, and interpretation (Bryman 2016: 36). Additionally, qualitative research designs are more susceptible to subjectivity and bias as it relies on the researcher's interpretation and reflexivity (Silverman 2016: 16). Aligned with the aim of the study, a quantitative approach was therefore deemed more suitable. Studies using a similar design have been conducted by Braga *et al*. (2015: 99).

3.2.2 Cross-sectional descriptive design

A cross-sectional descriptive design was adopted for this study. In non-experimental research designs, descriptive and correlational designs, are often utilised without any manipulation of the variables (Burns and Grove, 2007:237). According to Brink (2006:102) the purpose of non-experimental research is to describe phenomena, and to examine and describe relationships among the variables, as within the present study. The research design for this study originated through the research problem, research questions, and the theoretical framework identified for the study. This research design was used to develop the research plan through which the data was collected and analysed. A quantitative research approach enabled the researcher to formulate a logical and systematic research plan to collect numerical data in an objective manner (Grove, Burns and Gray 2013:23). Within the context of this study, it referred to collecting information with regards to consumers concern for the environment, whether such concern influenced consumer purchasing behaviour and how consumers' concern for the environment influenced consumers intentional purchase of green products. By utilising numerical data, the researcher was able to measure the frequency of occurrence and different forms of green purchasing behaviour within the eThekwini area and therefore to quantify and describe the study phenomenon. Furthermore, the numerical data collected allowed the researcher to measure the effects that certain variables like gender, education and income had had, on certain variables. Within this broader quantitative approach, a descriptive design was then most appropriate to gather relevant information about consumer attitudes and purchasing behaviour. A descriptive survey design therefore enabled the

researcher to identify consumers concerns for the environment, how such concern influenced consumer purchasing behaviour and how such concern influenced intentional purchase of green products. The data sought was also cross-sectional as it was collected, once during a certain period at a given time (Sekaran and Bougie 2011:45).

Descriptive designs then are used primarily to describe the characteristics of people or situations that are the focus of the research study (Sekaran and Bougie, 2011:42). Descriptive studies allow a researcher to gather more information about characteristics within a specific field of study. The advantages of descriptive studies are that they can be applied to develop new theories, identify problems with current practice, justify current practice, make judgements, or determine what other practitioners in similar situations are doing (Burns and Grove 2007: 249).

They are also utilised in studies where more information is required to provide a picture of a given phenomenon (Burns and Grove 2007:237). In such designs the variables are described to answer the research question (Brink 2006:102). Given that causality is not established in descriptive designs, no dependent and independent variables are identified (Burns and Grove, 2007:237). Fortune and Reid (in De Vos *et al.* 2005:73), argued that quantitative studies focus on specific questions throughout an investigation and specific variables are measured. These variables are quantified by means of rating scales or frequency counts. Standardised procedures, for example the completion of the same questionnaire by all the participants, are utilised to collect data. In this way, the researcher takes on the role of “an objective observer” with limited involvement in the study phenomena (De Vos *et al.* 2005:73).

A cross-sectional descriptive approach was thus adopted for this study so that the researcher could investigate current consumer attitudes towards the environment and green products, and how this influenced green purchasing behaviour. In this way, it was a non-experimental study as the researcher became an observer and collected information from participants without intervening (Polit and Beck 2021: 55). Thus, a quantitative nonexperimental descriptive survey was deemed most appropriate to guide the research inquiry, as it helped to investigate and describe consumers’ attitudes towards green products, their purchase thereof, and views with regards to manufacturers who use green marketing strategies.

3.2.3 Pilot study

According to Delport and Roestenburg (2011: 195), a pilot test is used to ensure that the questionnaire can be completed within a certain time frame. It also assists verifying how valid the questions and content are in relation to the subject matter. It is important to note that the questionnaire is also susceptible to a few possible errors, such as ambiguous, vague, and leading questions, which can interfere with responses and affect the overall quality of the data obtained.

Although the survey questionnaire was adapted from a study by Braga *et al*. (2015: 99), it still required piloting, as the researcher had to modify the questionnaire to the objectives of the current study. The questionnaire also needed to be piloted within the South African context and in the geographical area where the study was carried out. A pilot study is used as a trial run, to ensure that the questions have good face validity and can be regarded as a smaller scale of the larger study. Although the process of conducting a pilot study may appear time consuming, it plays a crucial role in ensuring validity.

A pilot study is usually done with participants who share similar characteristics to the intended sample for the primary research, but who will not be part of the subsequent investigation. The pilot study also aims to investigate the appropriateness and quality of the questions included in the questionnaire. Hence, the piloting of the instrument enabled the researcher to identify any ambiguous questions, as well as double barrelled or vague questions, and notice where certain important questions are missing. Once the weaknesses in the questionnaire have been recognised, the researcher can then rework and improve the instrument to ensure its validity and reliability (de Vos *et al.* 2005: 206).

The survey questionnaire for the current study was piloted with 10 consumers in the eThekwini district, and diversity in terms of age, gender, and income levels was ensured. The information letter, consent forms, and questionnaires were also administered to them, to ultimately mirror how the final study was going to unfold. This was done to secure informed consent. Questions that were ambiguous or hard to understand were reconstructed for ease of understanding, but its essence remained unchanged. Examples of this are as follows :

The original question read “The emission of carbon dioxide damages the atmosphere”, the modified to “ I am concerned that the emission of carbon dioxide damages the environment.”

Another example was, “firms that damage or disrespect the environment should be punished”, was changed to “laws, rules, and regulations should be better enforced from a manufacturing and organizational level. Failure to comply with this should result in punishment, especially in instances where the environment is negatively affected.”

A few additional few questions were added based on recommendations from the expert used to look at the questionnaire. These were added in relation to the objectives. For example questions added included :

- I value the earth and ocean, and am concerned for its sustainability.
- I understand that plant and animal life are directly and indirectly affected by human consumption.
- I prefer carpooling, public transport or bike riding to reduce my carbon footprint when it comes to commuting.
- Manufacturers should be given more responsibility in terms of the well-being of the environment.
- Manufacturers should replace plastic bags with paper bags
- Organisations that display eco-labels and certifications are favourable as they are attempting to conserve the environment

Cosmetic changes were also effected and those changed enhanced the coherence and clarity and ease of completing the final questionnaire, within the study.

3.2.4 Validity

Polit and Beck (2021: 336) explained that reliability and validity are interdependent. Validity refers to the degree to which the research instrument measures what it intends to measure. They added that *face validity* refers to whether the instrument appears to be measuring a given construct. This is an active measure of validity (Bolarinwa 2015:196) and assesses the questionnaire in terms of practicality, readability, constituency of style and structuring and simplicity of language used. This was achieved through modifications post the pilot testing of the questionnaire. *Content validity* focuses on whether an instrument, such as the survey questionnaire in the current study, has sufficient and appropriate items to provide answers to the stipulated research questions or objectives (Polit and Beck 2021: 336). *Construct validity* refers to what the instrument actually measures, specifically whether the questions in the survey instrument are aligned with the

objectives of the study. Hence, it concerns itself, not only with the validation of the instrument, but also with the theory underlying it (Polit and Beck 2021: 339 Burns and Grove (2007: 365) asserted that validity thus varies from one sample to another, and from situation to situation; hence, when researchers test for validity, they test it for a particular sample, in a particular situation. Pilot testing of the questionnaire contributed to face and content validity.

For the purpose of this study, the questionnaire was piloted with consumers in the central eThekwini region of KwaZulu-Natal. After securing their voluntary participation, participants had to read the information letter and provide written consent before participating. The consumers who were requested to fill in the questionnaire were not included in the main study. They were asked to complete the questionnaire instead of just reading it, as the purpose was to identify any issues through their responses (de Vos *et al*. 2005: 209). The suggestions provided for modifications were taken into account during the development of the final research instrument. To ensure content validity the variables were measured using pre-validated scales adapted from a study done abroad (Braga *et al.* (2015: 103). Moreover the pre-test enabled testing and modification of the questionnaire. Moreover it was vetted by an experienced researcher, who checked the content of the questionnaire ensuring that all areas of the study were covered. She has conducted research on environmental justice. This was explained in the sub-section on the pilot-testing.

3.2.5 Reliability

De Vos *et al.* (2005: 162) described the reliability of a measurement procedure as the stability or consistency of the tool or instrument. It suggests that if the same variable is measured under similar conditions using the same measurement procedure, it will produce identical or near identical numerical values each time it is applied. Hence, reliability testing takes into consideration characteristics such as dependability, consistency, accuracy, and compatibility. The survey questionnaire utilised in this study was based on validated scales used in research conducted by Braga *et al.* (2015: 103) and can therefore be considered reliable. Permission was secured from these researchers to utilise the questionnaire.

3.2.6 Study setting

Research can be conducted and data can be collected in diverse settings, which may include one or multiple sites (Polit and Beck 2021: 49). The research setting for this study was naturalistic. Participants completed the questionnaires at the Pavilion Shopping Mall, which is the largest mall

in the eThekwini central region and draws consumers from multiple neighbouring areas in the eThekwini area. The mall houses many types of food, clothing, medical, and other cosmetic outlets. Most of these outlets sell products that are both eco- or non- eco friendly thus making it a point, to secure consumers who purchase same.

Written permission was secured from the management of the Pavilion shopping centre, prior to the implementation of the study, to distribute the questionnaires to consumers. Because of the benefits of the findings, of such a study permission was easily secured. Management were reassured that no coercion would be used in the recruitment of the participants.

3.2.7 Population

Clow and James (2014: 15) defined the “population” as the total number of individuals who can be considered as a statistic of a particular phenomenon in the research that is to be conducted.

The population for the current study consisted of all the shoppers at the Pavilion Mall. Burns and Grove (2009: 343), defined the target population as all individuals who meet the criteria for inclusion in the sample. This refers to the inclusion criteria, primarily the characteristics that respondents must have to be included within the study. This included consumers 21 years of age or older, males and females, from all racial backgrounds who shopped on weekends. They are a group of people whom researchers wish to draw generalizations about in their findings. Under given conditions, a sample represents a group of people who collectively constitute a target population.

This group was chosen as the target population because the study aimed to explore the factors that influence consumers' green purchase intentions and behaviors. The Pavilion Mall was selected as the sampling unit because it is one of the largest and most popular shopping centers in eThekwini, offering a wide range of products and services to its customers. The sampling element was defined as any shopper who visited the mall during the data collection period and agreed to participate in the survey. The total population size was estimated to be around 1,000 consumers per day, based on the mall's average foot traffic statistics on a weekend. The latter information was secured from mall management prior to the pandemic when permission was sought from the mall. However, during the COVID-19 pandemic, they indicated that foot traffic

reduced to approximately 500 shoppers or even less because of regulations. Hence, the number of shoppers or target population was significantly reduced.

It must be further noted, that while an estimate of the target population was provided, an accurate number cannot be determined, as in this case, as the number of consumers will not only fluctuate depending on the month, time, but moreover as indicated the study was conducted during the COVID-19 pandemic. To quantify the exact target population is impossible and hence an estimate was provided. Hence, this can be deemed a convenience sample. De Vos *et al*. (2005:196) argued that representativeness refers to when the sample group has more or less similar characteristics as the larger population in order for the findings of the study to be generalised. Whilst a smaller sample was targeted, generalization, could have been affected. However, the study still shed valuable light on consumers attitudes and purchasing habits in eThekwini.

3.2.8 Sample

Dudovskiy (2015: 39) explained that the sample population represents the portion which has been selected from the total population to take part in the study. This portion is obtained after considering various factors such as the frame, the sample size, and the method of collecting the data. Strydom (2011: 224) stated that a sample population is used due to the fact that the total population may not be easily accessible. This could be due to factors such as time and cost constraints. Essentially, this leads to a more feasible and enhanced research study being conducted. A convenience sample of 250 people therefore was intended to take part in the survey. The reason for this chosen sample size was that this was a descriptive study and it would have meant that 50 % percent of the targeted population would have completed the questionnaires. According to Babbie (2007:262) 50% is considered to be an adequate response rate for analysis and interpretation. However, the use of convenience sampling, which has been used extensively in quantitative research, meant that the opportunity for all to participate is not equal for all qualified individuals in the target population and not necessarily generalizable. As in all quantitative studies, increasing sample size increases the statistical power of the convenience (Raeburn, Hipple, Delaney and Chesky 2003: 113). However data collection during the pandemic, constrained the researcher to do same.

3.2.9 Sampling strategy

Rahman (2023:42) differentiated between probability and non-probability sampling techniques, saying that in non-probability sampling samples can be obtained more quickly and for a smaller

financial investment. The most common non-probability sampling techniques identified by (Rahman 2023: 43) are as follows:

- Purposive sampling: this is a type of judgmental sampling when researchers wish to find people with specific traits.
- Quota sampling: researchers select the necessary sample size from each population's sub-group by adopting a proportionate ratio. Moreover, quota sampling identifies distinct characteristics among the interrelated traits of the sub-groups. Snowball sampling involves networking and the use of personal or professional contacts in securing respondents for a sample.

Probability sampling, are often aligned with quantitative research approaches. According to Strydom (2011: 226), probability sampling allows for all members of the total population to be selected to represent their views on the subject matter. There are several probability sampling strategies namely simple random sampling which is commonly used in quantitative studies This is defined as a sample in which all participants or elements have an equal and independent chance of being included in the sample (Kumar 2011: 181). Simply put, every case of the population has an equal probability of inclusion in simple random sampling (Taherdoost 2020: 21). Systematic sampling involves for example the researcher deciding from the onset of an alphabetical list that each tenth case will be sampled. Stratified random sampling is suitable for heterogeneous populations and includes dividing the population into a number of mutually exclusive strata where members of each strata share similar characteristics. This strategy ensures that different groups acquire sufficient representation in the sample. Cluster sampling also described as multistage sampling is used when the population is too large for random sampling. Hence the field study is concentrated in a specific section of a greater geographical area thus helping the researcher save time and costs (de Vos *et al.* 2005:27-228). Both probability and non-probability sampling approaches use convenience sampling. However according to Rahman (2023: 44) it is typically used by researchers in the beginning phases of survey research, since it is quick and easy to collect findings. Rahman (2023:49), stated that "although there is considerable resistance among statisticians to employing this method, it is essential whenever there is a need to get insights in a short amount of time." Furthermore, Highhouse and Gillespie (2010:249) debunked the myth that samples matter for generalizing inferences. In arguing for the use of convenience samples, they created a bibliography of articles defending convenience sampling saying as follows: convenience samples are more cost-effective, homogeneity, meaning homogenous groups, avoids extraneous

variance, and generalizability where they argue that field samples are no more representative than convenience samples. Most importantly the issue of humanity, is raised by multiple authors who assert that the "the similarities between convenience and field samples are greater than their differences, and any differences are unrelated to the research questions."

- Non-probability approaches which are aligned with qualitative studies, generally use convenience sampling strategies. This study although quantitative, used convenience sampling as the study was done in one place and also could be concluded quickly due to COVID-19 protocols.

