UNISA GRADUATE SCHOOL OF BUSINESS LEADERSHIP

SUSTAINABILITY OF GREEN MARKET ORIENTATION INITIATIVES IN THE SOUTH AFRICAN PACKAGING INDUSTRY: THE POLYOAK GROUP

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This research report is dedicated to Ropafado Shalom Shumba and Ryan Shammah Shumba my two children.

ABSTRACT

The research study aim to evaluate sustainability of green market orientation initiatives in the packaging industry of South Africa. Data was collected from 57 respondents, using the self-administered questionnaire. The analysis was done using Chi square, Crosstabs, Factor analysis and KMO and Bartlett's Test. The research findings indicate that adoption of green market orientation has a positive relationship with consumer satisfaction and loyalty.

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Abbreviations

CSR-Corporate social responsibility

ESP- Environmental sound product

GMO- green market orientation

NEO- natural environmental orientation

NGO- Non- governmental organisation

RBV- Resource based view

SGO- Strategic green market orientation.

CHAPTER 1

1.1 Introduction

The study of green market orientation is quiet broad and this research report will examine the sustainability of green market orientation initiatives in the packaging industry of South Africa with a special reference to the Polyoak group.

A lot of research has been done on the sustainability of business with special interest on environmental, economic and social constructs (Global Reporting Initiative, 2006) and triple bottom line (dos Santos, Svensson & Padin, 2013). To the knowledge of the researcher no study has been done on the sustainability of green market orientation initiatives in the packaging industry in South Africa, hence the need to conduct this research in the South African context.

An extensive amount of research exists on Green Market Orientation (GMO) of firms in the marketing literature (Cherian & Jacob, 2012) however efforts to conceptualise the determining constructs are incomplete and the research is on-going (Menon & Menon, 1997). The green market orientation has been operationalized as a multidimensional, latent construct as it is based on the market orientation construct (Stone & Wakefield, 2000). On the seminal work of Menon and Menon (1997) GMO was operationalized as enviropreneurial marketing, a multidimensional construct focusing on the firm's recognition that environmental issues are related to environmental commitment. Furthermore, the research by Bansal (2005) using a Resource Based View (RBV) created a multidimensional scale for a firm's sustainable development that has three components: environmental integrity, economic prosperity and social equity. These in simple terms suggest that there is a lack of common agreement on GMO and its constructs and hence consensus is yet to be reached.

A study by Ramirez (2010) pointed out that measuring a firm's green market orientation from a consumer's perspective may provide additional insights into what it means, and whether it matters, for a firm to be considered 'green' by consumers, who are generally unaware of most firm's inner day to day workings. This notion prompts this study to measure sustainability of GMO initiatives using customers as part of the broader company stakeholders. Having said this, a number of variables will be identified to evaluate the sustainability of green market orientation initiatives.

Prior researcher (Menon & Menon, 1997) on green market orientation explored impact of financial performance and customer perceptions. Porter and Linde (1999) found that adopting green market orientation initiatives affects financial performance of the firm positively as profits increase. In addition, research on customer outcome variables suggest that brand image, customer loyalty, corporate citizenship and perceptions of the firm are influenced when a firm adopts green market orientation (Menon, Bharadwaj, Adidam, & Edison, 1999). Green market orientation has been considered to be a major current trend in business (Witepski, 2007). Terms such as environmental, ecological, greener and sustainable have been used (Song-Tuner, Courvisanos & Zeegers, 2014). Green market orientation has various benefits which includes better brand and reputation (Porter & Linde, 1999), and better profitability and return on investment with robust sources of competitive advantage (Peattie & Crane, 2005).

Satisfaction measures have been used in marketing literature (Oliver, 1980). Green satisfaction is defined as a degree to which customer environmental desires, sustainable expectations and green need is satisfied (Chen, 2010). It has been explored as a significant predictor of customer loyalty (Cronin, Jeffrey, Gleim, Ramirez & Martinez, 2011), and it has also been suggested that loyalty is one means by which consumers express their satisfaction with the quality of the obtained product (Chahal, Dangwal & Raina, 2014). This implies that satisfaction levels of consumers on the firms' products have an effect on future usage.

Corporate social responsibility is defined as a consumer's appraisal of a firm's actions and how such actions impact society as a whole (Wagner, Lutz & Weitz, 2009). Many firms have taken steps to improve perception of corporate social responsibility (Bloom, Hoeffler, Keller & Meza, 2006) as there is evidence that such move increase purchase intentions and customer loyalty (Schuler & Cording, 2006). Despite the lack of common agreement on GMO variables in literature, the goal of this paper is to gain a deeper understanding of how the concept, application and situation of green market orientation works in the packaging industry of South Africa. Green may mean different standards and practices in different industries (Song-Turner, Zeegers, & Courvisanos, 2012). In this study, the underlying perception of

green market orientation from the perspective of the consumers will be explored, with a view to assess the firm's customer loyalty, satisfaction, corporate social responsibility, product quality and environmental concern to measure sustainability of GMO initiatives at the Polyoak group.

1.2 Background of study

Over the last decades environmental consciousness (Cherian & Jacob, 2012) has emerged to be a vital aspect due to increasing issues related to acid rains, depletion of the ozone layer, and degradation of the land. This was supported by Hsieh, (2012) who found that environmental problems that had plagued the world are global warming, environmental degradation, habitat destruction, air pollution, water pollution and resources depletion. These problems were known due to increase in media coverage, greater awareness of environmental problems, the rise of pressure groups activities, stringent regulation and the impact of major industrial disasters on public opinion (Wagner, 1997). This resulted in increase in consumer concern with regards to restoration of ecological balance by presenting demands for eco-friendly products in countries around the world (Doyle, 1992). The study by (Song-Tunner, et al., 2014) show that environmentalism become an issue due to the damage caused by products, production process and environmental disasters. On the part of consumers, they are considering green options to integrate in their purchasing behaviour to save the planet (Jones, Hillier & Comfort, 2014). Companies must take green market orientation initiatives seriously so as to become acceptable by consumers. In short, there has been extensive growth in interest exhibited by marketing academics (Cherian & Jacobs, 2012) as well as practitioners with regard to the impact of green market orientation on promoting and maintaining ecological balance (Chammaro, et al., 2009; Bhattacharya, 2011). There is a great deal of depletion of non-renewable energy resources which accompanied by generation of non-bio degradable pollutants has led to an increase in consumer and corporate awareness of green market orientation issues.

The Polyoak group as one of the players in the South African packaging industry is also faced with a variety of regulations governing the packaging industry. The Environmental Management Waste Act of 2008 is the key instrument governing waste management in South Africa. The act seeks to reduce the amount of waste

that is generated, ensure waste is reused, recycled and recovered in an environmentally sound manner before disposal. This was necessitated due to a high volume of illegal dumping and littering thereby contaminating the environment hence this research seek to review sustainability of green market orientation initiatives in the packaging industry. According to Macintosh (2010) cited by Marthinusen, 2013 1,1 million tonnes of plastic are consumed annually in South Africa and of which 650 000 tonnes are from packaging. This creates lucrative business for the packaging industry, if green initiatives are properly managed.

1.3 Description of research problem

Research problem is a clear, stand-alone statement that makes explicitly what the researcher aims to discover and establish (Irvine &Carmichael, 2009). As an industry leader in the plastic packaging manufacturing industry in South Africa, the Polyoak Packaging Group (Pty) Ltd has a responsibility to manage its environmental impacts. This is done by focusing on operational efficiency improvements through the continuous management of environmental factors, the efficient utilisation of raw materials, and the utilisation of product lifecycle analysis. This strategic emphasis of the Polyaok group does not have a clear green market orientation framework hence this gap underline the importance of conducting this research. The research problem formulated for this research study is:

1.3.1 Main problem

Analyse and evaluate sustainability of Green Market Orientation initiatives in the packaging industry of South Africa.

Sub Problem

1. Analyse and evaluate important green market orientation initiatives in the packaging industry in general and within the Polyaok group.

2. Establish what influence the sustainability of green market orientation initiatives in general and within the Polyoak packaging group.

1.3.2 Research questions

A research question is formulated, in the form of the research question or research hypothesis (Babbie & Mouton, 2004). The research questions formulated in this study are:

1. What are the important green market orientation initiatives exercised in the South African packaging industry.

2. What are the impacts of adopting a Green Market Orientation (GMO) in the packaging industry.

3. What are the benefits of adopting green market orientation initiatives to the Polyoak group.

1.3.3 Research objective

Research objectives indicate in more detail the specific research topics or issues the project plans to investigate building on the main theme stated in the research problem (Thomas & Hodges, 2010). This implies it is a statement indicating key issues to be focussed on in the research study. The primary research objective for this study is:

To review the sustainability of a GMO initiatives in the packaging industry used by the Polyoak group.

Following the above, the secondary research objectives formulated are:

(a) To identify and explore GMO initiatives influencing packaging in general and specifically within packaging in the Polyoak group.
(b) To determine what influence the sustainability of GMO initiatives in general and specifically on packaging within the Polyoak group.

1.3.4 Hypothesis

The following hypotheses were formulated for the purpose of this research:

(a) There is significant positive relationship between GMO constructs: customer loyalty, customer satisfaction, corporate social responsibility, product quality and environmental concern.

(b) GMO initiatives positively influence sustainability in packaging within the Polyoak group.

1.4 Importance of the study

Some packaging firms are implementing environmental practices due to high awareness around its impact on customer habits regarding consuming of traditional products. Retailers and packaging firms agreed that green marketing is not a passing trend and they are aware of the expanding demand for green products (World business council for sustainable development report, 2007). Green market orientation strategies that can be implemented by manufacturers include using green energy. Green energy is power sourced from renewable or non-polluting energy sources (Thompson, 2007). By choosing to purchase green power instead of conventional electricity, retailers support the development of new cleaner technologies that reduce the environmental impacts associated with conventional electricity generation (Thompson, 2007) and this gives a window of opportunity to the packaging industries to increase supply of products which can be recycled. Packaging firms must also use energy saver bulbs and computers which do not use a lot of energy so as to reduce overheads costs. Online sales generate less carbon footprint than physical process of going to a shop and transport goods away (Thompson, 2007) and this means packaging firms will influence their customers and suppliers to implement these green initiatives.