Furthermore, marketers often use convenience sampling more, so as to collect data, to investigate the intention of customers towards their products (Etikan, Musa and Alkassim 2016:2). Moreover as Raeburn *et al.* (2003:113) argued, that although random sampling methods remain gold standard for generalizable research, the COVID-19 pandemic and lack of research on this topic in eThekwini supported a more flexible approach. Given that the intent of this study was to explore consumer's attitudes towards green issues and products, it was deemed to be most appropriate. Convenience samples can provide preliminary insights, particularly in descriptive studies, when descriptive information begins to emerge about a population (Raeburn *et al.* 2003:113).

Etikan *et al.* (2016) noted that convenient sampling is more popular amongst marketers, as they use this strategy to collect data to investigate the intention of customers toward their products. Scholtz and Korsten (2016) further wrote that that in psychology, convenience sampling is the most commonly used sampling technique. Since this study focuses on the behavioral intention of consumers about green products, convenient sampling can be seen to be a better representative of this study. Despite there being many arguments regarding the reliability of the convenience sampling method, prior research has proved, that when a sample is chosen from urban educated people, the results of these studies are quite reliable.

3.2.9.1 Inclusion and exclusion criteria

The inclusion and exclusion criteria used to recruit the respondents were as follows:

Inclusion criteria:

- Consumers had to be 21 years of age or older.

- Both males and females were eligible to participate.
- Individuals from all racial backgrounds were invited to participate.
- Only those who have voluntarily provided their consent were included in the study.

Exclusion criteria

- Persons under the age of 21 years of age were not considered.
- No gender or races were excluded.
- Those who declined the invite to participate voluntarily.

As highlighted in the inclusion criteria, only adults of all races and gender, and who expressed a willingness to participate formed part of the sample.

3.2.10 Data collection

Burns and Grove (2007: 536) described data collection as involving the acquisition of participants and the collection of information from them that is relevant to the study. They added that the researcher should focus on the tasks of data collection that are interrelated and are performed concurrently, i.e., recruiting participants, training data collectors if they are going to be used, collecting data in a consistent way, maintaining research controls, protecting the validity of the study, and solving problems that may threaten to disrupt the study (Burns and Grove 2007: 393).

It is critical to select the number of participants who were originally planned for because data analysis and the interpretation of research findings are dependent on an adequate sample. The targeted number of the sample was 250 respondents. Burns and Grove (2007: 394) stressed that protecting the integrity of the study involves maintaining consistency and controls during the selection of the participants and data collection.

In an effort to secure an adequate response rate for this study and to maintain consistency, data collection took place during week-ends and only the researcher was involved. Consistency in data collection plays an important role in maintaining the validity of the study. Consistency implies that data is collected from each respondent in an identical fashion or as close as possible to the original way of data collection (Basavanthappa 2007:364). According to Burns and Grove (2009:409) consistency can be influenced by the number of data collectors involved and the circumstances under which the questionnaires are administered.

Permission to conduct the research surveys were requested from the Pavilion Centre Management. (See Appendix 2 – Gatekeeper Permission Letter).

The study followed a self-administered approach. This involves the researcher physically giving out the survey to persons responding and remaining on site to assist in the event of any issues (Deport and Roestenburg 2011: 188). In attempting to gain views from various demographics, the survey was conducted at different hours in the day on weekends.

As the study was self-administered, surveys were completed by willing respondents and collected on the spot. This was after they had read the information letters (see Appendix 3) and signed the consent to participate letters (see Appendix 4). No coercion was used to secure participation.

Data collection only commenced after receiving permission from management of the mall, to undertake the study on their premises. After obtaining permission and ethical approval from the Durban University of Technology's (DUT's) Faculty Research Ethics Committee (FREC) within the Faculty of Management Sciences, data collection commenced.

Respondents were approached respectfully and in a friendly manner, by first explaining the aim of the study. No coercion was used and those who agreed were provisioned with the information and consent letter and a pen, and hard board backing to enable its completion. All wore a mask aligned with COVID-19 protocols, however a hand sanitizer was made available to sanitize both respondents hands and their pens before and after questionnaires were completed. Those willing to participate eventually completed the questionnaire. The mall was not busy due to COVID-19 restrictions and hence there was not much noise or distractions. A quiet spot was chosen, and each respondent maintained a safe distance from the researcher during its completion. Burns and Grove (2007: 41) stressed that before data collection occurs, the researcher must ensure that consent has been obtained from the respondents. This was secured from all the consumers who were approached. Hence, after reading through the letter of information, written consent was secured from each respondent to participate in the study.

The data collection phase for this study took place between mid-2020 and the end of 2021, during the COVID-19 pandemic when strict lockdown measures were in place. Hence, data collection

was slowed and occurred only after certain regulations were eased and shoppers could be out. This was also the reason for why data collection stopped after the 50 % target population was surveyed.

3.2.10.1 Data collection tool

Data was collected by means of a self-reported survey. A survey is a data collection technique in which standardised questionnaires are administered to a sample of respondents to collect original data from an identified population that may be used for descriptive, explanatory or exploratory purposes (Babbie 2007:244). In self-reported questionnaires, as in the current study, the respondents completed the questionnaire themselves (Babbie 2007:260).

Botma *et al.* (2010: 131) clarified that data collection in quantitative research involves the systematic gathering of numerical data relevant to the purpose or specific objectives of the research study. Quantitative data collection methods frequently use predesigned structured measuring instruments, such as the self-administered questionnaire used in the current study (de Vos *et al.* 2005: 166). (See Appendix 1 – Survey Instrument). The survey questionnaire comprised of the four broad sections which focussed on: demographic details, consumers personal awareness of the environment and personal environment behaviours; organizational concerns which focussed on environmentally responsible organizations and the impact the organization has on the environment and consumer purchase behaviours. The latter section focused on consumer purchase behaviours related to eco-friendly products, influence of price on intention to purchase green products; environmentally friendly packaging and actual purchasing habits.

The instrument was a self-administered questionnaire which each participant had to complete, without the researcher's influence or input, so that objectivity was maintained and bias minimised. A survey questionnaire approach was deemed most suitable to collect data aligned with the objectives. As Cant and Van Heerden (2013:138) stated, a survey questionnaire is the most generally used tool for collecting primary data. McDaniel and Roger (2010:371) defined a questionnaire as a list of questions that can be used to generate the information required to meet the objectives of the study. It also constitutes a formal plan to gather information from respondents. The motivation for using a questionnaire in this study can be found in the advantages it provides by this type of data-gathering instrument. Firstly, it is a quick way of obtaining data from a large group of people, it is less expensive in terms of time and money, and

the format is standard for all the respondents (Brink 2006:147). Most importantly, is the sense of security created by the guaranteed anonymity accompanying the questionnaire which, according to Brink (2006:147), is vital for eliciting honest answers from respondents.

The survey questionnaire utilised in this study was based on validated scales used in research conducted by Braga *et al.* (2015: 103). These researchers gave permission for their questionnaire to be used in the current study, although it was adapted for use in the South African context. (See Appendix 1 – Survey Instrument).

Most of the questionnaire contained Likert scales and closed-ended questions. Likert scales are composed of statements that allow respondents to rate their opinions or beliefs on a particular statement, by selecting an ordinal direction that is expressed in words. It is not uncommon to include a neutral option between 'agree' and 'disagree' when formulating a Likert scale.

A mutually intensified response in either direction is also acceptable, e.g., 'strongly agree' versus 'strongly disagree', so long as it does not leave the respondent feeling overwhelmed with choice. The total account of each individual's response is tallied in concluding the findings, which also allows for this type of scale to be named a "summated rating scale" (Delport and Roestenburg 2011: 212). The purpose was to derive means to ascertain levels of support for different items on the scales.

Descriptive surveys are generally used to identify the selected sample's groups demographic characteristics, opinions on different subjects or on a specific topic. Descriptive statistics were used and is the most widely used analytic tool within survey research studies and includes the sum, which is the number of frequencies, rates, which reflects percentages, average which is the arithmetic mode or mean or mean and variability measurements which is the standard deviation. The choice of a descriptive survey research design therefore coheres with the objectives of this study (Best and Kahn 2007:5).

3.2.10.2 Process of data collection

On a given day the researcher positioned himself at different points at the entrance halls of the mall, so as to begin the recruitment process. Given that approximately a 1 000 shoppers passed

through the mall, during the weekend a response rate of 50 % was sought. This information was gleaned during a meeting with the management, when permission to conduct the study at the mall was being negotiated. This number shifted to 500, as the data was collected during the COVID-19 pandemic, when significantly fewer people were out and about. Over several weekends, questionnaires were distributed and collected and then stored at the researcher's home in a locked cupboard accessible only to the researcher. Prior to the pandemic, the issue of noise could have been a distraction, However, because it was during the pandemic, noise was not a huge factor because of the limited number of shoppers.

The data collection process however was slowed down due to the COVID-19 pandemic, which resulted in fewer shoppers at the mall and many being hesitant to participate. To ensure safety, each participant was provided with a pen for completing the questionnaire and offered a hand sanitiser before and after the survey. Although a direct approach was used to invite consumers to participate in the study, no coercion was employed. It was not possible to utilise a totally private space, as this was a mall, however the researcher stood aside with the respondent during the completion of the questionnaire. Those who completed it did not have any problems with same. There were no questions within the questionnaire, that could prompt any emotional distress within the questionnaire.

An information letter (Appendix 3) was attached to each questionnaire, which provided each participant with clear guidelines, on its completion. The information letter detailed the nature of the study, its objectives, and the value of the study. Once respondents agreed to participate, they were given a consent form to complete (Appendix 4). A total of 250 questionnaires were printed and distributed (this was the target number) with minimal data missing. This resulted in a 50 % response rate and data collection stopped thereafter, particularly due to the COVID-19 pandemic.

3.3 Data Analysis

The techniques used for data analysis in quantitative research include both descriptive and inferential analyses. Data analysis in quantitative research can be seen as the categorisation, ordering, manipulating, and summarising of data to obtain answers to the research questions (de Vos *et al.* 2005: 218; Polit and Beck 2021: 743). Numerical data, however, can be manipulated

through statistical procedures to describe phenomena or assess the strength and reliability of relationships between them (Polit and Beck 2021: 54).

Burns and Grove (2007: 402) described quantitative data analysis saying it consists of various phases, namely, preparing the data for analysis, describing the sample, testing the reliability of measurement methods and conducting exploratory analysis of the data. Computers are used commonly in data analysis; hence, a systematic plan is used for the entry of data onto a spreadsheet to reduce the possibility of errors. Once entered the data is subsequently checked to ensure its accuracy. Raw data for the current study was reduced and analysed by a professional statistician using the latest statistical software SPSS version, with the application of descriptive and inferential statistics (De Vos *et al.* 2005: 218).

All the survey questionnaires were checked, and once the researcher was satisfied that they could be used in the study, the data capturing process commenced. Quantitative data cannot be reported in its raw form. The aim of data analysis is therefore to reduce the data into a coherent form, organise it, and give meaning to the data. Each questionnaire was given an identification number after it had been returned by the respondent. The raw quantitative data was captured on computer with MS Excel for statistical analysis in the next phase of the research. The data was cleaned by randomly cross-checking the data points with the original data for accuracy and correction of the identified errors (Burns and Grove 2007:403).

Gay (1996: 96) noted that the research plan must include a description of the statistical technique/s used to analyse data. After all the surveys were completed, the researcher used a descriptive statistical method to examine the data. The data were extracted from the questionnaire into a Microsoft excel spreadsheet. Thereafter, it was imported to the Statistical Package for Social Sciences (SPSS) programme for the analysis (version 28.0, SPSS science, Chicago, USA). This was done with the assistance of a statistician.

Babbie (2007: 450) described descriptive analysis as statistical computations that highlight either the characteristics of a sample or the relationship among the variables in a sample. The analysis involved the use of descriptive statistics such as mean and standard deviation for continuous variables and frequency distribution for categorical variables. All the questionnaires were

completed fully, meaning that no questionnaires were discarded. the missing data was very negligible and scattered across the data field. Missing data is reported accordingly in Chapter 4.

Univariate analysis of the data, was done particularly in relation to the demographic characteristics of the participants. Bivariate analyses were also conducted to assess the relationship between the variables. This included the use of the Pearson correlation test to assess the relationship between variables such as gender and income levels with the intention to purchase green products. A confidence interval of 95% and a corresponding p-value of < 0.05 were considered statistically significant for standard inferential statistics. Tables were used to display trends and frequencies.

Descriptive statistics were used to describe the sample and draw up frequency distributions. The data on each of the variables was examined according to the measures of central tendency (mean) and dispersion (standard deviation) and the outliers were identified. The mean is the measure of central tendency that is most used and is also known as the average value. The mean is calculated by adding all the scores together and then dividing the sum by the total number of scores (Burns and Grove 2007:417).

Maltby, Day and Williams (2007:58) described the standard deviation (SD) as a descriptive statistic that measures variability and is always associated with the mean. According to Burns and Grove (2007:418) the standard deviation, provides the researcher with an indication of the average deviation of a score from the mean in that specific sample and provides a measure of dispersion. Inferential statistical tests were used to examine and describe differences between the different groups such as gender groups, income levels and education. The Pearson correlation coefficient (r) is a parametric test that is used when the variables are normally distributed to determine whether there is a relationship between two continuous variables (Burns and Grove, 2007:423). The possible correlations range between -1 (a perfect negative correlation) and +1 (a perfect positive correlation) with a value of 0 in the middle, which indicates that no relationship exists between the two variables (Burns and Grove, 2007:423). It is important to note that the Pearson correlation only determines that a relationship (positive or negative) exists or that there is no relationship between two variables, but it does not determine causation of one variable by another (Maltby *et al*. 2007:163). Analysis of variance (ANOVA) is a method for assessing the differences between means when data from two or more groups is being examined. The results are reported as an F-statistic (Burns and Grove 2007:430).

Probability (*p*) is used in statistics to establish confidence, within the findings of a study (Maltby *et al*. 2007:114). In other words, the *p*-value gives an indication of the probability that an event will occur in a given situation or that an event can be accurately predicted under certain circumstances (Burns and Grove, 2007:406). The *p* value is expressed as a decimal value ranging from 0 to 1 and can be stated as less than a specific value, for example $p < 0.05$ (Burns and Grove 2007:407). Significance testing is based on probability and is a criterion that is used to judge whether the researchers are confident that their findings are probable or not probable. The results of significance testing are expressed as a percentage indicating that the researcher is 95% or 99% confident of the findings. The level of significance is often expressed as a decimal of 0.05 or 0.01, meaning that there is a 5% or 1% probability that the researcher had made an error (Maltby *et al*. 2007:115).

Babbie (2007:450) similarly described descriptive analysis as statistical computations that highlight either the characteristics of a sample or the relationship among the variables in a sample. The analysis involved the use of descriptive statistics such as mean and standard deviation for continuous variables and frequency distribution for categorical variables. This constituted univariate analysis of the data, particularly in relation to the demographic characteristics of the variables. This included the use of the Pearson correlation test to assess the relationship between variables such as the gender and income levels with the intention to purchase green products. A confidence interval level of 95 % and a corresponding p value of <0.05 were considered statistically significant for standard inferential statistics. Finally, tables were used to display trends and frequencies.

The following section outlines the ethical considerations that were adhered to in this study.