1.5 Limitations of the study

The limitation is that closed ended questionnaires will limit responses and information that could be obtained. The researcher will use a flexible research design so as to uncover variables which are unknown to the researcher at the beginning of the research study (Allen, 2007). The study will not consider constructs like authenticity, supply chain management and consumer outcomes in examining the adoption of green market orientation by packaging sector in South Africa.

The sampling method used is skewed as it does not consider all industries in the packaging industry. In addition the research will be conducted on one company and therefore results cannot be extrapolated to the rest of the industry in South Africa.

1.6 Delimitations of the scope

The scope of this study will exclude retailer's required holistic approach, so as to study within the focus area. Some of the areas excluded include, ethical business practices, trade policy, government legislation, store insulation, store and air conditioning.

1.7 Conclusion

Adoption of green market orientation initiatives has a lot of benefits to customers, retailers and the packaging industry. The packaging sector must implement the use of green energy and customers will support cleaner technologies that have low level of cost. The research design and data analysis was explained fully. The next chapter will focus on research findings.

1.8 Plan for the dissertation

The study will follow the plan in form of chapters as shown below:

Chapter 1. This is the general introduction of the research report. The research focus area is to review the Green market orientation initiatives used in the packaging industry of South African companies. The background was discussed as well the research gap in the existing literature. Limitations and delimitations of the scope were highlighted.

Chapter 2. Literature review chapter focussed on the theory, concepts and constructs relevant to the current research study. These constructs are customer satisfaction, customer loyalty, corporate social responsibility, product quality and environmental concern. The research questions established guided the literature review.

Chapter 3. The research design and methodology was discussed. The survey design using case study approach was explored extensively. Data collection was done using a self-administered questionnaire covering all the five constructs of green market orientation. The analysis of quantitative data was done using spss.

Chapter 4. The research analysis and presentation of results was done using tables, tables, pie charts and figures.

Chapter 5. The conclusions, implications and recommendations for future research was done on this last chapter of the research report.

CHAPTER 2:

LITERATURE ON GREEN MARKET ORIENTATION

2.0 Introduction

The chapter start by the definition of key concepts of the research. An analysis on the development of green market orientation was made. Stakeholder theory was discussed as the industry was evaluated from a stakeholder perspective.

2.1 Definition of key concepts

Business sustainability can be defined as the ability of firms to respond to their short-term financial needs without compromising their (or others') ability to meet their future needs (Bansal & Desjardine, 2014). This means time is central to the notion of sustainability. This was supported by Hogenvold and Svensson, (2012) who postulates that business sustainability refers to the total effort of a company, including its demand and supply chain networks to reduce the impact on the Earth's life and eco-systems. According to (Schaltegger & Burritt, 2005), corporate sustainability (CS) highlights the business role and contribution to sustainable development.

A Stakeholder is defined by Freeman (1984) cited by (Poplawska, labib & Ishizaka, 2014) *as* anyone who affects or is affected by operations of a company. This clearly shows that stakeholders can be classified according to their role, such as government agencies, media, lobbyists, contractors, local community, employees, customers, Non-Governmental Organisations (NGOs) and environmentalists (Poplawska, et al., 2014).

Green marketing has been considered to be a major current trend in business (Witepski, 2007). Terms such as environmental, ecological, greener and sustainable have been used to describe such activities. Peattie and Crane (2005) suggested that all labels that describe a form of marketing based on concepts of sustainability be considered as green marketing. According to Peattie and Crane (2005), green marketing has various benefits including better profitability and return on investment with robust sources of competitive advantage.

Green marketing orientation (GMO) refers to the holistic marketing concept wherein production, marketing consumption and disposal of products and services happen in a manner that is less detrimental to the environment with growing awareness about the impacts of global warming, non-biodegradable solid waste and harmful impacts of pollutants (Mishra & Sharma 2010). Green consumer is defined by Elkington (1994:3) as one who avoids products that are likely to endanger the health of the consumers or others; cause significance damage to the environment during manufacture, use or disposal; consume a disproportionate amount of energy; cause unnecessary waste; use materials derived from threatened species or environment; involve unnecessary use of or cruelty to animals; and adversely affect other countries.

Strategic green market orientation (SGO) refers to an organisation's long term commitment for producing environmental sound products (ESP) and services through the implementation of environmental improvement goals and programs in the past, present and future (Hong, Kwon & Roh 2009). This implies it needs involvement of top management in monitoring past practices, implement current green practices and finalising future initiatives. This was supported by Venkata (2009) who argued that successful green marketing requires effective coordination of production design, manufacturing, delivery, distribution and disposal through the entire product lifecycle.

Green product is a relative new concept as there are no absolute green products. Ottman (2007) defines green product as typically durable, non-toxic, from recycled material or with minimal package. Green detergent is described as one using non-toxic and biodegradable raw materials with naturally based ingredients, produced through green processes (Xu & Ma, 2005) with concerns for human safety and environment friendliness.

The concept of green marketing emerged in the late 1980s (Peattie & Crane 2005) which gave birth to green market orientation. Welford (2000) describes green marketing as the management process responsible for identifying, anticipating and satisfying the requirements of customers and society in a profitable and sustainable way. This implies green market orientation consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants,

such that the satisfaction of these needs and wants occurs, with minimum detrimental impact on the natural environment. Having said this firm must decide whether to use green marketing orientation initiatives as sustainable marketing tools or not.

2.1.2 Green oriented firms

Research suggests that firms have developed a growing awareness of marketing strategies impact on the natural environment (Bansal, 2005). Environmentalist and consumer activists are now joining forces with the captains of industry to promote sustainable business practises as well to develop green environmental friendly quads and services (Ottman, 1992).There is evidence which supports that firms maintaining a green market orientation approach have been championed by environmentally vigilant consumers (Jones, 2008). With reference to the Polyoak packaging group its core business practise is to manufacture packaging materials through recycling and reuse of materials.

2.1.3 Environmental commitment

Environmental commitment is an organisation-wide recognition of the importance of the natural environment that influences organisations to act in ways consistent with the interest of the natural environment (Henriques & Sadorsky, 1999). These organisations have a written environmental plan, communicating its environmental plan to shareholders and employees; rewarding environmental performance and conducting regular environmental audits. (Henriques & Sadorsky, 1999). Environmentally proactive companies have top management support that is involved in environmental issues, utilises internal and external environmental reporting and employee environmental training and involvement is encouraged (Hunt & Auster, 1990). In addition, the findings of Menguc & Ozanne (2003) reveal that the higher order construct of natural environmental orientation (NEO) is positively and significantly related to profit after tax and market share however is negatively related to sales growth.

2.2.1 Development of Green Market Orientation

The concept of green market orientation evolved from the traditional marketing concept since 1980s (Peattie & Crane, 2005), which has taken its trajectory path from production concept to product, sales, marketing, social concept to green concept. Prakash (2002) pointed out that, the relationship between the marketing discipline and the natural environment is important as organisations perceive it as an opportunity that can be used to achieve their objectives. This relationship is described in many terms such as environmental marketing (Coddington, 1993), ecological marketing (Henion & Kinnear, 1976), green marketing (Mishra and Sharma, 2010), sustainable marketing (Fuller, 1999) and greener marketing (Charter & Polonsky, 1999). Green marketing encompasses all activities related to product modification, changes to production process, packaging changes, as well as modifying advertising (Chahal, Dangwal & Raina, 2014). This is designed to generate and facilitate any exchanges that intend to satisfy the needs or wants of customers and society and also paves the way for the organisational growth in a profitable manner with minimal detrimental impact on the natural environment (The American Marketing Association, Welling & Chavan, 2010; Ottman, 2006). Furthermore Prakash, (2002) explicated green market orientation to involve a broad range of activities which include recycling, construction and renovation of buildings with the marketing mix elements in the manufacturing sector.

Green innovation is the development of new or innovative green products (Chahal, et al., 2014). The development of new products or services entails stakeholders that the organisation is a green company. Greening the process is to focus on environmental aspects within the firm itself (Chahal, et al., 2014). Here, the initiatives are more focussed on greening the processes associated with the production of a good or the delivery of a service. Alliance or partnership enhances the green orientation. While, other researchers such as Ottoman (2011) and Grant (2007) put forth that the green marketing concept not only emphasises on product improvement but also improves the life style of the people by changing their behaviour. This improves marketability and the performance of the firm.

2.2.2 Conceptual development

A firm adopting a green market orientation initiative is characterised as developing environmentally- sensitive offering, acting in an environmentally friendly manner and promoting awareness of behaviours (Baker & Sinkula, 2005). Green market orientation may mean promoting the firm as environment-sensitive (Linton, Klassen & Jayaraman, 2007). Organisations adopting green market orientation initiatives have taken advantages of opportunities: profitability, competitive advantage, increased market share and better product quality (Kinoti, 2011). Implementation of green market orientation initiatives has shown positive impact on customer perceptions (Baker & Sinkula, 2005) and better physical environment namely reduced air pollution, reduced energy use and conservation of natural resources (Kinoti, 2011).

Many concepts have been used to operationalize green market orientation (Ramirez, 2010). Labelled firm's natural environment, it has been operationalized as a multi-dimensional construct embodying entrepreneurship, corporate social responsibility and commitment to the environment as its components (Menguc & Ozanne, 2006). Using a resource based view, Bansal (2005) created a multidimensional scale for a firm's sustainable development that contains three components (environmental integrity, economic prosperity and social equity).

Research on the adoption of eco-marketing orientation as a business philosophy has shown that success lies on organisation, restructuring and redesigning of many processes and systems within the organisation (Kinoti, 2011). Finally research on customer outcome variables has suggested that brand image, customer loyalty, corporate citizenship and perceptions of the firm are influenced when the green market orientation initiatives are adopted (Menon, et al., 1999). Following the research prepositions, the green market orientation constructs identified for the study are green customer loyalty, satisfaction, environmental concern, green product and corporate social responsibility. This will assist in the analysing and evaluation sustainability of GMO initiatives in the packaging industry.