3.4 Ethical Considerations

Considering the crucial role of ethics in any research undertaking, the current study adhered to all the required ethical protocols and considerations as stipulated by the DUT. Research ethics refer to the consideration of the well-being of participants during the process of collecting data as well as in the final reporting of the findings (Creswell 2015). As per the ethical requirements of the DUT, which stipulates preventing harm and protecting participants from any kind of harm or risk, the researcher did not include any questions that may have caused stress or discomfort during or after the research process.

The ethical considerations for this research study included the following:

3.4.1 Providing participants with letters of information and securing informed consent

Saunders, Lewis and Thornhill (2012: 238) stated that obtaining informed consent, from participants involves providing them with sufficient information; giving them the opportunity to ask questions; allowing them enough time for consideration (without any pressure or coercion); and enabling them to make a fully informed, voluntary decision about whether to participate in the study or not. In this regard, the respondents were made aware of the study and its objectives in the letter of information (Appendix A). The researcher also requested written consent from participants through a consent form (Appendix B).

Although a direct approach was made, no consumer was coerced to participate. All participants were approached with a friendly and respectful demeanour and only those willing to participate were included. Only adults, both males and females of all racial backgrounds were approached. The aim and objectives were explained, together with an indication that the questionnaire would take approximately five to ten minutes to complete and that they were not compelled to complete it. Then those with a willingness to participate were then provisioned with the information and consent letter. Following a signing of the consent letter, they were given the questionnaire and a pen to complete it. A sanitizer was also on hand enabling sanitization protocols which were being supported during the pandemic.

3.4.2 Protecting participants from harm

The researcher ensured that none of the questions in the questionnaire had the potential to cause emotional distress to the participants.

3.4.3 Ensuring confidentiality and anonymity

Anonymity and confidentiality are two important aspects of research (Oancea and Punch 2014). In this study, anonymity was maintained by not disclosing the actual names of the participants. The questionnaire did not require the participants to provide any personal information such as their name, identity number, or any other details that could potentially identify them. The participants' responses or views were also kept confidential.

Data was stored in accordance with Durban University of Technology's ethics requirements, in a secure facility. Electronic data is stored, using a password protected system, that only the researcher has access to.

3.5 Limitations of the study

There were several limitations to this study. They are as follows :

The first related to the small sample size due to the use of convenience sampling. The use of the latter sampling strategy was necessary as data collection occurred during the pandemic, which hampered the researcher from being in the field for a protracted period. Moreover, fears around the spread of infection, also meant that fewer consumers were out. COVID-19 restrictions meant fewer shoppers. Despite this being a convenience sample, valuable insights nonetheless were derived in relation to the study objectives.

Although the smaller size may have influenced generalizability, convenience samples are still used extensively in quantitative research. This means that the opportunity for all to participate is not equal for all qualified individuals in the target population and hence not necessarily generalizable. As in all quantitative studies, increasing sample size increases the statistical power of the convenience (Raeburn, Hipple, Delaney and Chesky 2003:113). However data collection during the pandemic, constrained the researcher to do same (Raeburn, Hipple, Delaney and Chesky 2003:113).

While enlightening, this research study had certain limitations that provide greater direction for future research. This study was done during the COVID-19 pandemic, and hence sample demographic may have been skewed. The study displayed a skew toward women, younger people and individuals with higher incomes. These characteristics may condition the accessibility of acquiring green products because of numerous factors, such as income and generational mindsets toward environment-friendly consumption.

It is possible that those who responded were concerned with the environment and purchased green products. Future studies may explore the views of consumers who do not presently consume green products, so as to expand the understanding of the elements that could potentially

convert non-green consumers into green consumers. Other studies can also investigate other variables such as consumers' understanding of greenwashing, everyday sustainable practices and sustainable citizenship. This may generate more complex, insights into green consumer behavior.

Finally, the cross-sectional nature of the study, created a picture in time, leaving the evolution of these dynamics unexplored. Future research may thus consider developing a longitudinal study to comprehend the patterns and adjustments in green consumer behavior over time. This research study nonetheless provided informed perspectives regarding the complexities of green consumer behavior. It uncovered the link between consumers' environmental concerns and their eventual green consumer decisions which offered insights into the salient mechanisms underpinning sustainable consumption. The benefits and quality of products significantly influenced consumers' green behavior especially when they were linked to environmental concerns. Consumers' awareness of green product pricing motivated green consumption.

3.6 Conclusion

This chapter provided the methodological approach that was used in this study. It discussed the research paradigm and approach; the data collection and analysis processes; reliability and validity; and the ethical considerations that were adhered to throughout the research process. The recruitment of respondents; the sampling approach that was adopted; and the inclusion and exclusion criteria were also discussed in relation to the aim and objectives of the study. The following chapter explains the data analysis process and discusses the findings of the study.

CHAPTER 4:
DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

The previous chapter discussed the methodology that was employed in this study. Following the data collection process, this chapter presents the analysis of the collected data and discusses the emerged findings. The chapter begins with Section A, which presents the demographic data of the respondents. This is followed by Section B, which contains data related to the consumers' personal beliefs, concerns, and behaviours in relation to the environment. An analysis of data related to waste separation practices, respondents' concerns related to global warming and destruction of the environment, and their involvement in green initiatives is presented. Section C of this chapter focuses on organisational concerns and contains an analysis and discussion of the data related to the respondents' views regarding environmentally responsible organisations, and their views regarding the impact of organisations on the environment. Section D presents data and examines consumer purchase behaviours regarding eco-friendly products; the influence of price on consumers' intention to purchase eco-friendly products; and the influence of environmentally friendly packaging on consumers' intentions to purchase ecofriendly products. It also explores respondents' actual purchasing habits. This chapter concludes with Section E, which discusses the significant correlations found within the data.

4.2 Section A

Section A presents the respondents' demographic data. The topics included in this section focus on age, gender, and racial distribution, respectively. Attention is also given to employment status and income level; highest qualification; place of residence; and lastly, the health status of the participants.

Demographical data was important as variables such as age gender, employment status and income level etc. could have potentially influenced green purchasing behavior.

4.2.1 Age distribution

This sub-section presents the age profile of the sample, which is illustrated in Table 1 below.

Table 4.1: Age distribution of sample

Age	Frequency	Percentage
21-30	54	21.7 %
30-39	86	34.5 %
40-49	46	18.5 %
50-59	46	18.5 %
60 and above	17	6.8 %

As reflected above, there were a diverse range of age groupings from 21 years of age. Most of the respondents (70.5%; *n*=178) were between the ages of 30 to 59 years. Of these, the highest number of respondents were found to be between 30 and 39 years of age (34. 5%; *n*= 86). The second highest category and the youngest age grouping were those between 21 to 30 years of age (21.7%; *n*=54). About 7% (6.8%; *n*=17) were in the most senior age category, namely, those who were 60 and above. There were no missing data.

4.2.2 Gender

This section describes the gender distribution within the sample. The data are presented in Table 2 below.

Table 4.2: Gender distribution of the sample

	Frequency	Percentage
Male	102	42.5 %
Female	138	57.5 %

Almost 60% of the sample (57.5%; *n*=138) was female, and 42.5% (*n*=102) were male.
This reflects a slightly stronger presence of female respondents in the study.

4.2.3 Racial distribution

As mentioned earlier, the sample was comprised of individuals from different racial groupings. Table 3 below summarises the racial distribution of the study's sample.

Table 4.3: Racial distribution of sample

	Frequency	Percentage
White	12	4.8 %
Black	44	17.6 %
Indian	151	60.4 %

Coloured	36	14.4 %
Other	7	2.8 %

As reflected in Table 3, the largest number of participants were from the Indian race group. This accounted for 60% (60.4%; *n*= 151) of the respondents in the study. The second highest racial grouping were from the Black race group (17. 6% *n*=44), followed by the Coloured race group (14.4%, *n*=36). Seven respondents (*n*=2.8 %) identified themselves as "other". The racial distribution reflects the population profile of KwaZulu-Natal. Both Indian and Blacks constitute the highest racial groupings who reside in this province.

4.2.4 Employment status

The employment status of the respondents varied, as indicated in Table 4 below.

Table 4.4: Employment status

	Frequency	**Percentage**
Student	17	6.9 %
Employed	150	61.0 %
Self-employed	35	14.2 %
Unemployed	44	17.9 %

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Most of the participants had a steady income source (75.2%; n=185), from either employment (61%; *n*=150) or through self-employment (14.2%; *n*=35). Less than 20% of the participants were unemployed (17.9%; *n*=44). About 7% (*n*=17) of the sample were students.

4.2.5 Income levels of the sample

The income levels of the respondents also varied. Table 5 reflects the monthly income distribution of the sample.

Table 4.5: Income levels

	Frequency	Percentage
Below R5000	54	27.6 %
R 5000 to R15000	76	38.8 %
R15001 to R25000	37	18.9 %
R25001 to 35000	16	8.2 %
R 35001 to R45 000	10	5.1 %
Above 45000	3	1.5 %

As reflected, the sample was ranked in tiers of R10 000, starting with below R5 000, to those whose income exceeded R45 000. The majority of the respondents (85.3%; *n*=167) earned below R25 000. Of these, almost 40% (38.8%; *n*= 76) of the respondents earned between R5 000 to R15 000, with only less than 15% (13.3%) of the respondents earning between R25 000 to R45 000. A very small percentage (1.5%; *n*=3) of the sample earned more than R45 000. These income statistics reflect the current socio-economic status prevailing in the South African context. Poverty and inequality remain one of the most problematic developmental challenges in South Africa (Mazibuko 2021). The Statistics South Africa (StatsSA) (2017: 2) report notes that many interventions have been designed to alleviate poverty, including social grant interventions in South Africa; however, despite these interventions, poverty continues to rise (StatsSA, 2017: 2).

4.2.6 Highest qualification obtained

The educational qualifications of the participants are reflected in Table 6 below.

Table 4.6: Highest qualification of the sample

	Frequency	Percentage
Matric	141	61.3 %
Diploma or Degree	72	31.3 %
Postgraduate Diploma	14	6.1 %
Masters	2	0.9 %
Doctorate	1	0.4 %

A significant number (61.3%; *n*=141) of participants had matric as their highest secondary school qualification. Almost a third of the sample (31.3%; *n*=72) had a National Diploma or were in possession of a bachelor's degree. A small portion of the sample, viz. less than 10% of the participants, had either a postgraduate degree (6.1%; n=14) or other postgraduate degree. Two participants indicated they had a master's degree (0.9%, n=2), with one indicating that they had a doctorate (0.4%, *n*=1). The educational qualifications are consistent with the income of the sample, as only a small percentage were slightly high earners. This is reflected in Table 6.

4.2.7 Place of residence

This section reflects on the place of residence of the sample, as shown in Table 7 below.

Table 4.7: Place of residence

	Frequency	Percentage
KwaZulu-Natal	237	95.2 %
Other	12	4.8 %

More than 95% (95.2%; *n*=237) resided in KwaZulu-Natal. This was expected as the survey was conducted within the province of KwaZulu-Natal. Less than 5% (4.8%; *n*=12) of the participants resided in other provinces. This latter percentage of the sample may have been those visiting the province of KwaZulu-Natal at the time of the survey.

4.2.8 Health status

This section presents the data related to the participants' personal ratings of their health status, as shown in Table 8.

Table 4.8: Health status of the sample

	Frequency	Percentage
Major illness	10	4.0 %
Relatively Healthy	76	30.5 %
Fit	163	65.5 %

More than 95% of the participants considered themselves being either relatively healthy (30.5%, *n*=76) or fit (65%; *n*=163). A small percentage, which was less than 5% (4.0%, *n*=10), reported having major illnesses. Given that the study was conducted during the COVID-19 pandemic, it was expected that those with major illnesses would not be out shopping for fear of risk of exposure to the coronavirus.

4.3 Section B

Section B presents data related to the consumers' personal beliefs, concerns, and behaviours in relation to the environment. The topics focused on in this section include their personal awareness of the environment; personal concerns regarding the environment; waste separation practices at home; concerns regarding global warming and the destruction of the environment; involvement in green initiatives; and personal environmental behaviours.

4.3.1 Personal awareness of the environment

This section presents the data regarding the respondents' personal awareness of the environment. Table 9 explores the frequency with which the participants consider their impact on the environment.

Table 4.9: Personal awareness of impact on environment

	Frequency	Percentage
Always	105	42.2 %
Sometimes	101	40.6 %
Never	43	17.3 %

Almost 40% (42.2%; *n*=105) of the respondents' indicated that they "always" considered their personal impact on the environment. This indicates a relatively significant awareness of personal behaviours and activities on the environment. A similar percentage (40.6%; *n*=101) expressed that they "sometimes" considered their impact on the environment. Collectively, there exists great personal concern for the environment.

However, less than 20% (17.3%; *n*=43) of the sample reported that they "never" consider the impact they have on the environment. The lower levels of awareness of personal impact on the environment is concerning, given the escalation in climate change and its debilitating effects on individuals, families, and communities. It is also possible that this lack of concern is not deliberate as they may not be aware of how personal behaviours and choices indirectly affect the environment. This suggests a need for greater educational awareness among the South African population regarding how their personal activities and choices can impact the environment, including a range of actions that may be harmful.

4.3.2 Personal concerns regarding the environment

Table 10 below reflects the descriptive statistics for the respondents' specific personal concerns for the environment.

Table 4.10: Personal concerns regarding the environment

	N	Missing	Mean	Median	SD	Min	Max
I am concerned with the level of pollution in our country	249	5	4.16	4	0.795	2	5
I am concerned that the emission of carbon dioxide damages the atmosphere	248	6	3.98	4	0.872	1	5
I am concerned that the utilisation of plastic bags destroys the environment	247	7	3.85	4	0.973	1	5
I am concerned that certain countries have banned the production and use of plastic bags due to its harmful effects, yet our country hasn't	248	6	3.7	4	1.01	1	5
I am wary of chemical products (including but not limited to detergents and cleaning products) as they cause harm to the environment	249	5	3.8	4	0.886	1	5

The highest mean was 4.16 (SD = 0.795) for the item "*I am concerned with the level of pollution in our country".* This indicates significant concern for the rising levels of pollution in South Africa amongst the current sample. It also supports earlier findings under section 4.3.1 where almost 80% of the sample indicated having personal awareness of their effect on the environment. This may be linked specifically to awareness of how their personal contribution to pollution may be destroying the environment. These concerns regarding pollution were reiterated by Oladipupo *et al*. (2022: 577) who described South Africa as one of the most polluted countries in Africa, with escalating CO2 emissions. They urged that the country find new ways of reducing pollution. The item with the second highest mean of 3.98 was "*I am concerned that the emission of carbon dioxide damages the atmosphere",* which reflects a strong concern for the same amongst the local respondents in this study.

The lowest mean 3.7 (SD=1.01) on this scale was for the item: *"I am concerned that certain countries have banned the production and use of plastic bags due to its harmful effects, yet our country hasn't".* Although this mean was relatively lower than other variables, it still reflects that the sample supports the banning of plastic bags in South Africa. It is possible that this lower mean may be attributed to a lack of knowledge regarding the harm that plastic bags cause to the environment. Miller (2012: 5) noted that plastic bags are often used globally in a careless manner and are popular with retailers and consumers, as they are very cheap, strong, lightweight, and functional. Regardless of such conveniences, the literature reflects that plastic bags have become responsible for environmental and agricultural land degradation and are a threat to aquatic life (Usman *et al.* 2022: 6773; Hossain *et al.* 2021: 212).