2.2.3 Stakeholder theory

Stakeholder theory asserts that managers need to consider the values, sentiments and expectations of their key stakeholders (Taghian, D'souza & Polonsky, 2015). A stakeholder is any individual or group that has a "stake" in the firm and can affect or be affected by the achievement of an organisation's objectives either as a claimant or influencer (Fassin, 2008). Managers design strategy and corporate actions, including Corporate social responsibility (CSR) actions, to address or respond to what the managers believe are their key stakeholders' expectations (Maignan, *et al.*, 2005; Wing-Hung Lo, *et al.*, 2010). Stakeholder orientation requires that firms actively monitor and engage with their stakeholder environment, which has been likened to expanding on the traditional marketing orientation approach (Ferrell, *et al.*, 2010). This actually shows that, for organisations to survive they need to be aware of the range of different stakeholders which can affect or are affected by organisational activities. These are both internal and external stakeholders. When sustainability is part of the organisational goal, the integration of the diverging needs of stakeholders is critical to assist responsible decision-making (González-Benito, et al., 2011 and Thabrew, et al., 2009). Using stakeholder analysis, the list of stakeholders is narrowed down to the most important ones in order to understand their interests, objectives, needs and concerns, and to foresee their actions (Sperry & Jetter, 2012). Organisations must align their activities and performance with the needs of these stakeholders. According to Bidhan, et al., (2010), the importance of stakeholders has increased over time, especially in relation to social and environmental issues. This is evidenced by the emergency of sustainability reporting that is now a critical component of an organization's sustainability accounting and reporting process (Unerman et al., 2007; Burritt & Schaltegger, 2010). From the above, it is clear that sustainability reporting provide organisations with the ability to assess and measure impacts (Lodhia & Martin, 2014) to the stakeholders and environment. The conceptual framework (see figure 2.1) shows the different stakeholders for an organisation. The original framework is set in Song-Toner (2010).

Table 2.1 Conceptual framework of firm's motivation to go green

Firm's environmental stakeholders	Motivation for greening the firm	Firm's Marketing strategy and practices
General public Government Interest groups Media	Legislation	Greening the product (Product level) Value addition process (firm level)
Scientific community Shareholders Suppliers Financial institutions	Competitiveness	Management systems (firm level) Green practices Marketing mix
Employees Legal/courts Competitors Consumers	Ethical reasons	Product Price place promotion

Source: Song-Toner, et al., 2014.

Figure 2.1 is the conceptual framework that brings together the different components of green marketing to identify and assess a firm's greening path. The first component, major environmental stakeholders, is used to identify influential stakeholders and drivers to go green from the firm's perspective, as proposed by Polonsky (1995). The second component, firm's perception of green motivation, is used to evaluate how three motivating forces (legislation, competitiveness, and ethics) are perceived by the managers and transferred into green marketing outcomes, as proposed by Bansal and Roth (2000). The third component, firm's green marketing configuration, is based on Menon and Menon (1997) to assess a firm's "enviroprenuerial" green marketing strategy and marketing practices (incorporating the standard product, price, place, and promotion marketing mix).

2.3.1 Green customer loyalty

Customer loyalty has become a strategic objective for companies as customers perceive a greater risk in the choice of services (Polo, *et al.*, 2013). In line with the above, customer loyalty is the future behaviour commitment to purchase a product or

service, or the linkage with a firm on all occasions when other alternatives were possible (Chang & Fong, 2010). Research suggests that customer Loyalty is the ambition of a number of companies, as loyal customers buy more, spend a larger share of their income at the supplier and tend to be less price-sensitive than other customers (Williams & Naumann, 2011). In the packaging industry, the visit frequency of loyal customers is higher, and that they buy more than non-loyal consumers (Martinez, 2014). Additionally, loyal customers are unlikely to consider competitor brands in their purchasing decisions only due to an economic reason (Yoo & Bai, 2013). The study of (Reichheld, 1993) shows that, a minimal variation in the percentage of loyal customers can have a great impact on the profitability of companies. This view was demonstrated by, Reichheld and Sasser (1990) who found that an increase of 5 per cent in the retention of customers implies an increase of 125 per cent in profits. In the same vein, Petrick (2004) demonstrated that it is six times cheaper to retain existing consumers than to attract new ones. Green loyalty in this study becomes the willingness of consumers to repurchase or reuse firm's green products and services.

2.3.2 Customer satisfaction

Green satisfaction is defined as a pleasure level of consumption-related fulfilment to satisfy customers' environmental desires, sustainable expectations and green needs (Martinez, 2014). This is in line with Bayraktar, et al., (2011) who argued that customer satisfaction construct indicate how much customers are satisfied and how and well their expectations are fulfilled. Enhancing customer satisfaction is widely recognised as an important element leading to the success of any business organisation. Mai and Ness (1999) view customer satisfaction as general feeling of pleasure or gratification experienced by a consumer arising from the ability of a product or service to satisfy the customer's expectation, desires and needs. This present study therefore proposes it as a pleasure gained from satisfying environmental desires and green needs.

2.3.3 Environmental concern

Environmental concern encapsulates a consumer's affective evaluation of environmental issues (Lee, 2008) and is often conceptualised as an immediate antecedent to environmental purchase intentions (e.g., Hartmann & Apaolaza-Ibáñez, 2012; Hedlund, 2011; Koenig-Lewis, Palmer, Dermody, & Urbye, 2014), which captures the extent to which individuals are prepared to purchase products and services from firms with a reputation for being environmentally friendly. Despite this common conceptualisation, however, the magnitude of the relationship between these two constructs is inconsistent at best (Manaktola & Jauhari, 2007). This gave rise to the notion that environmental concern plays an equivocal role in the decision making processes surrounding environmental purchasing (Akehurst, Afonso, & Gonçalves, 2012). Literature regarding role of environmental concern remain mixed (Ishaswinni & Datta, 2011) as some consumers are willing to pay a premium whilst others are not. Ishaswinni and Datta, (2011) found that consumers with high level of environmental concern are willing to buy eco-friendly products but unwilling to pay a premium, however, other researchers found that consumers with high concern about environmental issues tend to pay more for environmental friendly products (Royney, Levy & Martinze, 2011). Bamberg (2003) suggests that environmental concern should be viewed as an indirect factor influencing environmental related behaviours.

2.3.4 Green product

Although there is no consumer product that has a zero impact on the environment, in business the terms 'green product' or 'environmental product' are used commonly to describe those that strive to protect or enhance the natural environment by conserving energy, resources and reducing or eliminating use of toxic agents, pollution, and waste (Ottman, et al., 2006). Green product is defined by Ottman (2007:5) as typically durable, non-toxic, from recycled material or with minimal package. In the plastic packaging industry, green detergent is described as using nontoxic and biodegradable raw materials with naturally based ingredients, produced through green processes (Xu & Ma, 2005) with concerns for human safety and environment friendliness. From the statement, it is clear that green product focusses on key environmental issues mainly energy, material and pollution.

Green product innovation is a multi-faceted process whereby three key types of environmental focus: material, energy, and pollution are actually highlighted based on their major impact on the environment at different stages of the product's physical life cycle (Dangelico & Pujari, 2010). The product life cycle include the manufacturing process, product use and disposal (Dangelico & Pujari, 2010). The Polyoak group environmental impact occurs during manufacturing process where there is need to reduce energy use, water use, detergent and initiate use of renewable sources of energy in the production process.

Introducing radical green innovation in any stage of product's physical life cycle or addressing sustainability challenges across different dimensions such as material selection, energy use, or pollution prevention can bring substantial product differentiation and competitiveness for these products in the broader market place. Dangelico and Pujari (2010) argued that a major frontier in the quest for achieving environmental sustainability in packaging is during the transportation (in terms of energy consumption and pollution) and in the disposal stage (in terms of waste). The Polyoak group must come up with packaging rules which keep on encouraging and reward development of sustainable packaging ways in the broader industry so as to save the environment.

2.3.5 Corporate Social Responsibility

According McElhaney (2009), corporate social responsibility (CSR) is defined as a business strategy that is integrated with core business objectives and core competencies of the company. In addition, the author indicates that CSR is designed to create business value. This was supported by by Lizarzaburu (2014), who described corporate social responsibility as how to manage or lead a company or an organisation in a manner that meets or exceeds expectations ethical, legal, commercial and public expectations that society has, in relation to companies. Carroll (1999) delineated four categories of social obligations that a responsible corporate citizen would seek to meet. These include economic, legal, ethical, and philanthropic responsibilities. Economic responsibilities include the obligation of satisfying consumers with products of good value, as well as generating sufficient profits for investors. Legal responsibilities require firms to obey laws and comply with regulations while fulfilling their economic obligations. Ethical responsibilities refer to

the kinds of behaviours and ethical norms that business is expected to follow even though they have not been codified into law. Philanthropic responsibilities encompass financial and non-financial contributions to particular causes for the betterment of society at large. In short, CSR must take the business to make a profit, obey the law, be ethical and behaves as a good corporate citizen (Lizarzaburu, 2014). The companies must manage CSR as it help to build the reputation among the stakeholders at large and create value.

2.3.6 Green product quality, green customer satisfaction and green customer loyalty

According to Schellhase, et al., (2000) high product quality could gain greater product acceptance from customers as well as lead to satisfaction of retailers and wholesalers. The findings of Eskildsen, et al., (2004) show that product quality had a direct impact on performance and was closely linked to customer satisfaction, customer loyalty, and repurchase intentions. This is in line with the findings of Kotler, et al., (2005) who argued that maintaining good product quality will provide satisfaction to customers and further generate customer loyalty. This clearly shows that companies in the packaging industry must satisfy the environmental needs of their customers to create loyalty and have sustainable competitive advantage over their competitors. According to the research of Chen (2010), there is a positive relationship between, green satisfaction, green loyalty and the performance (financial or non-financial performance) of the organization, which ultimately enhances the green brand equity.

2.4.1 Green market orientation initiatives

The companies in the packaging industry have many initiatives they can come up with in the manufacturing of sustainable packaging products. Gonz-alez-Benito and Gonz-alez-Benito (2006) identified a set of initiatives that should be adopted for the development of green market orientation products. These initiatives include the substitution of polluting and hazardous material/parts; design focused on reducing resource consumption and waste generation during production and distribution process. In addition, design of products must be focused on reducing resource

consumption and waste generation in product usage; and products in the packaging industry must be designed for easy disassembly, reusability and recyclability.

Jabbour, Jagend, Jabbour, Gunasekarant & Latan (2014) described these green initiatives in their work as coordinated efforts that organisations should take. These initiatives include among others:

- Adopting environmental technologies, preventive or end of pipe control (Kuehr, 2007);
- Obtaining specific technical knowledge about legislation and environmental requirements in the packaging industry of South Africa;
- Obtaining technical knowledge and enabling the application of technologies such as life cycle assessment, CO2 emission analysis (Rajaeifar et al., 2014) and eco-efficiency (Govindan et al., 2014b), among others, to map the environmental effects generated by the manufacturing and production processes; and
- Obtaining technical knowledge and enabling the application of the above mentioned technologies to measure the environmental impact of the end consumer's product consumption (Jabbour, et al., 2014).

Having said this, it is clear that the sustainability of green market orientation initiatives lies on the human resources elements (employees and managers) of the packaging industry in general and specifically within the Polyoak group. There must be environmental management plan at the Polyoak group level such that green market orientation initiatives are implemented. The Polyoak group must embark on environmental training on employees and managers to improve their capacity to address environmental management situations (Jabbour, 2013) when the need arise. In addition, the Polyoak group must have green empowerment policy framework in place so as to provide employees autonomy to make environmental decisions (Daily, et al., 2012) without wasting any time. According to the research of (Jackson et al., 2014) firms must have environmental performance assessment plan to measure employees' contribution to the advancement of environmental performance. This is in line with the earlier findings of (Renwick et al., 2013) who recommended that there must be reward systems for environmental performance at

company level. This implies there must be valuing of employees that contribute the most to the sustainability of green market orientation. Furthermore, the Polyoak group senior management must support these green market orientation initiatives. Research suggests that there must be inter-functional or cross-functional integration of environmental management that favours the formation of green teams (Dangelico, 2014; Jabbour et al., 2013) at an organisational level.

In the same vein, Milliman (2013) emphasised that sustainability of green market orientation initiatives requires employee dedication and attention from human resources departments. According to the authors Delmas and Pekovic (2013), companies that pay attention to the greening of human factors may be more productive and gain a competitive advantage over competitors. A lot of recent findings supporting the relevance of greening the "human side" by the company management (for example, Ehnert, 2009; Jackson & Seo, 2010; Kim, et al.,2014; Paill et al., 2014; Govindan, et al., 2014a; Wolf, 2013; Graves, et al., 2013). This implies the Polyaok group must workshop employees and managers from time to time on its green strategic emphasis so as to ensure success of its green market orientation initiatives.

2.4.2 Benefits of green market orientation in the packaging industry

The implementation of green market orientation initiatives in the packaging industry have tangible benefits as it leads to reduction in pollution generation (for example, atmospheric emissions, liquid effluents and residues) as illustrated by (Lai and Wong, 2012; Zhu et al., 2007). Green market orientation initiatives lead to reduction in the consumption of toxic, hazardous materials (Jabbour, et al., 2014). In addition, the implementation of these green market orientation initiatives result in the reduction of water and energy consumption as well as frequency of environmental accidents (Lai and Wong, 2012). The authors Dangelico and Pujari, (2010) cautioned that green products cannot sustain long term market success unless they demonstrate credible environmental performance.

2.4.3 Impact of green market orientation initiatives

The success of green market orientation has effect on corporate image and motivation to employees, management and other stakeholders. Research supports that overall corporate image exerts great influence on customers' behaviour and their purchasing decisions (Chen & Tsai, 2007; Han, *et al.*, 2009; Lin, *et al.*, 2007; Ryu, *et al.*, 2012). Some academics have also explored the motivations to implement green initiatives (Bonilla-Priego, *et al.*, 2011; Tzschentke, *et al.*, 2004). For instance, one reason to develop green market orientation strategies is to accomplish corporate goals. Other motives include moral obligations as organisations want to be more ethical (McIntosh, 1990), pressure from competitors or government (Delmas & Toffel, 2008), costs associated with reductions in waste disposal (Tzschentke, *et al.*, 2004), opportunity to develop a favourable corporate image and reputation (Lee *et al.*, 2010) and the opportunity to seek new markets and enhance product value (Chen, 2010). This leads to sustainability of green market orientation initiatives in the packaging industry.

2.4.4 Critique of Green Marketing Orientation

Evidence shows adoption of firm level green marketing orientation might be a risky strategy (Ramirez, 2010). Some research shows that consumer response to green offering can be characterised as lukewarm (Cleveland, Kalanas & Laroche, 2005). Considering Monsanto's genetically modified seeds, Shell's Pura gasoline, Phillip's Earth light and Timberland's organic cotton t-shits have each failed to meet sales expectations (Esty & Winston, 2006; Ottman, Stafford & Hartman, 2007; Peattie & Crane 2005). This was caused by consumer scepticism towards products' level of greenness, convenience and price acted as barriers for adoption (D'Souza, Taghian & Khosla, 2007; McDonald & Oates 2006). The green initiatives are very expensive especially for undercapitalised firms which are characteristics of firms in developing countries like South Africa.

2.5 Conclusion

From the views of different scholars, it is clear that green market orientation involves many activities related to production process, packaging and disposal of material.

Companies must implement the green management plan to implement the green initiatives. Customer loyalty is the behaviour of consumers in relation to repurchase and reuse of products and services. Customer satisfaction is the total consumption experience of the goods or services by the consumers. Environmental concern is an indirect factor which influences the behaviour of consumers. Green product is viewed as focussing on environmental issues like reducing energy use, water use, and pollution as well focusing on recycling. Corporate social responsibility is the obligation of the firm to its stakeholders and the society at large. The next chapter focus on research design and methodology.

CHAPTER 3

RESEARCH DESIGN AND METHOLOGY

3.1 Introduction

In the previous chapter, the literature review was conducted to explore the sustainability of green market orientation initiatives in the packaging industry in general and within the Polyoak group. The development of green market orientation was scrutinised and the constructs were also discussed. These constructs are customer satisfaction, customer loyalty, environmental concern, green market orientation and green product quality.

The first part of this chapter contains the description of objectives, population of the study and the sample. Description of the research design follows. The design of the research instrument gets more attention and the chapter concludes by discussing the testing techniques used on the measuring instrument for testing reliability and validity.

3.2 Research objective

Research objectives indicate in more detail the specific research topic or issues that the project plans to investigate, building on the main theme stated in the research problem (Thomas and Hodges, 2010). This means it is a statement indicating key issues to be focussed on in the research study.

3.2.1 Primary objective

The primary research objective for this study is:

To determine how the sustainability of green market orientation initiatives influence the packaging industry as used by the Polyoak group.

3.2.2 Secondary objectives

Following the above primary objective, the secondary objectives formulated are:

a) To identify and explore green market orientation initiatives influencing packaging industry in general and specifically within the packaging in the Polyoak group.

b) To determine what influence the sustainability of green market orientation in general and specifically within packaging at Polyoak.

3.3 Target population

In research methodology, population does not refer to the population of a country (Brynard & Hanekom, 2005). It actually refers to the objects, subjects, phenomenon, cases, events or activities specified for the purpose of sampling (van Rensburg, 2010). In this research study, the population consists of Polyoak stakeholders who include employees, customers, suppliers and regulators among others. Customers of the firm were targeted. To reach them in this research, a list of Polyoak customers was obtained from the database of the company. These customers become the population of the study.

3.4 Study sample

3.4.1 Sampling method

As it is not practical to study the whole population, evidence from other researchers shows that a portion of the population known as the sample must be selected to participate in the study (Babbie & Mouton, 2010; Brynard & Hanekom, 2006; Maree & Pieterson, 2007; Strydom, 2011b). In selecting the sample for the research study, the researcher conforms to the simple convenience sampling method. This procedure helped to come up with 180 participants who were sent the self-administered questionnaires.

Sampling of a population is used to:

- Simplify the research as it is easier to study a representative sample of a population than to study the entire population (van Ransburg, 2010)
- Save time as studying an entire population could be time consuming (Jolley, 2007: 531).
- Cut costs as collecting data from a population can be costly if it is large and geographically distributed (Brynard & Hanekom, 2005:43).

Based on the above, the following was evident:

- It would be more manageable to target a representative sample of Polyoak customers rather than targeting the whole stakeholders in the packaging industry of South Africa.
- It would be more time efficient to use companies doing business with Polyoak group rather than all buyers in the packaging industry nationally.
- It would be more cost efficient to collect data from customers in Polyoak database rather than targeting consumers of packaging products nationally in the entire packaging industry.

Before distributing the self-administered questionnaire managers in respective companies were contacted telephonically or by email explaining the purpose of the study and seeking their approval to participate in the research study. The research instrument was then distributed.

3.4.2 Units of the study

Anderson (2004) postulates that there are no clear answers with regards to how large a sample should be. Neuman (2006) suggests the general principle of the smaller population, the bigger the ratio of the sample size to population size; for example, a ratio of about 30:100 (30%) for smaller population under 1000. In the study, the sample size was 32% to population and its considered meeting the suggested principle.

3.5.1 Research design of the study

Research design is a plan or blue print of how you intend to conduct the research (Babbie & Mouton, 2010). The survey research design was used in the study. Survey research generally involves acquiring information about one or more groups of people, perhaps about their characteristics, opinions, attitudes or previous experiences by asking questions and tabulating answers (Leedy & Ormond, 2014). During the study, the researcher asked questions and summarises the responses.

Face to face enabled the researcher rapport with potential participants and therefore gain their cooperation. For those interviewees who were far away, the researcher

emailed the self-administered questionnaire. Self-administered questionnaires had their drawbacks of low return rate (Leedy & Ormond 2014). In the study, non-response rate was 68% (see table 4.1). The self-administered questionnaire was carefully planned, constructed and distributed so as to produce useful data.

Closed ended questions were used as the respondents were asked to select an answer from among a list of provided by the researcher (Babbie & Mouton, 2010). In the construction of closed ended questions, the response categories provided were exhaustive. This means they include all possible responses that might be expected and secondly the answer categories were mutually exclusive were the respondents were not compelled to select more than one response (Babbie & Mouton, 2010). A pilot study using 10 questionnaires was administered to test the validity and reliability of the instrument. Corrections were made on the instrument to improve the structure and rating sequence of the constructs.