A larger number of manufacturing organisations are engaging in using harmful chemicals and materials in the production process. Moreover, there is a steady number of consumers who are using plastic bags, which are environmentally hazardous products, for their shopping needs. This has resulted in the environment and agricultural lands being polluted. In order to reduce the debilitating environmental as well as agricultural land pollution, consumers of plastic bags and the business sector must collectively harness their energies to address these issues. Whilst the threat of global warming has compelled the business sector to strictly reduce its environmental and agricultural land pollution (for example, waste water and solid waste discharges and energy use), consumers, however, continue to contribute to the environmental and agricultural land pollution burden, particularly through the use of plastic bags.

There are several eco-friendly alternatives to plastic bags, including jute bags, paper bags, and biodegradable bags, all of which have no hazardous effects on the environment and agriculture. Additionally, reusable bags are a great option. However, if a reusable bag is not readily available, and no eco-friendly alternatives are offered, customers may request or accept plastic bags due to the need for convenience.

The European Union (EU) reports that more than 100 billion plastic bags are used annually in Europe (A European Strategy 2018:1). However, these bags are considered environmentally damaging due to their use of non-renewable resources (such as petroleum) in production, their lack of biodegradability, and their tendency to quickly become litter after only a short period of use. Plastic litter in the ocean has been well researched and linked to the death of marine species such as turtles, fish, whales, crabs, and even zooplankton (Steensgaard *et al.* 2017: 290) because once

they consume the plastic bags, they die from intestinal blockage or starvation. Despite the significant reduction in the use of plastic bags, the consumption habits of end users, as argued by Gómez and Escobar (2022:110), have not changed radically, which warrants consideration of materials such as paper, cotton, fabric or other reusable plastics for packaging purposes. The low average opinion on plastic bags suggests that local consumers may not be fully aware of their harmful effects. This highlights the need for educational initiatives to increase awareness. In addition, manufacturers should seriously consider alternative materials such as paper, cotton, or other fabrics.

4.3.3 Waste separation practices at home

This section indicates the respondents' practices of waste separation in their home environment.

Table 4.11: Separation of waste at home

	Frequency	Percentage
Plastic	135	54,0%
Metal	47	18.8 %
None	68	27.2%

Respondents were asked if they separated their waste at home into plastic or removed metal from their waste. Just more than half the sample (54%; *n*=135) expressed separating plastic from other waste, which reflects some awareness of the harm plastic causes to the environment. Slightly less than 20% (18.8%; *n*=47) indicated separating metal from the rest of the waste. About 27% (*n*=68) reported that they did not separate their waste at all, which reflects a lack of awareness regarding the importance of the same.

The burgeoning waste volume is a significant problem, with consumers across the globe playing a significant role in sorting recyclable materials from residual waste (Katan 2022: 187). Katan (2022: 187) argued that the experience of inconvenience plays a major role in deterring householders from sorting their waste.

Goh *et al*. (2022: 131), however, highlighted the importance of waste separation behaviour, saying that one pro-environmental strategy, with regards to the problem of household waste, is waste separation behaviour. Their study which was conducted in the city of Joondalup, Australia, with 1,697 household residents, found that personal norms and social norms, and perceived behavioural control, were major factors that influenced these householders. This finding is

consistent with the theory of planned behaviour, which was the guiding theoretical framework of the study. This theory is based on the premise that personal and social norms play a significant role in influencing green purchasing behaviour. Therefore, this highlights the importance of educating and raising awareness among the current sample and other local consumers regarding the impact of personal and social norms on their purchasing behaviour.

According to Tejaswini *et al.* (2022: 5), managing post-consumer discarded plastic waste poses significant challenges in developing countries, including a lack of amenities, technological interventions, and associated negative environmental factors. This is particularly evident in South Africa. They added that untreated recyclable and nonrecyclable plastic wastes, together with dumping of other solid waste, has other environmental consequences, such as pollution, global climate change, and health issues, which warrants deeper consideration by local municipalities and government stakeholders. This is important to consider within the context of other research studies conducted in South Africa and the current study. Roos *et al*. (2022: 467), for example, undertook a study which investigated waste separation behaviour amongst South African households in the Abaqulusi Municipality in KwaZulu-Natal. “Behaviour”, in their study, referred to determining the current waste separation practices of these households. Using door-to-door surveys, data were collected from 757 households. Only 16% of the households were found to be engaging in waste separation practices, whilst less than one-third of the households expressed a willingness to participate in waste separation practices in the future. This correlates with the findings in the current study, supporting the need for greater education around waste separation and its benefits.

Abdul-Rahman (2014: 5) has provided an overview of the reasons and ways to better manage household waste. He advocated for the use of the three Rs, saying:
I. Reduce: People should only purchase what they need to minimise waste creation.
II. Reuse: Goods should be acquired by obtaining used items or substitutes.
III. Recycle: Instead of sending waste to landfills, it should be recycled.

He argues that current disposal strategies pose a threat to the health and safety of both humans and the environment, and create risks for global society as a whole. Untreated industrial, commercial, and household waste can contaminate groundwater, rivers, and streams. When burned, it releases hazardous gases into the air and emits toxic residues, which can find their way

into the human or animal population in various forms (Siddiqua, Hahladakis and Al-Attiya 2022: 58514). Hence, both household waste and industrial waste must be separated and disposed of in a way that does not harm the environment.

4.3.4 Global warming and the destruction of the environment

This sub-section describes the respondents' views regarding global warming and the destruction of the environment.

Table 4.12: Concern regarding global warming and the destruction of the environment

	Frequency	Percentage
None	35	7.2 %
Global warming	184	37.8%
Deforestation	75	15.4%
Destruction of eco-system	71	14.6%
Loss of plants, animal and aquatic life due to Pollution	122	25%

In this section of the survey, participants could select more than one item. Almost 40% of the sample (37.8%; *n*=184) indicated personal concerns regarding global warming. This was a relatively low level of concern for global warming, considering the growing attention to the effects of global warming. Moreover, there were equally lower levels of concern for deforestation (15.4%; *n*=75); destruction of the eco-system (14.6%; *n*=71); and loss of plant, animal, and aquatic life due to pollution (25%; *n*=122). Again, this reflected very low levels of concern for the same, which suggests the need for greater education on the harmful effects of global warming in the South African context. Kvaløy, Finseraas and Listhaug (2012: 15) who undertook a cross-national study of 47 countries, documented public concern for global warming. The study revealed that a significant proportion of the population across all countries are worried about global warming, indicating a greater concern for global environmental issues. Again, more education and community awareness regarding the same is crucial to strengthening personal concern for the environment in the local context.

The following sub-section looks at the participants' involvement in green initiatives.

4.3.5 Involvement in green initiatives

Table 13 summarises the relevant data pertaining to this topic.

Table 4.13: Involvement in green initiatives

	Frequency	Percentage
None	75	25.1%
Earth Hour	27	9.0%
Earth Day	26	8.7%
World Environment Day	28	9.4%
National Arbor Day	124	41.5%
International Coastal cleanup Day	19	6.3%

Respondents were also asked about their involvement in various green initiatives as above. They could indicate support for more than one variable. As reflected in Table 13, there was very poor involvement in various green initiatives. The highest level of involvement was in National Arbor Day (41.5%; *n*=124). This may be linked to the fact that most South African schools celebrate this day and ensure that students are involved in initiatives related to the same. The extremely poor levels of involvement in initiatives such as World Environment Day (9.4%; *n*=28); Earth Hour (9%; *n*=27); Earth Day (8.7%; *n*=26) and International Coastal Clean Up Day (6.3 %; *n*=19) are suggestive of the fact that there is little attention in the South African context to these international green initiatives. It is noteworthy that a quarter of the sample (25.1%; *n*=75) had not been involved in any green initiatives. Earth Hour, for example, is an international campaign organised annually by the World Wide Fund for nature. It highlights the environmental consequences of human activity and encourages sustainable behaviour (Kountouris 2022: 107367). These findings support the need for greater attention that will enable individual and community involvement in such initiatives locally and globally.

4.3.6 Personal environmental behaviours

Table 14 below presents the descriptive statistics for the respondents' personal environmental behaviours.

Table 4.14: Personal environmental behaviours

	N	Missing	Mean	Median	SD	Min	Max

I separate recyclable wastes and organic residues at home	249	5	2.02	2	0.911	1	3
I try to reuse packaging or wrappings when possible	247	7	4.04	4	0.798	1	5
I believe that pollutants in the environment indirectly go into our food	250	**4**	**3.86**	4	0.768	1	5
I feel that I may help solve problems related to natural resources by saving water and energy	250	**4**	**4.04**	4	0.832	1	5
I value the earth and ocean, and am concerned for its sustainability	249	**5**	**4.19**	4	0.762	1	5
I understand that plant and animal life are directly and indirectly affected by human consumption	248	**6**	**4.05**	4	0.821	1	5
I prefer carpooling, public transport or bike riding to reduce my carbon footprint when it comes to commuting	249	5	3.67	4	1.038	1	5

The highest mean on this scale for personal environmental behaviour was 4.19 (SD = 0.762) for the item "*I value the earth and ocean, and am concerned for its sustainability*". Hence, despite findings that participants did not engage in various green initiatives, they valued the earth, and ocean, and its sustainability. Again, this ties up with earlier findings which support significant personal awareness of the environment amongst the current sample.

A significantly high mean was also found for the item, "*I understand that plant and animal life are directly and indirectly affected by human consumption*". This was the second highest mean of 4.05 (SD= 0.82). What is noteworthy is that this item reflected personal awareness of how both plant and animal life was affected by human consumption. Another item that had a significantly high mean was: "*I feel that I may help solve problems related to natural resources by saving water and energy*" (4.04; SD=0.83). Strong support for this variable was promising as it showed a high

commitment amongst the sample in terms of saving water and energy, thereby preserving natural resources. Thus far, the research has found that water pricing, family composition, or personal and behavioural characteristics influence water conservation (Koop, Dorssen and Brouwer 2019: 867). If the same level of personal commitment towards water and energy conservation observed in the current sample is also evident in the wider South African population, it could greatly contribute towards achieving these goals locally.

A further variable which had quite a high mean was for the item, "*I prefer carpooling, public transport or bike riding to reduce my carbon footprint when it comes to commuting*" (3.67; SD=1.03). This was also noteworthy as it shows a growing trend to use carpooling in an effort to reduce carbon transmissions. Other studies abroad, such as in South Korea, also found that carpooling can alleviate traffic congestion, as well as reduce greenhouse gas emissions and energy consumption (Seo and Lee 2022: 877). Another study by Amatuni *et al.* (2020: 266) in the Netherlands, San Francisco, and Calgary, also documented a reduction of greenhouse gas emissions due to carpooling. Hence, education regarding the benefits of carpooling is crucial to ensuring a reduction in greenhouse gas emissions locally.

There were moderate means obtained for the following items on this scale:

"*I believe that pollutants in the environment indirectly go into our food"* (M=3.86; SD=0.76). It was significant to find that there was also a strong moderate mean for the item: "*I try to reuse packaging or wrappings when possible*" (4.04; SD=0.798). This was important because packaging has a noteworthy environmental impact and constitutes a significant cost in the current supply system. Therefore, the use of reusable packaging can lead to a large reduction in environmental damage (Coelho *et al.* 2020: 5).

In this vein, Marsh and Bugusu (2007: 39) called for innovation in packaging technology, which must strike a balance between energy and material costs, greater social and environmental consciousness, and stricter municipal regulations regarding pollutants and municipal solid waste. Cruz *et al.* (2022: 3087) also highlighted the impact of single-use plastics and advocated for the adoption of more biodegradable alternatives. They emphasised the importance of exploring new initiatives for packaging and wrappers.

The lowest mean on this scale was 2.02 (SD=0.91), for the item: "*I am concerned that certain countries have banned the production and use of plastic bags due to its harmful effects, yet our*

country hasn't". This was an interesting finding as a higher mean would have tied up with findings related to concern for the environment. As discussed earlier, the convenience of the use of plastic bags may have led to this finding, or the lack of awareness regarding the harmful effects of plastic bags.

A study undertaken in South African townships found that plastic waste is disposed of in a haphazard manner, and most community members were unaware of or showed little concern for its adverse environmental and health effects (Adeniran and Shakantu 2022: 779). The researchers concluded that the plastic materials manufacturing sector, especially in packaging, is booming. However, little has been done to ensure that such waste is recycled or disposed of in a way that does not harm the environment.

Section B above analysed the respondents' personal beliefs, concerns, and behaviours regarding the environment. With these insights in mind, Section C looks at organisational concerns and contains an analysis and discussion of the data related to the respondents' views regarding environmentally responsible organisations, and their perceptions regarding the impact of organisations on the environment.

4.4 Section C

The topics discussed in Section C include the participants' views on organisational concerns; the impact of organisations on the environment; and packaging.

4.4.1 Organisational concerns

This section presents the views of the participants regarding environmentally responsible organisations. Table 15 below presents data related to participant's views on what they perceive to be environmentally responsible organisations.

Table 4.15: Respondents' views of environmentally responsible organisations

	N	Missing	Mean	Median	SD	Min	Max

Manufacturers should be given more responsibility in terms of the well-being of the environment	249	5	4.21	4	0.756	1	5
Laws, rules and regulations should be better enforced from a manufacturing and organisational level. Failure to comply with this should result in punishment especially instances where the environment is negatively affected	249	5	4.22	4	0.859	1	5
Manufacturers should replace plastic bags with paper bags	250	4	3.8	4	1.142	1	5
Organisations that display eco labels and certifications are favourable as they are	250	4	3.96	4	0.852	1	5
Manufacturers that produce water and energy saving products add an extra mark	248	6	4.1	4	0.813	1	5
Firms that use sustainably sourced materials for their products and processes can	248	6	3.66	4	0.804	1	5
Eco-friendly producers produce products of an inferior quality	248	6	3.06	3	1.028	1	5

Environmental declarations demonstrate that the manufacturer may be	250	4	3.71	4	0.806	1	5

The highest mean on this scale was received for the item: "*laws, rules and regulations should be better enforced from a manufacturing and organisational level*" (4.22; SD=0.859). This reflected that the sample believed that manufacturers should enforce their own laws to ensure they are compliant with regards to the environment. The respondents were of the opinion that failure to comply with this should result in punishment, especially in instances where the environment was being negatively affected. The second highest mean of 4.21 (SD=0.756) related to the variable that the sample believed that "*manufacturers should be given more responsibility in terms of the well-being of the environment*".

According to Saxena and Srivastava (2022: 32), green manufacturing is premised on the "minimisation of hazardous matter in the process of designing, production and technology which may affect the earth and leads to global warming. It generally refers to a broad area including air, water and land pollution, energy usage and efficiency, waste generation and recycling". They added that to protect the environment, it is crucial to decrease the carbon footprint of this sector. In this vein, Piwowar-Sulej (2022: 33) argued that if companies cared for the environment, they should each implement different environmental strategies.

While it is crucial for each manufacturer to establish their own regulations for environmental protection, government initiatives also play a significant role. In a study on environmental regulation, Liu, Xin and Li (2022: 26351) reported that based on the manufacturing panel data of 30 provinces in China, environmental regulation was found to be critical in suppressing local manufacturing carbon emissions. This is an important consideration in the South African context.

A relatively high mean was also received for the item, that "*organisations that display eco labels and certifications are favourable as they are attempting to conserve the environment*" (3.96; SD=0.85). This suggests that consumers want manufacturers to use eco-labels on their products. According to Kumar'Ranjan and Kushwaha (2017: 88), environmental labels, or eco-labels, enable consumers to make decisions regarding environmentally friendly products. In addition, they are also intended to motivate consumers to switch to less environmentally harmful and resource-

consuming products (Thøgersen 2002: 83). Nguyen (2022: 87) conducted a study that investigated the direct impact of eco-labels and green advertising on green purchase intention with 870 consumers. Results revealed that eco-labels and green advertising positively and significantly influenced green purchase intention directly. This data, together with findings from the current study, affirm that manufacturers and marketers should support the role of ecolabels and green advertising.

The lowest mean 3.06 (SD=1.028) was for the item, "*eco-friendly producers produce products of an inferior quality*". This reflects that participants did not believe that ecofriendly products were of an inferior quality. Support for this argument was evident in a study by Soegoto (2018: 434) with 100 customers in Bandung. He found that eco-friendly products were linked to customer satisfaction. Pahlevi and Suhartanto (2020: 1208440) conducted a study in Indonesia with 400 consumers of eco-friendly products and found that green perceived quality and green perceived value were the primary drivers of loyalty towards eco-friendly products. The results from this study align with earlier findings regarding consumers' personal concern for the environment and their support for ecofriendly products.

4.4.2 Impact of organisations on the environment

Table 16 presents data on respondents' views regarding the impact of organisations on the environment.

Table 4.16: Impact of organisations on the environment

	N	Missing	Mean	Median	SD	Min	Max
The production and importing of plastic bags should be banned in our country	249	5	3.6 7	4	1.176	1	5
Agricultural toxins and dangerous substances used in the production of food harm the environment	249	5	3.9 8	4	0.823	1	5

Plastic and paper bags should be recyclable and not have to be deposited into the environment	250	4	4.2	4	0.783	1	5
I am concerned that emissions of gasses into the environment by manufacturing plants contribute to polluting the environment	250	4	4.0 4	4	0.847	2	5
The production of organic products do not impact the environment	249	5	3.7 8	4	0.9	1	5
Deforesting for purposes aligned to manufacturing and production may place the	250	4	3.8 8	4	0.811	1	5
The manufacturing of paper bags has a greater negative impact on the environment	250	4	3.1 7	3	1.16	1	5

As reflected in Table 16, the highest mean was 4.2 (SD = 0.783) for the item "*plastic and paper bags should be recyclable and not have to be deposited into the environment*". This was noteworthy as it reflects consumer awareness of the importance of recycling plastic and paper bags and their impact on the environment. Several researchers have called for the banning of plastic bags and the consideration of alternatives which are biodegradable. Consequently, many countries such as South Africa, Somalia, Bangladesh, India, and some other environmentally concerned countries (Ahmad 2005:1471), have begun taking legal steps to prohibit the use of plastic bags. Despite this, many stores in South Africa continue to use plastic bags. Countries such as Australia, Italy, USA, Tanzania, and Ireland, however, have implemented relevant laws to impose tax or ban the production and use of plastic bags for shopping or other purposes in order to protect the global environment (Brown 2003:1). Plastic packaging has been linked to damage of terrestrial ecosystems, with it being the main source of pollution in marine ecosystems,

as approximately 55% of plastic products are directly discarded every year (Boubeta *et al.* 2018:230). This accounted for about 15%–25% in volume of total municipal solid waste in most countries (UN Environment Programme [UNEP] 2018), which reflects the gravity of the situation.

The item with the second highest mean was "*I am concerned that emissions of gasses into the environment by manufacturing plants contribute to polluting the environment*" (4.04; SD=0.84). This reflected significant concern amongst the sample, that manufacturers are contributing to environmental pollution and highlights the need for more stringent governmental regulations. It further reflects that this is a characteristic issue within the South African context. Coelho *et al.* (2020: 7) argued that reusable packaging is a viable option to significantly reduce environmental impacts. Paper bags have been presented as a more environmentally friendly option due to the natural fibres of paper, which allow for recycling. Scottish research has found that imposing a levy on plastic bags can result in an increase in paper bag consumption (Tough 2007:10), leading to environmental improvement. Instead of providing customers with free plastic bags, they should be encouraged to purchase them for a higher price and reuse them during their next purchase.

Other significant high ratings were received for the item, "*deforesting for purposes aligned to manufacturing and production may place the future of humanity at risk*", which reflects a noteworthy level of concern amongst consumers (3.88; SD=0.81) with regards to the effects of deforestation. These findings align with the views of researchers such as Aquilas *et al.* (2022: 100) that the pursuit of economic growth has fuelled many negative environmental outcomes, including pollution, natural resource destruction, loss of wildlife, soil erosion, and deforestation.

The lowest mean 3.17 (SD=1.16) was for the item "*the manufacturing of paper bags has a greater negative impact on the environment than plastic bags*". This suggests that consumers are aware of the risks associated with plastic bags compared to paper bags and may be more inclined to use paper bags instead of plastic bags. It is possible that the availability of plastic bags and convenience related to its use may have influenced some of the respondents to use and favour them more. Almost a decade ago, Jalil, Mian, and Rahman (2013: 10) observed that countries like Bangladesh, India, Pakistan, and South Africa were opposed to the use of plastic bags due to public concern over their serious negative impact on the environment and agriculture. However, despite these concerns, progress towards change has been slow.

Abdul-Rahman (2014: 7) recommended that consumers should choose durable, reusable items even if they cost more. He also advocated for minimum packaging, stating that materials such as plastic bags, boxes, and wrappers often end up in landfills. He further asserted that consumers should carry their own shopping bags instead of using plastic bags. He added, if consumers didn't have shopping bags, they should use paper bags rather than plastic as they decompose faster (Nguyen 2022: 395).

In terms of reusing items, Nguyen suggested that containers be reused at home, and that wrapping paper, plastic bags, and boxes be reused and that beverages be purchased in returnable containers. Moreover, he argued that newspaper, corrugated cardboard, highgrade paper, aluminium, steel (tin) cans, glass, plastic, motor oil, organic waste, and scrap metals be recycled (Abdul-Rahman 2014: 8).

4.4.3 Packaging

El Bilali and Allahyari (2018: 456) wrote that understanding and communicating the environmental impacts of food products is crucial to enabling a transition to environmentally sustainable food systems. Clark *et al.* (2022: 119) added that it is the manufacturers who are aware of the nature and quantity of ingredients in certain products and hence it is difficult to know what environmental impacts certain products would have. This is where the importance of eco-labelling arises. Grymshi *et al.* (2022: 93) asserted that eco-labels present the opportunity to promote and support more sustainable products as it provides the necessary information required by consumers to select products with less environmental harm.

4.5 Section D

Section D reflects on consumers' purchase behaviours regarding eco-friendly products. It also looks at the influence of price on consumers' intention to purchase eco-friendly products, as well as the influence of environmentally friendly packaging on consumers' intentions to purchase eco-friendly products. It also explores respondents' actual purchasing habits.

4.5.1 Consumer purchase behaviours related eco-friendly/ green/ environmentally sustainable products

This sub-section presents data related to consumer purchase behaviours in relation to eco-friendly, green, or environmentally sustainable products. This is captured in Table 17 that follows.

Table 4.17: Consumer purchase behaviours related to eco-friendly/green/environmentally sustainable products

	N	Missing	Mean	Median	SD	Min	Max
I feel that I can contribute to the sustainability of the environment by purchasing eco-friendly/ green/ environmentally sustainable declared products	250	4	3.91	4	0.836	2	5
I try to avoid manufactured products that damage or disrespect the environment	247	7	3.74	4	0.874	1	5
I seek out food without agricultural toxins since the environment is respected	249	5	3.5	3	0.829	1	5
I verify whether a product that I intend to buy does not damage the environment or cause harm to people	250	4	3.56	4	0.918	1	5
I rate products based on information from the manufacturers' environmental certificates	249	5	3.58	4	0.952	1	5
I intend to buy chemical products (including but not limited to detergents and cleaning products) which are ecologically correct or biodegradable	250	4	3.57	4	0.89	1	5

As reflected in Table 17, the highest mean was obtained for the item, "*I feel that I can contribute to the sustainability of the environment by purchasing eco-friendly/green/ environmentally sustainable declared products*" (M=3.91; SD=0,83). This was noteworthy as it shows a high level of personal commitment to sustainability of the environment, through the purchase of eco-friendly/green/environmentally sustainable products. This tied up with earlier findings from the

present study, where consumers indicated a significant level of avoidance of products that damage the environment, regardless of the current sample's earnings.

A survey conducted with 540 consumers in Istanbul found that environmental awareness, green product features, green promotion activities, and green pricing have a positive influence on consumers' green purchasing behaviours (Boztepe 2012: 15). Another important study by Sewwandi and Dinesha (2022: 10), which included 150 consumers in Sri Lanka, found that green marketing tools have a positive influence on green purchasing behaviour in the electronics home appliances market. In a study by Sun and Wang (2020: 865) that focussed on consumers' attitudes toward and intentions to purchase green products in China, it was found that green product knowledge positively influences consumers' attitudes and intentions.

The item with the second highest mean of 3.74 (SD= 0.87) was related to the item, *"I try to avoid manufactured products that damage or disrespect the environment*", which supports earlier findings regarding consumers' concern for the environment. It was also noteworthy that a significant number of participants rated products based on information from the manufacturers' environmental certificates. A mean of 3.58 (SD=0.95) was found for this variable. Aprile and Punzo (2022: 332) conducted a study in southern Italy that investigated consumers' preferences and willingness to purchase products with three different sustainability labels. They discovered that consumers' preferences for environmentally sustainable labelled products increased when they had sound knowledge about the label's information. Information about the product's domestic origin was significant for all consumers, regardless of their education level, whereas environmental sustainability labels were more appreciated by highly educated consumers. Moreover, consumers were willing to pay more for labels that had a greater market infiltration (Yadav and Pathak 2017: 117).

Moreover, there was also quite a high moderate mean in relation to the item, "*I intend to buy chemical products (including but not limited to detergents and cleaning products) which are ecologically correct or biodegradable*" (M=3.57; SD=0.89). This further reflects that despite the low-income levels within the current sample, they are aware of the hazards of chemical products and are supportive of moving towards those that are more ecologically correct or biodegradable.

The lowest mean of 3.5 (SD=0.829) was for the item "*I seek out food without agricultural toxins since the environment is respected*". This finding may be linked to earlier findings that the price of

such items may have influenced respondents to seek out food without agricultural toxins. This finding must still, however, be considered within the context of the fact that although this was the lowest mean, a mean of 3.5 still suggests that the sample does seek out food without agricultural toxins, so as to respect the environment, despite poor income levels.

Agyeman (2014: 189) argued that a consumer's choice of a green product is heavily influenced by the packaging. Laroche, Begeron and Barbaro-Forleo (2001: 505) noted that green consumers are those who check the labelling of green products to see if it was manufactured with recycled materials.

The item, "*I rate products based on information from the manufacturers' environmental certificates*", also received a moderately high mean rating of 3.58 (SD=0.95). Environmental certificates are important to identifying those manufacturers who are compliant, which may in turn influence customers to purchase their products. According to Houde (2022: 5570), environmental certification programmes have been increasingly supported by governments, industry groups, and non-profit organisations as they identify products that have environmental certification requirements, differentiate certified products in the energy and non-energy dimensions, and charge a premium price on certified products. Michael, Echols and Bukowski (2010: 466) added that environmental certification plays a salient role in business strategies purely due to consumer demand for environmentally friendly products. This is important as in a study by Marrucci and Daddi (2022: 1347), which looked at the environmental and economic performance of 268 manufacturing organisations, it was found that some organisation's environmental performance had deteriorated and that approximately 60% of the organisations were not totally compliant with the standard requirements linked to environmental statements.

4.5.2 Influence on intention to purchase

The data that follows in Table 18 reflects the influence of price on consumers' intention to purchase eco-friendly/green/environmentally sustainable products.

Table 4.18: Influence of price on consumers' intention to purchase eco-friendly products

	N	Missing	Mean	Median	SD	Min	Max

When possible, I choose products which cause the least pollution possible	250	4	3.8 2	4	0.838	2	5
I may pay more to buy organic products since they do not impact the environment	249	5	3.1 8	3	1.077	1	5
I am willing to pay a somewhat higher price for products and food free of agricultural toxins which damages the environment	249	5	3.0 2	3	1.139	1	5
Differences in price interferes with my intention to buy ecologically correct products	250	4	3.6 9	4	0.926	1	5

As reflected in Table 18, the highest mean was 3.82 (SD=0.83), for the item "*when possible, I choose products which cause the least pollution possible"*. This was a relatively high mean, indicating that whenever possible the sample opted to purchase products which caused the least pollution. This substantiates earlier findings where most of the sample expressed concern for the environment and awareness of their actions. This finding must, however, still be viewed within the context of the overall research, which suggests that the difference in prices does have an impact on consumers' intent to purchase environmentally friendly products. The item with the second highest mean of 3.69 (SD= 0.92) "*differences in price interferes with my intention to buy ecologically correct products*", supports this notion. The fact that most of the sample earns in a low-income bracket, may account for the fact that they would not opt for ecologically friendly products if they are more expensive, regardless of their personal concerns for the environment. Hence, despite the high means reflected in Table 18 under the section which indicates strong concern for the environment, price discrepancies do influence whether ecologically friendly products are purchased or not. Berger (2019: 233) noted that most green products are more expensive than non-green ones. Research, however, for example in China, with 781 respondents,

suggests that despite limited knowledge on green products, customers were still willing to pay more for it.

The current study found that customers were "*willing to pay a somewhat higher price for products and food free of agricultural toxins which damages the environment*" (M=3.02; SD=1.13). The average mean obtained for this item suggests that the financial status of these consumers, most of whom are not high-income earners, may have played a role in their decision to purchase products and food that are free of agricultural toxins and harmful to the environment. Hence, whilst personal concern for the environment is high, financial standing appears to influence whether eco-friendly products and food is actually purchased. Here, again, the unwillingness to pay higher prices may be influenced by consumer earnings as opposed to a personal need to purchase food free of agricultural toxins. Pricing of green and non-green products has been widely researched (Wang *et al.* 2015: 45; Luo *et al.* 2017; 440; Xu *et al.* 2017: 250). Liu *et al.* (2016: 4480) reported that manufacturers who follow eco-friendly operations have greater profits and success even under competition. Kreczmańska-Gigol and Gigol (2022: 2077) with a sample of 1 000 individuals, which was representative of gender and age, found that women, people with a higher education, and that those in better financial situations, accept higher prices for products that do not cause environmental damage.

According to Ramalingam (2021: 5796), consumers are becoming more health conscious as a result of the increasing prevalence of health-related issues. Ramalingam found that the consumption of organic food products has increased and that consumers' level of education and the quality of organic food products are factors that motivate them to pay a premium price for such products, based on his research.