3.5.2 Data collection

Respondents completed the self-administered questionnaire. Each respondent received a cover sheet explaining the purpose of the study, the participants' rights and the name of the contact person and telephone number for those who had questions (Ramirez, 2010). The respondents were guaranteed of anonymity and confidentiality (see annexures C and D) which is the consent form to participate and participant information sheet respectively.

3.6 Measuring instrument

Data was collected using a questionnaire.

3.6.1 Rationale for the use of a questionnaire

Anderson (2004) argues that surveys using a questionnaire are the most widely used data gathering techniques in research and can be used to measure issues that are crucial to the management and development of human resources such as behaviour, attitudes, beliefs, opinions and characteristics among others. The advantages and

disadvantages of using a questionnaire were considered before selecting the instrument. The contact details of the principal researcher were provided so as to clarify on areas respondents don't understand. The questionnaire was distributed using the email.

Table 3.1 Advantages and disadvantages of a self-administered questionnaire

Advantages	**Disadvantages**
They are cheap to administer. The only costs are those associated with printing or designing the questionnaires, their postage or electronic distribution	Questionnaires have to be short and the questions must be simple as there is no opportunity to probe or clarify misunderstandings.
They allow for a greater geographical coverage than face-to-face interviews without incurring the additional costs of time and travel. Thus they are particularly useful when carrying out research with geographically dispersed populations.	There is no control over who fills out the questionnaire, and the researcher can never be sure that the right person has completed the questionnaire.
Using self-completion questionnaires reduces biasing error caused by the characteristics of the interviewer and the variability in interviewers' skills.	Those with low levels of literacy or poor access to email or the Internet are unlikely to complete a questionnaire, meaning that they are excluded from the study.
The absence of an interviewer provides greater anonymity for the respondent. When the topic of the research is sensitive or personal it can increase the reliability of responses.	Response rates tend to be low and it is difficult to know the characteristics of those who have not filled in the survey and how their non-response will affect the findings.

(Source: Adapted from Phellas, Bloch & Seale, 2011:185-186)

Based on the above information, the rational of using this self-administered questionnaire is:

- Cheaper to administer
- Cover greater geographical area
- Reduces biasing error
- Provides greater anonymity for the respondent

3.6.2 Questionnaire design

A questionnaire is a tool for collecting and recording information about a particular issue of interest made up of a list of questions with clear instructions and space for answers or administrative details (Oppenhein, 1992). This means that the questionnaire must be able to address the primary and secondary research objectives of the phenomenon under investigation.

A self-administered questionnaire was designed by the researcher basing on the literature review (Fick, 2008) in order to gather data based on the research objectives. The designed measuring instrument consisted of different types of questions namely closed ended, dichotomous, multi-response and scaled (Babbie & Mouton, 2010). The researcher numbered and coded the boxes adjacent to each response and in instances where the response does not fall within the pre-coded category, an additional box marked ‘other’ was allocated (Fouche & Bratley, 2011:254). The process of pre-coding made it easier during data capturing of the survey data.

3.6.2.1 Questionnaire planning and the components

According to the work of Dencombe (2003), elements which need to be considered during questionnaire planning stage are:

- Costs
- Production or design time frame
- Distribution, collection and analysis process

- Time span for receiving results

In line with the above elements, costs were incurred in terms of distribution, collection and analysis of the results. The researcher allocated sufficient time for all the stages described in questionnaire planning.

The main components of the questionnaire are described by Hamlet (2005) as follows:

- Title
- Cover letter
- Instructions for completing the questionnaire
- Respondent data: age, education, job title, level of management, years in current position.
- Focal data: these items gather data on the opinion and views that lie at the core of the study.
- Open questions help to capture topics that otherwise have been escaped. In this research, no open questions were asked.
- Closing remarks: a thank you note to the respondent and instructions on how to return the completed questionnaire to the researcher were made.

3.6.2.2 Ethical and general consideration

Ethical consideration

The researcher ensured confidentiality and anonymity. The explanations were made in advance so that respondents make informed decisions (Alasuutari, Bickman & Brannen, 2008). According to Michell and Jolley (2007), the respondents must be guaranteed of confidentiality and be assured of their privacy as a basic right. A consent form to be signed by the respondent during the participation was included.

Furthermore, Kruger and Mitchell (2005) explain ethical consideration and behaviour when conducting a research as highlighted on the table below.

Table 3.2 Ethical consideration

Competence	Researchers should not embark on research involving the use of skills in which they have not been adequately trained. To do so may risk causing harm to subjects, abusing a subject's goodwill, damaging the reputation of the research organisation, and may involve wasting time and other resources.
Plagiarism	The use of other people's data or ideas without due acknowledgement and permission where appropriate is unethical.
Falsification of results	The falsification of research results or the misleading reporting of results is clearly unethical

(Source: Adapted from Welman, et al., 2005:182)

General consideration

Unlike face to face interviews, with distributed questionnaires there is no one to explain the questions to respondents (van Rensburg, 2010). It is therefore important that questions contained in the questionnaire must be simple, clear and understandable (Gillharm, 2000). This view was shared by Kumar (2005), who argued that questionnaire must be easy to follow. During the pilot study, the length of the questionnaire was determined to be ten minutes to complete.

3.6.2.3 Steps in designing the questionnaire

Krosnick & Presser (2010: 264) summarised the steps in designing the questionnaire as follows:

- Use simple, familiar words (avoid technical terms, jargon and slang).
- Use simple syntax
- Avoid words with ambiguous meaning
- Strive for wording that is specific and concrete

- Make response options exhaustive and mutually exclusive
- Avoid leading or loaded questions that push respondents towards the answer
- Ask about one thing at a time (avoid double-barrelled questions)
- Avoid questions with single or double negations.

Question order

Krosnick & Presser (2010) came up with an advice on how to optimise question order:

- Early questions should be easy to answer and should build rapport between the respondent and the researcher
- Questions at the very beginning of the questionnaire should explicitly address the topic of the survey, as it is described to the respondent prior to the interview.
- Questions on the same topic should be grouped together and proceed from general to specific.
- Questions on the sensitive topics that might make respondents uncomfortable should be placed at the end of the questionnaire.
- Filter questions should be included to avoid asking that do not apply to them.

In order to consolidate the above steps in designing a questionnaire, it was decided to carry out a pre-test on the instrument before rolling out to the participants. This gave the researcher chance to modify the research instrument and make it user friendly.

3.6.2.4 Number of points on the rating scale

During the designing process of the rating scale, the researcher specified the number of points on the scale. According to Likert (1932), scaling most often uses 5 points. Osgood, Suci & Tannenbaum's (1957) semantic differential uses 7 points.

From the above findings, this research study used five point Likert scale as the base for collecting data on different constructs.

3.6.2.5 Open versus Closed questions

Open questions permit the respondents to answer in their own words and closed questions require respondents to select an answer from a set of choices (Krosnick & Presser, 2010). In order to analyse closed ended questions, they must be grouped into smaller categories and this requires development of coding scheme. The process is costly in terms of difficulties in interviewing and recording responses hence this research follows closed ended questions.

Closed ended questions are used in order to retrieve the maximum amount of information without imposing on the time and resources of respondents (van Rensburg, 2010). Examples of closed ended questions are:

- Rated responses which use Likert scale (Burgess, 2001)
- Mark the correct space used when obtaining demographic information of respondents.
- Yes/No used to seek definite answers

3.6.3 Measures for gathering information

Information was gathered using the following measures: demographic variables, customer satisfaction, customer loyalty, green market orientation, environmental concern a, product quality and green market orientation initiatives.

3.6.3.1 Demographic variables

The demographic variables that were included in research instrument are gender, race, age, level of management in the organisation, experience with the present employer and academic qualifications.

3.6.3.2 Customer satisfaction

The measuring instrument was adopted from Oliver (1980) who developed it measuring antecedents and consequences of satisfaction decisions. In the study, 2000 residents and 1000 students were contacted for the study. Forty five percent of the students and twenty eight percent of the residents participated in the study. The measure was selected because previous researchers used it to measure green market orientation. Ramirez (2010) argued that the measure helped to operationalize the firm's efforts to operate in a sustainable manner from a consumer's perspective.

3.6.3.3 Green customer loyalty

The measuring instrument was developed by Sirdeshmukh, et al., (2002) & Zeithaml et al., (1996) and was modified by Martinez, (2014). In the study, 382 respondents were used, 49.8% were males and 50.2% were females. The instrument used Likert scale to measure the scores. The variable was used to measure customer loyalty exploring antecedents from a green marketing perspective.

3.6.3.4 Green market orientation

The variable was measured using the scale which was developed by Ramirez (2010) using Churchill (1979) scale development process. In the study qualitative method was used to obtain data from the sample. The scale was selected for this study because it was used previously to test green market orientations dimensions at a firm level. The research focussed on one company using the case study approach. The researcher modified the research scale which was used and used it in the current research.

3.6.3.5 Environmental concern

The measure was developed and validated by Stafford, Stafford & Collier (2006) measuring mediating factors affecting relationship between environmental concern and sustainable behaviour. The same variable was used by Thlieme, Royne, Jha,

Levy & McEntee (2015) measuring factors affecting the relationship between environment concern and sustainable behaviour. During the study, a total of 467 participants were involved and 57,8% were females. Likert scale was used to score the responses.

3.6.3.6 Green product quality

The measuring instrument was adopted from Chang & Fong (2010). In the study, they sent 600 questionnaires and the response rate was 32.6%. From the sample, 44% were males and 56% females. The majority of respondents (72%) were between 30 and 49 years. This variable was selected because it was used to establish relationship between green product quality on customer satisfaction and customer loyalty. A five point Likert scale was used to gather data.

3.6.4 Pilot study

The researcher conducted a study on a small scale prior to the main study. This was done to determine suitability of the sampling frame, measuring instrument and to check on the adequacy of the methodology. This was done to effect modification at little cost before the main investigation (Babbie & Mouton, 2010; Delport & Roestenburg, 2011; Strydom, 2011a). When conducting pilot study, the researcher administered the measuring instrument to ten respondents who were advanced marketing students, the Polyoak group management and practising marketing professionals. This group was targeted as they are experts and are well versed with green market orientation initiatives and helped to delineate the problem more sharply.

Follow up meetings were done with the research promoter, the Polyoak group sustainability management and other participants in the pilot study to refine the measuring instrument as per their recommendations. The instrument was viewed in terms of the layout, structure, relevancy, suitability, appropriateness, validity and reliability (Alasuutari et al., 2008; Strydom, 2011a). All the participants who took part during the pilot study were not included in the main research survey. Their views

were used to modify the measuring instrument. The measuring instrument received ethical clearance from the SBL research ethics committee before data was collected.

3.6.5 Administration of the questionnaire

A package containing the cover letter, consent form, participant information sheet and a measuring instrument was e-mailed and hand delivered (Delport & Roestenburg, 2011). The questionnaire was distributed to the Polyoak group customers whose contact details were found on the company database. These were selected because they contributed at least 80% of the company revenue.

Potential disadvantages and advantages of the administration of self-administered questionnaire were identified by van Rensburg (2010) as follows:

Disadvantages

- A concern about anonymity by respondents
- A concern regarding respondents potentially altering the questionnaire.

Administrative advantages

- Speedy transmission.
- No interviewer bias.
- The fact that respondents could complete the questionnaire at any time suitable to them.

The researcher sends reminders to the respondents to return the questionnaires.

3.7 Statistical data analysis

The data which describes the sample was generated first using demographic variables. This was done by showing means of continuous variables like age and frequencies of categorical data like qualifications, post level and gender. This was done so as to know the background information about the people who participated in the study.

The next step was to calculate descriptive statistics of the data. Here, means and standard deviation of variables was calculated. This was done to know the average scores of participants on the five point likert scale on the variables. Factor analysis was also used in the study to test validity of the research instrument.

3.7.1 Reliability

Values greater than 0.60 are acceptable for consistency estimates on reliability (Barrett, 2001). Three most popular types of consistency estimates are a) correlation coefficients, b) Cronbach's alpha (Cronbach, 1951) and c) intra class correlation. This research test reliability of the research instrument using correlation coefficients and Cronbach's alpha.

Cronbach's alpha

Cronbach's alpha coefficient is a measure of internal consistency reliability and is useful for understanding the extent to which the ratings from a group of judges to measure a common dimension (Stephen, et al., 2008). If Cronbach's alpha estimate is low, this implies majority of the total variance in the composite score is due to error variance and not true score (Crocker & Algina, 1968). The following strategies outlined by Delport & Roestenburg (2011:177) were used to improve reliability of the quantitative data.

- Clear conceptualisation of constructs was done by defining key constructs to avoid ambiguity and eliminate confusion (Deport, 2005). This actually increased reliability of the measuring instrument.
- Use of precise level of measurement was adopted by using nominal and ordinal data level of measurement in the instrument.
- Use of multiple indicators was adopted by using multiple indicators to measure the same construct with the intension to improve reliability. The measuring instrument was tested for reliability using correlation coefficient and Cronbach's alpha.

- Use of pilot study before the main helped the researcher to obtain many drafts of the instrument from ten respondents. Those drafts were consolidated to make final measuring instrument. This process was useful considering that the instrument was designed for the first time in this study (Welman, Kruger and Michell, 2005).

3.7.2 Validity

Validity refers to the extent to which a test measures what it is supposed to measure in a consistent and accurate manner (Babbie, 2004 as cited in Delport, 2005:160). In this regard, validity of this research instrument was tested using face, content and factor analysis.

3.7.3 Face validity

Face validity was achieved through circulating the instrument to ten respondents during the process of pilot study and they made some recommendations regarding layout, content and instructions (van Rensburg, 2010). According to Anderson (2004:112), no one project is going to be able to produce findings that are 100% reliable and valid. However, factor analysis minimise limitations and maximise credibility of the study.

Having said this, a properly planned approach was developed to gather data. The instrument was tested to ensure reliability and validity of the research report and validate the decisions taken.

3.7.4 Content validity

Content validity is defined as a subjective measure of how appropriate items seam, to set of reviewers who have some knowledge of the subject matter (Litwin, 1935). For content validity, the questionnaire was circulated to advanced marketing students and practising marketing practitioners in the industry.

3.7.5 Factor analysis

According to Rummel, (1970) factor analysis is a means by which the regularity and order in phenomenon can be discerned. This is supported by Field, (2000) who referred to factorial validity, as to whether the factor structure of the questionnaire makes intuitive sense. If the shared variance is higher than (60%), it is acceptable as a common construct (Steven et al., 2008) and it actually shows that independent ratters agree on the construct being rated.

3.8 Conclusion

In this chapter, the following was discussed namely research population, sample and research objectives. More was said on the measuring instrument focussing on its rationale, design components and also ethical components. Measures used to gather information were highlighted focussing on each variable, and how previous researchers used them in measuring the construct. The pilot study helps to test reliability and validity of the measuring instrument. In chapter 4, the empirical findings were presented.

CHAPTER 4

ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

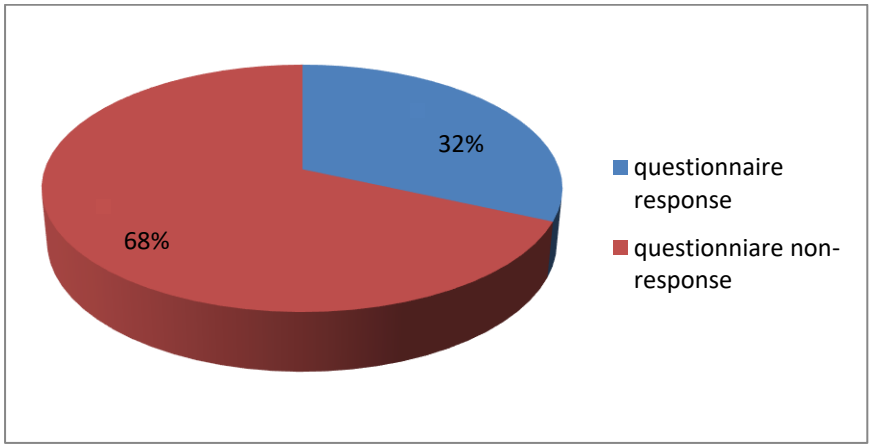
During the previous chapter, research methodology was discussed. The measuring instrument used to obtain data was thoroughly discussed and an indication was given on the method of statistical analysis. This chapter is going to interpret the meaning of the data obtained from the empirical study.

Sustainability of green market orientation initiatives, as a focal point is going to be evaluated against critical elements, such as customer satisfaction, green loyalty, corporate social responsibility, environmental concern and green product quality.

4.2 Response rate of the survey

About 180 questionnaires were sent out to the respondents. 57 questionnaires were returned while 123 were not returned. The response rate was 32% and the non-response rate was 68. This is shown on (figure 4.1).

Figure 4.1 Percentage participation in the research.



Hussey and Hussey (1997:164) clarify two types of non-response bias as:

• the questionnaire non-response, whereby the questionnaires are not returned at all.

• the item non-response, where some of the questions in the questionnaire have not been answered.

Response rate is calculated by dividing the number of usable responses returned by the total number eligible in the chosen sample (Fincham, 2008). Out of the 180 questionnaires distributed, the response rate was 31.7% and non-response rate to 68.3% (see figure 4.1).

4.3 Summary of variables under background information of respondents.

Table 4.1 Statistics of background information

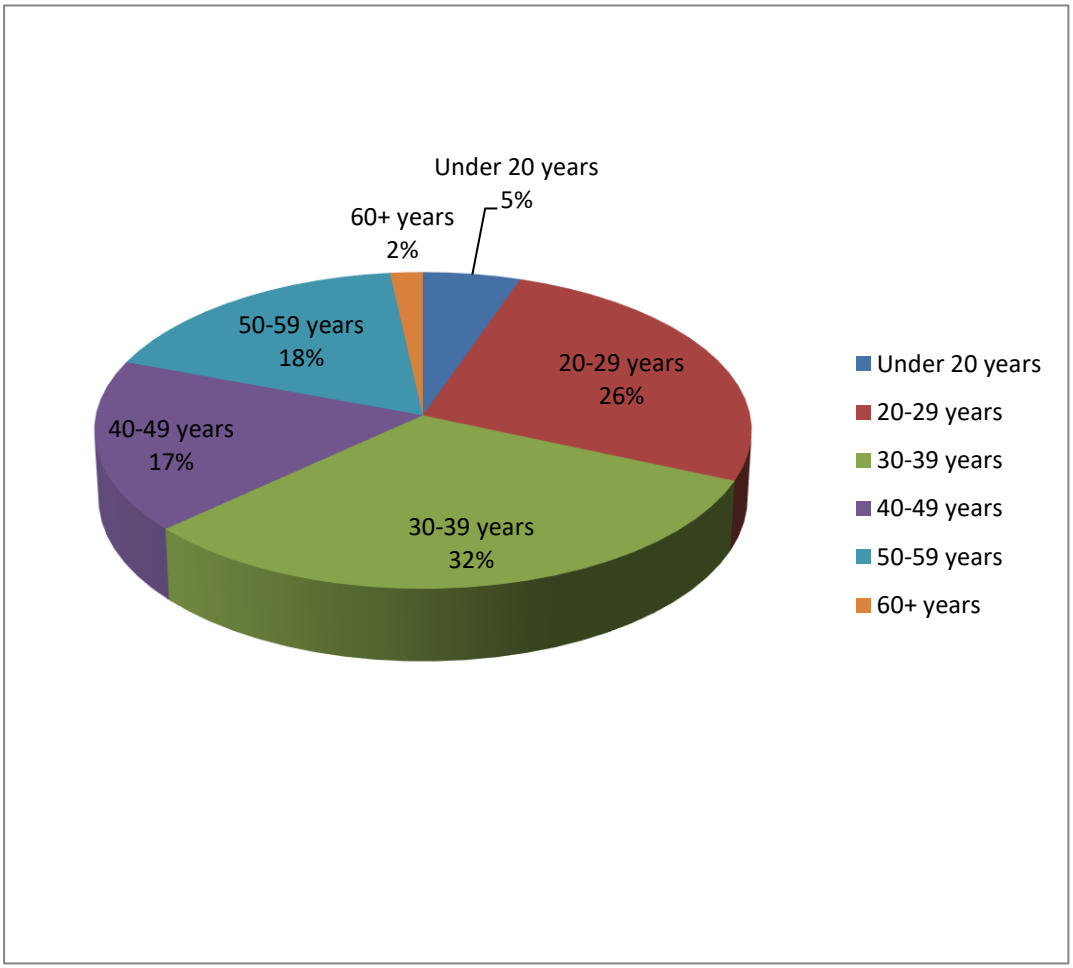
		Age	Gender	Experience	Post Level	Race	Academic Qualifications
N	Valid	57	57	57	57	57	57
	Missing	0	0	0	0	0	0
Mean		3.211	1.491	2.789	1.807	2.175	4.789
Median		3.000	1.000	3.000	2.000	1.000	5.000
Mode		3.0	1.0	2.0[a]	1.0	1.0	5.0
Std. Deviation		1.2209	.5044	1.0305	.9149	1.3512	1.4484
Variance		1.491	.254	1.062	.837	1.826	2.098
Skewness		.252	.036	-.167	.980	.479	-.495
Std. Error of Skewness		.316	.316	.316	.316	.316	.316
Range		5.0	1.0	3.0	3.0	3.0	6.0