Other studies in America also found that women consume organic food products more frequently than men (Van Loo *et al.* 2011: 63). A Polish study has suggested that the main reason motivating green consumption amongst women is that of health (Witek 2019: 1119). Other researchers have found that those consumers who were better educated showed more positive attitudes toward all environmental factors and were therefore more willing to pay higher prices for the same (do Paço and Raposo 2010: 429). Rödiger and Hamm (2015: 29) also supported this notion, saying that their research found that those with higher education were more willing to buy organic food and pay higher prices for such "green products".

More importantly, however, was that enhanced knowledge of the environmental impact of production, which was correlated with a higher education, was also found to positively influence green purchase (Kanchanapibul *et al.* 2014: 529). This further supports the notion that consumers who are well-informed about environmental issues are more inclined to pay a premium for products that are eco-friendly and energy-efficient (do Paço and Raposo 2010: 10). Some support for this was evidenced in the current study as discussed. However, the poor socio-economic climate prevalent in South Africa may have influenced this. Bukhari (2011: 375) identified price as one of the main reasons consumers chose not to buy green products as they considered them to be expensive. Moreover, scholars have noted that young consumers showed a greater willingness to pay the price for eco-friendly products (Boztepe 2012: 13).

Abzari *et al*. (2013: 2) contend that consumers often display a willingness to pay a higher price if the benefits of consuming the green product outweigh the price. Their study found that 67% of the sample viewed green products to be better than standard products. With regards to pricing, 74% of the sample disagreed that green products were reasonably priced. Finally, 75% of the sample concurred that the price of green products affected their purchase decision. Moreover, 78% of the sample agreed that information on product packaging helped them make an informed decision about what they were purchasing. This is consistent with findings from Ansar's (2013: 650) study that green advertisements enhance consumers' knowledge and motivation.

These research findings are not reflective of the profile of the general South African population, which is characterised by low education levels, implying that the majority of the South African population may not be aware of green products. Marketers would, therefore, need to raise awareness levels of green marketing among the wider consumer population. The price of green products locally is an important consideration, given the high levels of poverty in South Africa, which would deter much of the local public from buying such items.

Most of the sample perceived green products not to be reasonably priced and displayed price sensitivity with regards to green products (Govender and Govender 2016: 83). In the future, consumer buy-in could strengthen more sales of green products which could lead to lower prices (Yadav and Pathak 2017: 114).

A study done by Herrmann, Rhein and Sträter (2022: 106219) noted that consumers' perceptions of and willingness to pay for alternatives to plastic packaging are unclear. Although many consumers are reluctant to change their consumption habits or pay extra for alternatives, there is still evidence to suggest that they are becoming more environmentally aware and may be willing to pay for packaging alternatives.

4.5.3 Influence of environmentally friendly packaging on consumers' intention to purchase eco-friendly/green/environmentally sustainable products

In this sub-section, data related to the influence that environmentally friendly packaging had on consumers' intention to purchase eco-friendly/green/environmentally sustainable products are presented, which is summarised in Table 19 below.

Table 4.19: Influence of environmentally friendly packaging on consumers' intention to purchase eco-friendly/green/environmentally sustainable products

	N	Missing	Mean	Median	SD	Min	Max
Visibly displayed briefings on environmental situations affect my purchase intentions	250	4	3.56	4	0.895	1	5
I try to buy products with minimal packaging to reduce the consumption of natural resources	246	8	3.57	4	0.882	1	5
I try to avoid buying products with non-biodegradable packaging	249	5	3.49	4	0.890	1	5
I do my best to buy refillable products so that the previous containers need not be disposed of	248	6	3.9	4	0.796	1	5

I intend to buy certain products in bigger sizes and with less frequency in order to sustain our planet	248	6	3.6 3	4	0.909	1	5

The highest mean obtained was, "*I do my best to buy refillable products, so that the previous containers need not be disposed of*". This finding may be linked to both the sample's strong personal concern for the environment as well as cost related issues, as this might be a cheaper alternative. Other moderately high means were obtained for the following items: "*I intend to buy certain products in bigger sizes and with less frequency in order to sustain our planet*" (M=3.63; SD=0.90) and "*I try to buy products with minimal packaging to reduce the consumption of natural resources*" (3.57; SD=0.88). This suggests a moderately high level of purchase of eco-friendly/green/environmentally sustainable products in order to protect the environment. This is consistent with earlier findings regarding personal concern for the environment.

Although the data from the current study focuses on the purchase of environmentally friendly products, other studies emphasise the importance of this issue. A study by Borghesi, Stefanini and Vignali (2022: 185), for example, noted that organisations are paying attention to the environmental impact their products have, arguing that consumers' opinions are crucial to establishing what market strategies should be undertaken. Ischen *et al.* (2022: 31) assert that environmentally friendly products have become popular and, in order to be purchased, must be both sufficiently salient as well as regarded as being environmentally friendly or green. Their study investigated whether implicit, namely packaging material, and explicit, which is the eco-labelling packaging, can influence this salience and perceptions of greenness amongst consumers. Their study found that both implicit and explicit cues that suggest environmental friendliness positively influence both salience and greenness amongst their participants.

4.5.4 Research the product and its packaging

This sub-section presents data pertaining to the research that consumers conduct on a product and its packaging.

Table 4.20: Research undertaken on the product and its packaging before purchase

	Frequency	Percentage

I don't research	61	17%
I ask friends	44	12.26%
I Google the product	61	17%
I read the label at the store	110	30.64%
I ask consultants	83	23.10%

Almost 30% (30.6%; *n*=110) of the sample read the label on a product at the store, while 23% (*n*=83) asked consultants about a product. Furthermore, 17% Googled information about the product; additionally, the same percentage (17%; *n*=61) did not undertake any research related to the product. Almost 12% (12.2 %; *n*=44) asked friends about products. Given that a third of the sample read labels at the store prior to purchasing, it suggests a greater level of awareness with regards to products, its packaging, and its effects on the environment.

In the following sub-section, the researcher discusses data pertaining to consumers' actual purchasing habits.

4.5.5 Actual purchasing habits

This sub-section presents data on the sample's actual purchasing habits.

Table 4.21: Actual purchasing habits

	N	Missing	Mean	Median	SD	Min	Max
When I buy a product, I always verify whether the manufacturing firms damage or disrespect the environment	248	6	3.4	3	0.871	1	5
I buy food without any agricultural toxins since I am aware that I am preserving the environment	247	7	3.4	3	0.83	1	5
I pay more to buy products that promote the protection of the environment	248	6	3.19	3	0.966	1	5

I buy organic products because they do not contain agricultural toxins that harm the environment	250	4	3.43	3	0.904	2	5
I pay more to buy ecologically friendly and sustainable products concerned with the preservation of the environment	250	4	3.2	3	1.023	1	5
I buy products with the least packaging possible	250	4	3.52	4	0.910	1	5
I buy certain products in bigger sizes and with less frequency in order to sustain our planet	250	4	3.58	4	0.938	1	5
I buy refillable products to take advantage of the previous container	250	4	3.96	4	0.813	1	5
I switched to or did not use certain products anymore due to ecological motives	250	4	3.42	3	0.833	2	5
I buy products with environmental certifications because they are ecologically correct	250	4	3.5	3	0.832	1	5
I always choose a product which causes the least harm to people and damage to the environment when choosing between two of the same competing products	250	4	3.56	4	0.909	1	5
I always buy ecologically correct or biodegradable chemicals (including but not limited to detergents and cleaning products)	250	4	3.5	3	0.911	1	5

Table 21 demonstrates that most of the items had high to moderately high means, indicating that the sample's purchasing habits were consistent with their strong environmental concern. The

highest mean on this scale was 3.96 (SD=0.813) for the item "*I buy refillable products to take advantage of the previous container*". This reflects a significantly high awareness of the need to buy refillable containers to protect the environment. It may also be linked to cost effectiveness, where filling up previously purchased containers may be a less expensive option for most consumers in this sample. The item with the second highest mean of 3.58 (SD=0.938) was "*I buy certain products in bigger sizes and with less frequency in order to sustain our planet*". This can be linked to the item with the highest mean, where refillable containers are purchased. The extent to which actual purchasing habits were influenced by concern for the environment were also reflected in the following items: "*I buy products with the least packaging possible*" (M=3.52; SD=0.91, and "*I buy products with environmental certifications because they are ecologically correct*" (M=3.5; SD=0.83). Again, the need for eco-labels and certificates appeared to be a factor in influencing purchase behaviour. Kumar Ranjan and Kushwaha's (2017: 88) study found that young consumers in India tend to follow the environmental norms within their social circles. The study also discovered that these consumers' high level of environmental awareness resulted in an increased willingness to pay for green products. Of the 300 respondents surveyed, 70% agreed that ecolabels were a credible tool for promoting green products.

A study by Unilever found that the awareness of green brands among Indian consumers and their intention to buy green products was influenced by their belief that green products protect the environment (Panda *et al.* 2020: 118575). Borin, Cerf and Krishnan (2011: 78) in their study reported that eco-labels acted as a qualifying criterion for companies for improved environmental management to ensure long-term stewardship and availability of natural resources for a nation's sustainable growth. The authors note that eco-labels are a novel concept in India, not only in terms of their existence but also as a marketing strategy to influence consumer behaviour. Therefore, it can be inferred that the element of "trust" would play a significant role in consumer interactions related to environmental issues.

Although the item, "*I switched to or did not use certain products anymore due to ecological motives"*, was not the highest mean, it was still moderately high and indicates that the purchase habits of the sample were driven by concern for the environment. It is plausible that those who did not support this had financial or income-related reasons, rather than a lack of environmental awareness. This is in line with the income levels of the sample. The same reasons can be considered for the item "*I pay more to buy products that promote the protection of the environment*" (M=3.19; SD=0.96), which was the lowest mean on this scale. Again, although this was the lowest

mean, it was still significantly high given the low-income levels of the sample. The following section presents the most significant correlations that emerged from the analysis of the data.

4.6 Section E

Section E discusses the significant correlations found within the data.

Table 4.22: Significant correlations

Correlation Matrix																			
		Age		**Race**		**Gender**		**Employment Status**		**Income Bracket**		**Education**		**Residence**		**Health rating**			
I am concerned with the level of pollution in our country	Pearson correlation	0.131	*	-0.014		0.038		0.025		0.057		-0.02		-0.115		0.078			
	N	248		249		239		245		195		229		248		248			
I value the earth and ocean, and am concerned for its sustainability	Pearson correlation	0.066		0.036		0.126		0.042		0.05		0.021		-0.179	**	0.073			
	N	248		249		240		245		196		229		248		248			
Laws, rules and regulations should be better enforced from a manufacturing and organizational level. Failure to comply with this should result in punishment especially instances where the environment is	Pearson correlation	0.157	*	0		0.043		-0.062		0.034		-0.019		-0.124		0.141	*		
	N	248		249		239		245		196		229		248		248			

negatively affected																	
When possible, I choose products which cause the least pollution possible	Pearson correlation	0.135	*	-0.044		0.017		-0.033		0.147	*	0.043		-0.132	*	0.062	

	N	249		250		240		246		196		230		249		249	
Plastic and paper bags should be recyclable and not have to be deposited into the environment	Pearson correlation	0.144	*	0.011		0.062		-0.018		0.092		0.057		-0.13	*	0.043	
	N	249		250		240		246		196		230		249		249	
I feel that I can contribute to the sustainability of the environment by purchasing ecofriendly/green/environmentally sustainable declared products	Pearson correlation	0.039		-0.028		-0.001		-0.016		0.009		-0.041		-0.088		0.047	
	N	249		250		240		246		196		230		249		249	

I intend to buy certain products in bigger sizes and with less frequency in order to sustain our planet	Pearson correlation	0.049		0.022		0.13	*	-0.057		0.116		-0.018		-0.01		0.184	**
	N	247		248		239		244		194		229		247		247	
I buy refillable products to take advantage of the previous container	Pearson correlation	-0.016		-0.049		0.054		-0.109		-0.006		-0.13	*	-0.103		0.156	*
	N	249		250		240		246		196		230		249		249	
Note. * p < .05, ** p < .01, *** p < .001																	

Based on the matrix presented above, an analysis of the positive significant correlations was calculated for variables with the highest mean and the demographic details of the sample. The highest significant correlation found was 0.157 (N=248; p<0,05); it was found between the age of the sample and “laws, rules and regulations should be better enforced from a manufacturing and organizational level. Failure to comply with this should result in punishment especially instances where the environment is negatively affected”. This suggests that the older the older participants in the study perceived the responsibility for environmental protection as primarily lying with the organisation. They felt that if the organisation failed to comply with environmental regulations, then it should be subject to punishment.

The second highest correlation was 0.144 (N=249, p<0.05) and was again found between age and the variable, “*plastic and paper bags should be recyclable and not have to be deposited into the environment”*. Other significant correlations were found between the age of the sample (0.131 (N=248, p< 0,05) and the items, “*I am concerned with the level of pollution in our country*”, and “*when possible, I choose products which cause the least pollution possible*” (0.135; N= 135, p<0,05). Again, these findings suggest that age of the respondents was linked to their concern for the environment, particularly levels of pollution in the country and the choice of products that caused the least level of pollution. Age of the respondents also seems to have influenced views regarding the recycling of plastic and paper bags, rather than depositing it into the environment.

Gender was also found to have a significant correlation (0.1; N= 239, p<0.05) with the item, “*I intend to buy certain products in bigger sizes and with less frequency in order to sustain our planet”.* This suggests that female consumers opt to buy products in bigger sizes and less frequently. A significant correlation of 0.147 (N =196, p<0,05) was also noted between income bracket and the variable “*when possible, I choose products which cause the least pollution possible*”, which suggests that income levels influenced the purchase of products which caused the least pollution. In summary, while a significant number of participants showed a strong level of concern for the environment, their purchasing decisions for green products were influenced by their earnings. Hence, pricing of green products is critical to ensuring an

uptake within the local population, due to the poor socio-economic status of most of the South African population.

Sharma's (2015: 15) study also revealed that socio-demographic characteristics such as age and education level influence consumers' intent to go green. Wang (2014: 45) also cited previous research indicating that women, young adults, and individuals with relatively high education and income levels are more likely to engage in green consumption behaviour.

4.7 Conclusion

The collated data and discussion of findings were presented in this chapter. The study found strong levels of concern with regards to the escalation in pollution in the South African context, with at least a third of the sample expressing concern for the effects of global warming on the environment. This was aligned with participant's value for the earth and ocean and its sustainability. Most of the sample believed that manufacturers should be held accountable through laws and regulations. These positive notions were translated into positive consumer purchasing behaviour with many respondents believing that they could contribute to the sustainability of the environment by purchasing eco-green products. Chapter 5 that follows summarises key findings obtained in the study and provides recommendations for further research.

CHAPTER 5:
CONCLUSIONS & RECOMMENDATIONS

5.1 Introduction

In this final chapter, the major findings of the study are presented within the context of the research objectives. The key conclusions drawn from the study are summarised, and the limitations of the research are discussed. Based on the insights gained from the study, recommendations are provided for the marketing of greener products. The chapter concludes with suggestions for areas of further research that could build on the findings of this study and contribute to a better understanding of the subject matter.

5.2 Major Findings

Most of the consumers who participated in this study were between the ages of 30 to 40 years, with a slightly stronger prevalence of females in the sample. Although nearly 75% of the sample were employed, almost 40% had an income range of R5 000 to R15 000, reflecting the poor socio-economic status of the country. Close to 60% of the sample only had a secondary school qualification, which was consistent with the income of the respondents.

The study documented that consumers' personal concern for the environment and positive attitudes towards green products influenced their green purchase intentions. This was aligned with the theoretical framework that guided the study – the theory of planned behaviour – as perceived behavioural control and subjective norms influenced them. Perceived value, one of the important constructs embedded in the guiding theoretical framework, was found to be linked to consumers' intentions to purchase green products. It is linked to the perceived value of green products, which translated into decisions related to purchase. The major findings of the study are summarised in relation to the themes linked to each of the four objectives. They are presented in the sub-sections below.

5.2.1 Consumer concern for the environment

The first objective of the study was to explore consumers' concerns for the environment and whether this influenced their purchasing behaviour. This objective was achieved as almost 80% of the sample "always" or "sometimes" had a personal awareness of their impact on the environment. This personal concern for the environment was evident in the findings that almost 40% indicated concern about global warming and 25% about the loss of plant life. While a smaller proportion of the participants expressed concern about deforestation, it is possible that their lack of knowledge on the topic was due to their urban residence in eThekwini.

This personal concern for the environment was also evident in that over 40% of the sample participated in National Arbor Day green initiatives, which focussed on the planting of trees and other flowers and plants. Given that there is not much attention towards international green initiatives in South Africa, such as Earth Hour, Earth Day, World Environment Day, and International Coastal Clean Up Day, it was still significant that some respondents had participated in these events.

Personal concern for the environment was evident from the data derived from other findings on the other scales in the current study. This reflected strong concern for the environment amongst consumers. These included several items where relatively high to moderately high means were found. For example, on the scale related to personal concerns regarding the environment, high means were found for all five items. Means in the range of 4 indicate that the participants were concerned about the high level of pollution in South Africa. They also expressed concern about the environmental damage caused by the emission of carbon dioxide, and were wary of using chemical products due to their harmful impact on the environment. Additionally, the participants expressed concern about the use of plastic bags and the negative impact they have on the environment. Despite the aforementioned, only half of the sample was involved in separating waste at their homes. This was particularly with regards to separating plastic from other household waste, which indicates awareness regarding the effects of plastic on the environment.

The study revealed a strong correlation between high levels of personal environmental concern and high engagement in pro-environmental behaviours. Participants reported engaging in various behaviours, such as saving water and energy, reusing packaging or wrappings, and carpooling

to reduce their carbon footprint. These behaviours were reflected by the high means recorded in the study. The study also found high means for personal values related to the environment, such as valuing the earth and being concerned about its sustainability. Participants also demonstrated an understanding that human consumption affects plant and animal life. These findings suggest that high personal concern for the environment, as well as personal values related to sustainability, can strongly influence pro-environmental behaviours. Consumers who place a high value on environmental conservation and have a positive attitude towards the environment are often more willing to pay a premium for green products (Kang *et al.* 2012: 564).

5.2.2 Consumers' views on environmentally responsible manufacturers and their commitment to greener products

The second objective was to explore consumers' views on environmentally responsible organisations or manufacturers and their commitment to greener products. The study found strong levels of support amongst consumers with regards to the responsibilities of manufacturers in committing to eco-products and packaging as well as pro-environmental manufacturing strategies. High means were recorded for items which support the notion that consumers believed that manufacturers must have greater responsibility for the well-being of the environment. The following items received high means in the study: Participants believed that laws and regulations were critical at both the manufacturing and organisational levels. They also felt that necessary steps should be taken when manufacturers failed to comply and put the environment at risk. Participants also believed that manufacturers should prioritise producing water and energy-saving products. They suggested that organisations display eco-labels and certifications that reflect their commitment to environmental conservation. Additionally, participants expressed the opinion that manufacturers should switch from plastic bags to paper bags and produce more water and energy-saving products.

The study also revealed that consumers perceived manufacturing organisations as having a role to play in protecting the environment. High means were recorded again for manufacturers themselves to engage in recycling, to avoid the use of toxins during production, and to safeguard against the emission of gasses into the environment. Collectively then, the sample believed that manufacturers had a crucial role to play in the protection of the environment.

5.2.3 Consumer purchasing of greener products

The third objective was to investigate the extent to which consumers deliberately purchase green products. The study showed that personal concern for the environment significantly influenced consumers' decision to purchase green, ecofriendly, and environmentally sustainable products. Participants reported a high mean rating for the item reflecting their efforts to avoid products that caused pollution. Although the study revealed moderately high means for participants' willingness to pay more for organic products that do not harm the environment and for food free of agricultural toxins that damage the environment, pricing may have been a contributing factor. This is supported by the fact that there was a moderately high mean for the item linked to the fact that differences in prices interfered with the respondents' intentions to buy ecologically correct products. This finding is further linked to the fact that only about 15% of the sample earned over R25 000. Nearly 66% of the sample earned below R15 000, indicating very low-income levels that are consistent with the high levels of poverty in South Africa. This suggests that the decision to purchase green products may be influenced by financial constraints.

Despite the low income levels of the sample, the study revealed that consumers still purchased green products. Participants reported moderately high means for items related to the purchase of eco-friendly and environmentally sustainable products. These findings suggest that the sample was supportive of contributing to the sustainability of the environment through the purchase of green products. Many also expressed an intention to purchase chemical products that were environmentally friendly or biodegradable. It was noteworthy that most of the respondents reported avoiding products that harmed the environment; rated products according to manufacturers' environmental certificates; and verified whether the products they purchased indeed damaged/harmed the environment. This green purchasing behaviour is tied up with the respondents' personal concern for the environment as discussed under sub-section 5.2.1. It also reflects the theory of planned behaviour where personal values influence green purchasing behaviour.

5.3 Major Conclusions

The overall aim of the study was to investigate whether consumers' environmental concerns translated into pro-environmental behaviours and to assess the level of personal concern for the environment among the sample. The study found that consumers exhibited a high level of personal concern for the environment, thereby addressing the first research question. The second objective, which was to investigate whether concern for the environment influences consumers' purchasing behaviours, was also met. The study found that the respondents' personal concern for the environment had to an extent influenced their consumer purchasing behaviour. The third objective, which was to investigate the extent to which consumers' intentionally purchase green products, was also met. The study found that despite poor income levels, the sample still endeavoured to purchase greener products. The findings revealed that consumers showed a greater preference for organic food free of toxins and products that do not harm the environment, even though they were more expensive. This indicates that they would likely purchase these products if they had a higher income. Finally, the last objective – making recommendations for the marketing of green products – is presented in the section that follows.

5.4 Recommendations for Marketing of Greener Products

Green marketing can be described as a range of activities, from the production process, adjustment of product lines and changes in packaging, as well as the transformation of advertising in respect of green products (Diglel and Yazdanifard 2014: 14). The term 'green marketing' has been used interchangeably with "sustainable marketing" and "ecological marketing" in the literature. According to Kumar'Ranjan and Kushwaha (2017: 12), "green consumer behaviour" refers to the actions of consumers when they use and evaluate products that are environmentally friendly, recyclable, and in line with environmental concerns. "Green marketing strategies" refer to efforts made by manufacturers to design, promote, price, and distribute products in a way that enables environmental protection. These strategies aim to increase consumer awareness and perception of the attributes of green products, making it easier for them to purchase such products. While still an emerging concept, the goal is to encourage environmentally conscious consumer behaviour (Papadas *et al.* 2019: 632).

Kumar' Ranjan and Kushwaha (2017: 89) made recommendations with regards to green marketing as follows:

1) Marketers should develop communication strategies that highlight their green procedures or practices.
2) Marketers should be involved in educating customers with regards to the green usage of products.
3) Marketers should adopt green processes for delivery and sales of products.

Based on the findings of the current study, several additional recommendations can be made related to the marketing of green products.

1. Increase consumer awareness of green products.
2. Design green products.
3. Promote green products.
4. Distribute green products.

Manufacturers should continue to raise awareness of green products and also join the call to raise awareness around environmental protection. Manufacturers need to be compliant with environmental protection laws and regulations and endeavour to reduce carbon emissions. In terms of the production of green products and green marketing strategies, manufacturers should focus on satisfying consumer needs, whilst reducing harmful effects to the environment. Given the poor socio-economic context of the country, the promotion, pricing, and distribution of products, must occur within a context of eco-concern as well as with awareness of consumer earnings locally. Furthermore, it is essential for manufacturers to not only produce green products but also focus on green packaging, modification of manufacturing processes, and advertising to further increase consumer awareness and their contribution towards environmental protection. Green marketing strategies should encompass the entire green supply chain (GSC), including green product design, packaging, pricing, and promotion, as opposed to traditional marketing strategies (Yan and Yazdanifard 2014: 35).

The implications of the findings of the current study can therefore be translated and summarised into several important further recommendations as follows:

1. Manufacturers need to develop green products that meet the needs of consumers, without jeopardising the environment.
2. Green business strategies must be interweaved with the organisation's manufacturing vision and marketing mix.
3. There should be green marketing policies which include aspects such as product design, pricing, packaging, and promotion, using eco-labels as emerging from the study.
4. Green brands are important to reflect socio-environmental concerns and should indicate a manufacturer's concern for the environment. This must be reflected in the development of products and its modification when necessary, using sustainable packaging and promotion which must be linked to preservation of the environment.
5. The advertising of green products should allow consumers to understand and assess how the product and its packaging impacts the environment. Environmental information must be included in advertising, so that brand image can be enhanced.
6. Green pricing, which is linked to pricing of environmentally sustainable products, must convince consumers in their decision-making with regards to green products.
7. Consumer purchase is linked to packaging as well. Manufacturers and marketers must therefore work towards packaging that is recyclable and biodegradable. Consumers can make decisions to purchase, based then on green packaging factors which have sustainability labelling.

5.5 Limitations of the Study

This section acknowledges the limitations of the study.

While enlightening, this research study had certain limitations that provide greater direction for future research.

1. This study was done during the COVID-19 pandemic, and hence sample demographics may have been skewed. These characteristics may have conditioned mindsets around acquiring green products because of numerous factors, such as income restraints as well as generational mindsets toward environment-friendly consumption.

2. Secondly, there were the geographical limitations, as the area of study was limited to eThekwini in the Province of KwaZulu-Natal, South Africa. It is possible that the findings may differ for example in rural areas, where income levels may prevent consumers from purchasing eco-friendly products that might be more expensive. Hence, a future study may focus on a survey of consumers across peri-urban and rural areas where potentially marked differences may be found. Moreover, future research can investigate this topic using qualitative in-depth interviews with consumers so as to get a richer insightful understanding of consumers views and purchasing behaviours.
3. Thirdly, there is a paucity of literature/research on “green marketing” as it is an emerging concept in developing countries, creating another limitation for this study. This undeniably influenced the literature reviewed as it contributed to understanding consumer views and purchasing lens primarily within developed countries. However, the study forms a valuable starting point for emerging literature and research in a developing country such as South Africa.
4. Fourth, while the use of a convenience sample of consumers in this small geographical area may have limited the generalisability of the findings, the study nonetheless shed valuable light on consumers’ views and opinions regarding green marketing and factors influencing their intent to purchase green products.
5. The study therefore provided valuable insight into consumer purchasing behaviour related to green products and their views of manufacturers’ production and marketing strategies within a context of eco-concern. Given the aforementioned, future research studies can explore larger more representative samples across a wider geographic area. For this purpose cluster sampling or multistage sampling can be used to investigate consumer attitudes across KwaZulu-Natal or even South Africa. It is possible that those who responded were concerned with the environment and purchased green products. Future studies may explore the views of consumers who do not presently consume green products, so as to expand the understanding of the elements that could potentially convert non-green consumers into green consumers.
6. Other studies can also investigate other variables such as consumers’ understanding of greenwashing, everyday sustainable practices and sustainable citizenship. This may generate more richer insights into green consumer behavior.

7. Finally, the cross-sectional nature of the study, created a picture in time, leaving how these dynamics evolve unexplored. Future research may thus consider developing a longitudinal study to comprehend the patterns and adjustments in green consumer behavior over time. This research study provided informed perspectives regarding the issues surrounding green consumer behavior. It uncovered the relationship between consumers' environmental concerns and their eventual green consumer decisions which offered insights into the important mechanisms underpinning sustainable consumption. The benefits and quality of products significantly influenced consumers' green behavior especially when they were linked to environmental concerns. Consumers' awareness of green product pricing motivated green consumption.
8. The demand for green products are most likely to differ across market segments and cultures and differences in national regulations; hence country-specific field studies can be beneficial for comparative purposes. Hence future research on green marketing functions should be extended to brand equity or value (Kumar, 2016) to identify and classify different targeting approaches for a green marketing strategy, highlighting the best options based on industry and corporate characteristics (Dangelico and Vocalelli, 2017).

5.6 Suggestions for Further Research

The study, being descriptive in nature, has implications for future research. This study was limited geographically to the eThekwini region, and therefore the sample was small. It is therefore recommended that this study be replicated on a greater scale. A wider geographic area could be considered, particularly that of a national study, so a deeper picture of the South African consumer context can emerge. As indicated above, a larger scale study can target peri-urban and rural

areas as well in order to cover the breadth of consumers in other areas. This can be done using cluster or stratified sampling techniques.

The issue of price sensitivity for green products was particularly evident. Factors around this could be investigated in greater detail, so as to understand how green products can be marketed, aligned with the income levels of a majority of South Africans. In terms of suggestions for future research, similar studies can also be conducted in other developing countries to enable cross cultural comparisons. Moreover, the use of qualitative research can bring richer and fresher insights related to consumers' green purchasing behaviours.

In terms of suggestions for future research, similar studies can also be conducted in other developing countries to enable cross-cultural comparisons. Moreover, the use of qualitative research can bring richer and more fresher insights related to consumer green purchasing behaviour. A further recommendation, can be longitudinal studies which can track changes in consumer behaviours over a period of time.

Other recommendations:

The key insight from this study is that corporates and businesses should contribute to increasing environmental awareness. Concern for the environment should promote awareness and amplify the value of environment-friendly behaviors. This can include developing educational campaigns and engaging with ecological organizations to use marketing methods that emphasize the environmental advantages of buying green products. Environmental issues be integrated into all aspects of marketing, such as new-product development and communication.

It is important that in addition to suppliers and retailers, new stakeholders be recruited, particularly educators, the community, policy makers and non-governmental organizations to drive environmental issues. The findings indicate several strategies that businesses and policymakers can adopt to promote eco-friendly consumer decisions. By emphasizing environmental concerns in green consumer decision-making, the study suggests the need for strategies to support environmental consciousness amongst consumers. For those corporate and businesses,

especially industries with a high ecological footprint, it would be important that the ecological advantages of their products be more clear, thereby ensuring the quality of green products. This will justify pricing and project the future sustainability implications of this. This may require innovation and changes in product design, pricing strategies, marketing communication and business strategies.