a. Multiple modes exist. The smallest value is shown

The average age group of the consumers is between 30-39 years. All the responses on the questionnaire where completed by 57 participants. The gender of participants was almost similar although males have an extra of one member. Most of the participants are experienced in their organisations considering that they have between 6-10 years of experience in the buying of packaging products. The middle managers dominated in the survey as they are the highest to respond in the questionnaire. The blacks dominated in completing the questionnaire and most people have bachelor's degree.

4.3.1 Age

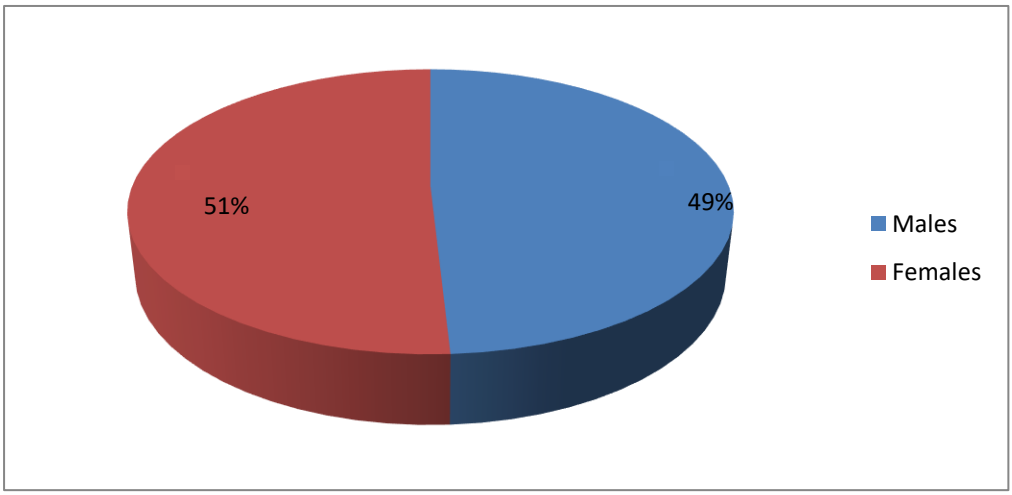
Figure 4.2 Age of respondents



The results of the survey show that buyers in the packaging industry span across different age groups. 32% are in the 30-39 age group and those who are the seniors only account for 2%. They fall in the age group of 60+ years.

4.3.2 Gender respondents

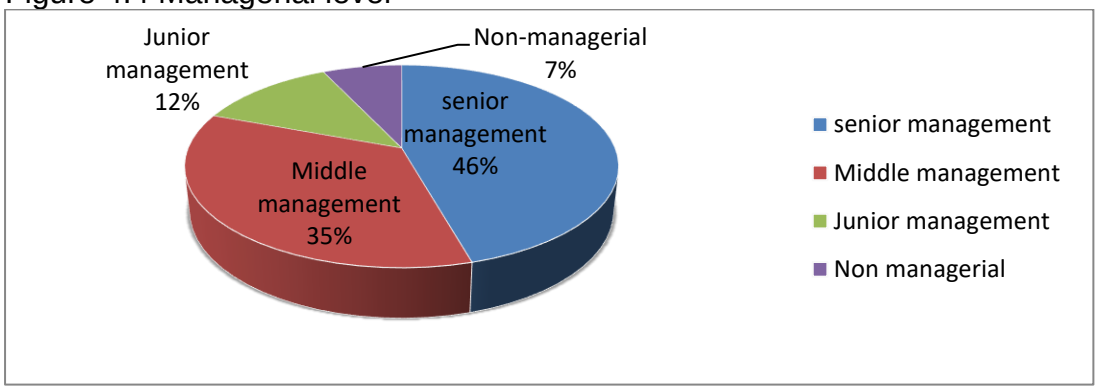
Figure 4.3 Gender of respondents



Out of the 57 respondents who completed the questionnaire, 51% were males and 49% females. This shows purchasing of packaging materials is done by both consumers regardless of their gender.

4.3.3 Managerial level of respondents

Figure 4.4 Managerial level

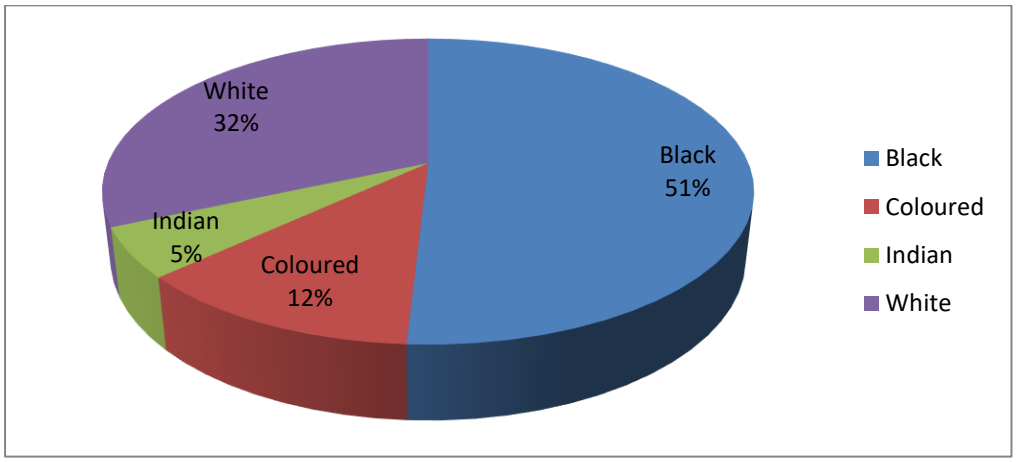


The statistics for question 4 require respondents to indicate their levels of management. Results show that most buying decisions are done by senior

management. According to the survey results, 46% was completed by senior management, 35% were the middle managers and junior management accounted for 12%.

4.3.4 Race

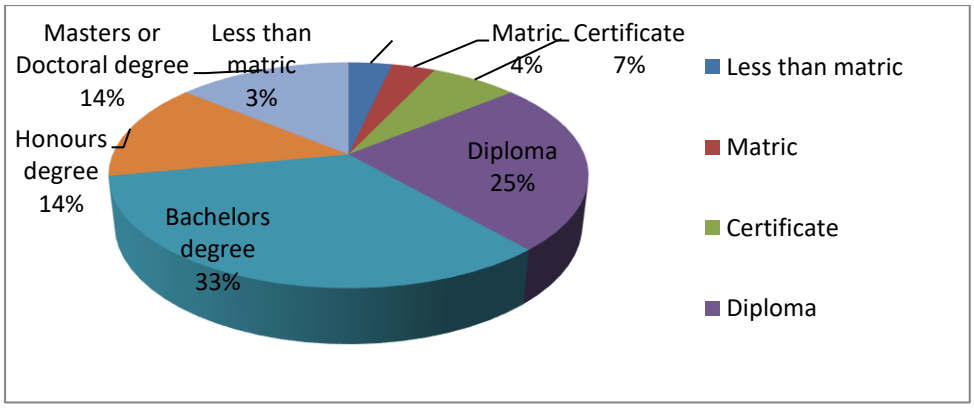
Figure 4.5 Race of the respondents



Most of the consumers in the packaging industry in South Africa are composed of blacks who account for 51% according to the survey results. Whites constitute 32% and the Indians constitute 5%. This clearly shows that use of packaging projects is across the racial divide hence to increase sales volumes, segmentation and targeting of products must be the priority of marketers in the industry.

4.3.5 Academic Qualifications

Figure 4.6 Academic qualifications of respondents



The respondents were requested to state their highest academic qualifications. The aim was to see the qualification level of buyers for different institutions who are responsible for making purchasing decisions. The survey results show that only 7% are having matric or less qualification. About 93% of the respondents have at least a certificate and among them 33% do have bachelor's degrees. Masters or doctorate degree is shown by 14%. This clearly shows that buying decisions in the packaging industry are done by professional people.

4.4 Section B of the survey instrument (Specific questionnaire).

In section B of the research instrument (refer to annexure A), the questionnaire sought to evaluate the relationship among green market orientation constructs in the packaging industry. The analysis was done using crosstabs, reliability test using Cronbach's alpha and validity test using KMO and Bartlett's test. Correlations were conducted to establish any significant relationship between the constructs.

4.4.1 Reliability test

Assessment of reliability of research instrument is essential in order to measure internal consistence. The reliability of a research instrument concerns the extent to which the instrument yields the same results on repeated trials (Nunnally, 1970). This tendency towards consistency, found in repeated measurements, is referred to as reliability (Zikmund, 1994). Although unreliability cannot be fully eliminated, an instrument of good quality will generally yield consistent results, at different times (Nair, 2007). Cronbach's alpha is a recommended test for measuring construct reliability (Ravichandran & Rai, 2000). Cronbach's alpha (Cronbach, 1951) is an index of reliability associated with the variation accounted for by the true score of the underlying construct. Having said this, the study adopts the Cronbach's alpha index for estimating reliability. Alpha coefficient ranges in value from 0 to 1 and the higher the score, the more reliable the generated scale is (Nair, 2007). Values greater than 0.70 are acceptable for consistency estimates on reliability (Barrett, 2001). According to Churchill (1979), a low value of Cronbach's alpha may result if there is very little commonality between the items measured or if there are only a few items measured. The following table shows reliability statistics for the study.