Hence, companies should embrace a holistic and integrated strategy to promote green consumption. These strategies should include creating premium, beneficial eco-friendly products, communicating such benefits, dealing with the cost factor related to same, emphasizing the future impact of eco-friendly options and nurturing environmental awareness amongst consumers. Such a holistic approach will contribute to a business's sustainable growth and advance the wider global agenda of environmental sustainability

The perceived quality of green products, along with the perceived benefits of these products, will influence environmental concerns and, consequently green consumer decisions. Hence, businesses should ensure that their green products, meet high-quality standards and offer clear advantages that surpass that of non-green alternatives. Such benefits should be then communicated to customers, by emphasizing the inter-relationship between using green products and promoting environmental well-being. The pricing of green products is therefore a critical consideration.

For policymakers, the concern for the environment emphasises the need for relevant policies and programs to enhance environmental awareness. This may include environmental education drives to heighten public projects regarding the effects of consumption choices on the environment. There is therefore a clear mandate for policy interventions that can improve ecological awareness.

Government and other policy makers should make certain initiatives to increase green consumption, through tax relief for producers of green products, financial support for green projects, and encouraging research for green innovation. Universities can develop a "green" course for example in business modules to strengthen knowledge, understanding, and

importance of green consumption. Moreover, everyone should be educated on green consumption especially environmental ethics, and green values and attitudes.

5.7 Conclusion

This study sought to investigate the influence of green marketing on the purchasing behaviour of consumers in eThekwini, in KwaZulu-Natal. It found significant consumer concern for environmental issues and concern that manufacturers should adhere to eco-green good practices, in order to be part of the wider drive to save the environment. Concern for the environment was found to influence purchasing behaviour, despite poor income levels. Most respondents felt that green products were healthy, good for the environment, and superior to traditional products. It also emerged that green products were not always reasonably priced, and hence, not easily accessible or properly promoted. Price sensitivity with regard to green products was a key factor and should be considered by manufacturers against the backdrop of the poor socio-economic context of South Africa. The study sample was also influenced by the promotion of green products and felt that packaging, labelling, and product information strongly influenced their purchase decisions. The current study was significant in that there has been a paucity of empirical work on green marketing in South Africa. It can therefore serve as a catalyst for further research into green marketing, an area that has been receiving significant interest globally, as concern for environmental degradation grows.

This study then delivered a clear picture of consumers' green purchase awareness and behaviour locally. The above conclusions revealed that their concern for the environment transformed into environmentally friendly purchasing and choice of green products. In order to promote environmental sustainability, green marketing should prioritise the development of eco-friendly products and incorporate eco-labels on their packaging to enable consumers to make informed choices when making purchases. The adoption of green marketing must be driven by manufacturers who ascribe to sustainable development, social responsibility, and a deep commitment to green leadership.

Environmental degradation has reached unprecedented proportions, with natural disasters having disastrous effects across the world. This has left the business world with the responsibility of driving environmentally safe consumption. Consequently, with the behavioural change of consumers, businesses are implementing environmentally supported green production and distribution initiatives so as to join the green market that is growing globally. However, marketers need greater information about consumer behavioral intentions before engaging in green product development. Hence research is critical to shedding light on the sustainable behavioral intention of consumers. Whilst research has grown in an international context to gain insight into the behavioral intention of consumers on green products, little is known about consumer views especially in a developing context like South Africa where pollution is rife. This study shed light on how concern for the environment influenced consumer's attitude and behavioral intentions regarding green products. It was discovered that consumers who are sensitive to environmental issues appear eager to buy green products which creates insight for marketers about consumers' sustainable behavioral intentions. This suggests that marketers create and drive marketing policies for their green products, so that consumers can have greater knowledge and sensitivity towards environmental degradation and its consequences for the planet and its people. It is hoped that this study will inspire greater research on the green purchasing intentions of local consumers and that a greater number of South Africans will engage in more sustainable consumption behaviour.

The importance thereof is captured in the following quote:

"The environment is where we all meet;
where all have a mutual interest; it is the one thing all of us share".
- Lady Bird Johnson (1965).

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Appendix 1: Survey Instrument

APPENDIX 1

QUESTIONNAIRE: Please mark X where relevant:

Section A: Demographic details

1. Age:

1-19	20-29	30-39	40-49	Over 50

2. Race:

White	Black	Indian	Coloured	Other

3. Gender:

Male:	Female

4. Employment status:

A Student	Employed	Self-Employed	Unemployed

5. Income level: (Rands):

-5000	5001-15 000	15001 – 25000	25001 – 35000	35001- 45000	45001 and over

6. Highest qualification:

Matric	Undergraduate	Postgraduate

7. Place of residence

Kwa – Zulu Natal	Other

8. Health status

Major illness	Relatively healthy	Fit

Section B:

Personal awareness of the environment

9. Personal awareness of the impact on environment

Sometimes	Never	Always

10. Personal concerns regarding the environment

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
I am concerned with the level of pollution in our country					
I am concerned that the emission of carbon dioxide damages the atmosphere					
. I am concerned that the utilization of plastic bags destroys the environment					
. I am concerned that certain countries have banned the production and use of plastic bags due to its harmful effects, yet our country hasn't					
I am wary of chemical products (including but not limited to detergents and cleaning products) as they cause harm to the environment					

11. I separate my waste at home into (more than one accepted)

Plastic	Glass	Paper	Tin	None

12. I am concerned about.

Global warming	Deforestation	Destruction of Ecosystems	Loss of Plant, Animal and Aquatic life due to Pollution

13. I am active in the following: (More than one accepted)

Earth Hour – 26 March	Earth Day – 22 April	World Environment Day – 05 June	National Arbour Day 01 September	International Coastal Clean-Up Day – 19 September

14. Personal environments behaviors

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
I separate recyclable wastes and organic residues at home					
I try to reuse packaging or wrappings when possible					
I believe that pollutants in the environment indirectly go into our food					
I feel that I may help solve problems related to natural resources by saving water and energy					
I value the earth and ocean, and am concerned for its sustainability					
I understand that plant and animal life are directly and indirectly affected by human consumption.					
I prefer carpooling, public transport or bike riding to reduce my carbon footprint when it comes to commuting					

Section C

Organisational concerns

15. environmentally responsible organisations:

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**

Manufacturers should be given more responsibility in terms of the well-being of the environment					
Laws, rules and regulations should be better enforced from a manufacturing and organizational level. Failure to comply with this should result in punishment especially instances where the environment is negatively affected					
Manufacturers should replace plastic bags with paper bags					
Organisations that display eco labels and certifications are favourable as they are attempting to conserve the environment					
Manufacturers that produce water and energy saving products add an extra mark up to the price					
Firms that use sustainably sourced materials for their products and processes can regard their products as premium products					
Eco-friendly producers produce products of an inferior quality					
Environmental declarations demonstrate that the manufacturer may be concerned for the environment					

16. Impact the organisation has on the environment.

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
The production and importing of plastic bags should be banned in our country					

Agricultural toxins and dangerous substances used in the production of food harm the environment					
Plastic and paper bags should be recyclable and not have to be deposited into the environment					
I am concerned that emissions of gasses into the environment by manufacturing plants contribute to polluting the environment					
The production of organic products do not impact the environment					
Deforesting for purposes aligned to manufacturing and production may place the future of humanity at risk					
The manufacturing of paper bags has a greater negative impact on the environment than plastic bags					

Section D

17. Consumer purchase behaviors related eco-friendly/ green/ environmentally sustainable declared products

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
I feel that I can contribute to the sustainability of the environment by purchasing ecofriendly/ green/ environmentally sustainable declared products					
I try to avoid manufactured products that damage or disrespect the environment					
I seek out food without agricultural toxins since the environment is respected					

I verify whether a product that I intend to buy does not damage the environment or cause harm to people					
I rate products based on information from the manufacturers' environmental certificates					
I intend to buy chemical products (including but not limited to detergents and cleaning products) which are ecologically correct or biodegradable					

18. Influence of price on my intention to purchase eco-friendly products / green/ environmentally sustainable declared products

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
When possible, I choose products which cause the least pollution possible					
I may pay more to buy organic products since they do not impact the environment					
I am willing to pay a somewhat higher price for products and food free of agricultural toxins which damages the environment					
Differences in price interferes with my intention to buy ecologically correct products					

19. Influence of environmentally friendly packaging on my intention to purchase of eco-friendly/ green/ environmentally sustainable declared products

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Visibly displayed briefings on environmental situations affect my purchase intentions					
I try to buy products with minimal packaging to reduce the consumption of natural resources					
I try to avoid buying products with nonbiodegradable packaging					
I do my best to buy refillable products so that the previous containers need not be disposed of					
I intend to buy certain products in bigger sizes and with less frequency in order to sustain our planet					

20. Before I purchase, I consider the product and its packaging before purchase by (more than one option can be selected):

	Tick the appropriate options
I don't research	
I ask friends	
I Google the product	
I read the label at the store	
I ask consultants	

21. Actual Purchasing habits

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
When I buy a product, I always verify whether the manufacturing firms damage or disrespect the environment					
I buy food without any agricultural toxins since I am aware that I am preserving the environment					

I pay more to buy products that promote the protection of the environment					
I buy organic products because they do not contain agricultural toxins that harm the environment					
I pay more to buy ecologically friendly and sustainable products concerned with the preservation of the environment					
I buy products with the least packaging possible					
I buy certain products in bigger sizes and with less frequency in order to sustain our planet					
I buy refillable products to take advantage of the previous container					
I switched to or did not use certain products anymore due to ecological motives					
I buy products with environmental certifications because they are ecologically correct					
I always choose a product which causes the least harm to people and damage to the environment when choosing between two of the same competing products					
I always buy ecologically correct or biodegradable chemicals (including but not limited to detergents and cleaning products)					

Appendix 2: Gatekeeper Permission Letter

APPENDIX 2

The Pavilion Shopping Centre
Jack Martens Drive
Westville
3611,

05 September 2018

Dear Mr Ramessur,

Kindly note The Pavilion Shopping Centre has approved the below mentioned Research to take place within the **Centre**, (*Dates TBC).

Permission has been granted to Ashvir Ramessur (DUT Student NO: 21030450) to conduct a research to approach consumers that shop at The Pavilion and to understand "Consumer concerns for the environment and its effect on the purchase of green products"

Kindly ensure that you share your research findings is shared with us upon collection and analysis. Please also note that you are required to confirm dates and times you will be present at the centre.

Please contact me if you have any further queries.

Kind Regards,

AVESH UDIAJOO
Marketing Co-ordinator

Tel: +27 (31) 275 9800
Fax: +27 (86) 675 6325
Email: avesh.udiajoo@thepav.co.za
Web: www.thepav.co.za

The Pavilion Shopping Centre Jack Martens Drive, Westville
P.O. Box 111, Pavilion, 3611

APPENDIX 3

Appendix 3: Letter of Information

Title of the Research Study: Consumer Concerns for the environment and its effect on the purchase of green products

Principal Investigator/s/researcher: Ashvir Ramessur, BTech: Marketing

Co-Investigator/s/supervisor/s: Prof. R. Bhagwan

Brief Introduction and Purpose of the Study:

Due to an ever increasing population, strain has been placed on the earth in terms of the diminishing of its natural resources at a rate faster than it can be regenerated. Each and every person including businesses, the government, NGO's as well as consumers all play a role in the inevitable use of goods and services. This ranges from the where and how materials are sourced, to how the products are packaged, as well as the manner in which these products are disposed of. It is obvious that if each person plays an active role in considering the environment at each stage of the product life cycle, we would have a much more sustainable future. This study therefore aims to understand consumers concerns for the environment and its effect on the purchasing of green products.

Outline of the Procedures:

Responsibilities of participant: To answer honestly based on their views and opinions in the survey questionnaire

Survey Details: 300 questionnaires will be completed at the Pavilion Mall. These will then be handed to a statistician in order to simplify and form generalizations based on the results.

Inclusion: this study will include all shoppers in the mall from 21 years of age, all race groups and both genders.

Exclusion: This study will exclude all persons under the age of 21 years of age, those not willing to participate.

Instrument: The instrument used to conduct this research will be a survey questionnaire. Results obtained from all individuals will be viewed collectively and used to form generalizations.

Time: Participant will have about 30 mins to answer the questionnaire in the presence of the person facilitating the survey.

Risks or Discomforts to the Participant:

N/A

Benefits:

This study will benefit the participant by allowing them to contribute to the information required by the researcher which eventually can be used in efforts to sustain the environment. This study may benefit Governmental and Non-Governmental Organizations, as well as businesses and consumers in understanding where the gap is between environmental concerns and the purchasing of green products. Recommendations will be given by the researcher to bridge these gaps in promoting a healthy environment sustainable future. Solutions may then be implemented at all levels.

Reason/s why the Participant May Be Withdrawn from the Study:

There will be no adverse consequences for the participant should they choose to withdraw from the study.

Remuneration: None

Costs of the Study for Participant: None **Confidentiality:**

Participants are not required to provide their names and all information will be kept confidential.

Research-related Injury:
N/A

Persons to Contact in the Event of Any Problems or Queries:
Please contact the researcher Ashvir Ramessur- 0837787818, or my supervisor Prof. R Bhagwan- 0761010693, or the Institutional Research Ethics administrator on 031 373 2900. Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or dvctip@dut.ac.za.

General:
Potential participants will be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter is to be issued to participants.

Appendix 4: Consent

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, Ashvir Ramessur, about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me. • I acknowledge that the approximate number of participants will be 300.

_____	_____	_____	_____
Full Name of Participant	**Date**	**Time**	**Signature / Right Thumbprint**

I, Ashvir Ramessur herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Ashvir Ramessur 02/09/2018  **Full Name**
of Researcher **Date** **Signature**

_____ _____
_____
Full Name of Witness (If applicable) **Date** **Signature**

_____ _____
_____
Full Name of Legal Guardian (If applicable) **Date** **Signature**

Please note the following:
Research details must be provided in a clear, simple and culturally appropriate manner and prospective participants should be helped to arrive at an informed decision by use of appropriate language (grade 10 level - use Flesch Reading Ease Scores on Microsoft Word), selecting of a non-threatening environment for interaction and the availability of peer counseling (Department of Health, 2004)

If the potential participant is unable to read/illiterate, then a right thumb print is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling, friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document e.g. wrong date or spelling mistake a new document has to be completed. The incomplete original document has to be kept in the participant file and not thrown away and copies thereof must be issued to the participant.

References:
Department of Health: 2004. *Ethics in Health Research: Principles, Structures and Processes* http://www.doh.gov.za/docs/factsheets/guidelines/ethnics/

Department of Health. 2006. *South African Good Clinical Practice Guidelines*. 2nd Ed. Available at: http://www.nhrec.org.za/?page_id=14

Appendix 5: Editor's Letter

PROOF-READING

DR LEE-ANNE ROUX

EDITOR | PROOFREADER

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PROFESSIONAL EDITING SERVICES

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2 May 2023

TO WHOM IT MAY CONCERN

RE: LANGUAGE EDITING

This letter serves to confirm that I have edited the thesis titled:

CONSUMER CONCERNS FOR THE ENVIRONMENT AND THE EXTENT TO WHICH IT INFLUENCES THE PURCHASING OF GREEN PRODUCTS IN THE GREATER eTHEKWINI REGION

By

ASHVIR RAMESSUR

Please feel free to contact me if you need any further information.

Yours sincerely,

Dr Lee-Anne Roux