Table 4.2 Reliability per construct

Construct	No. of items	Cronbach's alpha
Satisfaction	3	0.612
Loyalty	4	0.780
Corporate social responsibility	4	0.693
Environmental concern	3	0.539
Product quality	4	0.629
Green market orientation initiatives	6	0.779

Source: primary data

Most of the constructs are having Cronbach's alpha values greater than than 0.6 hence the data is reliable and consistent.

Table 4.3 Reliability statistics for the study

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
S1	41.351	83.518	.418	.709	.842
S2	41.193	85.516	.286	.602	.847
S3	41.246	86.617	.204	.541	.849
L4	41.158	79.850	.516	.586	.838
L5	41.263	80.162	.633	.780	.835
L6	41.246	81.689	.509	.648	.839
L7	41.246	83.296	.410	.636	.842
CSR8	41.211	82.276	.477	.644	.840
CSR9	40.860	83.694	.332	.598	.845
CSR10	40.684	83.434	.295	.731	.848
CSR11	40.526	83.932	.284	.545	.848
C12	41.298	83.356	.350	.603	.845
C13	41.105	86.239	.254	.604	.847
C14	41.263	85.447	.331	.491	.845
Q15	41.439	87.072	.177	.397	.850
Q16	41.158	85.742	.341	.559	.845
Q17	41.070	80.888	.456	.783	.841
Q18	41.053	82.015	.490	.534	.840
R19	41.491	86.040	.215	.570	.849
R20	41.246	79.724	.528	.738	.838
R21	41.368	79.951	.605	.760	.835
R22	41.228	78.751	.554	.756	.836
R23	41.070	75.459	.617	.783	.833

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.848	.845	23

Source: primary data

The results of reliability test shows that all values scored high and therefore data is reliable, consistent and therefore is acceptable for the research study.

4.4.2 Validity Test

Test of validity is necessary for a research instrument to assess the different green market orientation constructs of the study. According to Nair (2007), a study is valid if its measures, actually measure what they claim to, and if there are no logical errors in drawing conclusions from the data. For the purpose of this research survey, face, content and convergent validity were carried out.

4.4.3 Face validity

Face validity was achieved by circulating the instrument to ten respondents during the process of pilot study and they made some recommendations regarding layout, content and instructions (van Rensburg, 2010). According to Anderson (2004:112), no one project is going to be able to produce findings that are 100% reliable and valid. However, factor analysis will minimise limitations and maximise credibility of the study.

4.4.4 Content validity

Content validity is defined as a subjective measure of how appropriate items seam, to set of reviewers who have some knowledge of the subject matter (Litwin, 1935). For content validity, the questionnaire was circulated to four Advanced marketing MBL3 students and they made some adjustments and recommendations regarding initial scale which was used to measure the construct. It was recommended to start with strongly agree then end with strongly disagree.

4.4.5 Convergent validity

Convergent validity measures whether constructs that theoretically should be related to each other are, in fact, observed to be related to each other (Nair & Ramachandran, 2007). To measure convergent validity, factor analysis is used, to check whether the items under each construct load cleanly under one factor, i.e., to check whether the items under each subheading measure the same variable (Carmines & Zeller, 1979). Hair *et al.,* (1987) advocate that factor loadings of 0.5 or higher are considered significant for the study. Some researchers (Steven et al., 2008) postulates that If the shared variance is higher greater than (60%), it is

acceptable as a common construct and it actually shows that independent ratters agree on the construct being rated.

4.4.6 Kaiser-Meyer and Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity.

Bartlett's Test of Sphericity

Bartlett's test of Sphericity indicates whether the correlation matrix is an identity or not. Significant level shows the results of the matrix conducted. Very small values less than 0.05 indicate there is a probably significant relationship among the variables and values higher than 0.10 indicate that the data is not suitable for factor analysis (Nair and Ramachandran, 2007). From the study, the significance level of (0.000) shown indicates that the variables are suitable for conducting factor analysis.

Table 4.4 KMO and Bartlett's Test

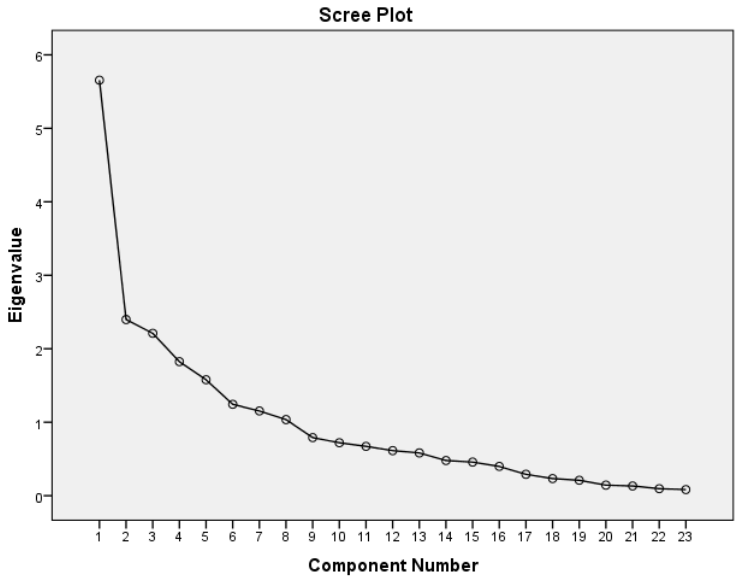
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.589
Bartlett's Test of Sphericity	Approx. Chi-Square	599.569
	df	253
	Sig.	.000

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic which indicates the proportion of variance in the variables which is common variance (Nair & Ramachandran, 2007). The KMO value for the given factor analysis is 0.589. The work of Nair and Ramachandran (2007), found that three component construct of market orientation explains 54% of the variance in market orientation. Pulendran, et al., (2000) reported only 48% variance in their study. This research study is in favour of Pulendran, et al., (2000)'s recommendation that future studies should explore the scale validation and address the substantive and application issues of green market orientation scale.

4.4.7 Scree plot

The scree plot is used to help determine the optimal number of factors or components to retain in the solution. Here, the scree plot clearly shows that there are eight main factors contributing to green market orientation.

Figure 4.7 Scree plot



4.4.8 Rotated sum of squared loading

Table 4.4 Total Variance Explained

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.655	24.588	24.588	2.787	12.118	12.118
2	2.398	10.425	35.013	2.510	10.914	23.033
3	2.210	9.610	44.623	2.452	10.662	33.695
4	1.824	7.929	52.552	2.428	10.555	44.250
5	1.578	6.859	59.412	2.315	10.063	54.313
6	1.244	5.409	64.821	1.918	8.338	62.651
7	1.153	5.014	69.835	1.364	5.933	68.584
8	1.036	4.504	74.339	1.324	5.755	74.339

Extraction Method: Principal Component Analysis.

The table (see figure 4.16) shows the rotated sum of squared loadings. It is seen that the eight component construct of green market orientation explains 74% of the variance in green market orientation. Nair (2007) reported only 54% variance in the study of market orientation.

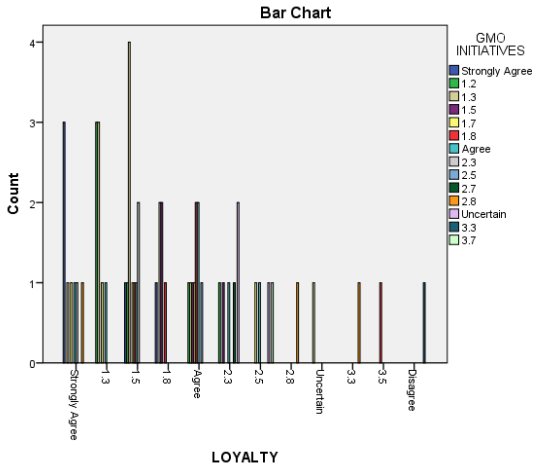
4.5 CROSSTABS

Crosstabs is also known as contingency tables. Crosstabs help to analyse the relationship between two or more variables mostly categorical data. The construct used to measure sustainability of green market orientation were analysed using crosstabs and probability was measured using Chi-square tests.

4.5.1 Loyalty and GMO Initiatives

Chi square test was carried out to find any relationship between green loyalty and green market orientation (see table 4.3).

Figure 4.8 LOYALTY * GMO INITIATIVES



Chi-Square Tests

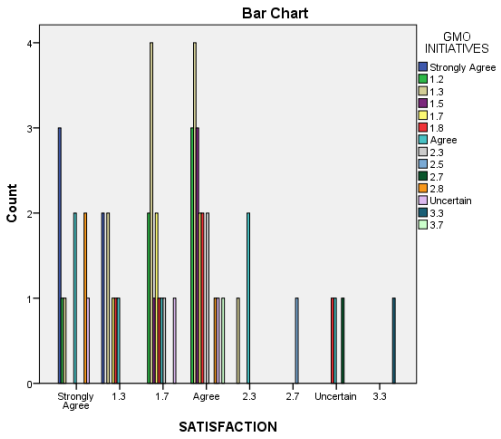
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	199.054[a]	143	.001
Likelihood Ratio	107.940	143	.987
Linear-by-Linear Association	13.929	1	.000
N of Valid Cases	57		

a. 168 cells (100.0%) have expected count less than 5. The minimum expected count is .02.

*X*2(chi-square) tests for relationships between green loyalty and GMO initiatives. The null hypothesis (Ho) is that there is no relationship. To reject this we need a P-value < 0.05 (at 95% confidence). Here X2 is significant. Therefore we conclude that there is some relationship between green loyalty and GMO initiatives.

4.5.2 Customer satisfaction and GMO initiatives

Figure 4.9 SATISFACTION * GMO INITIATIVES



Chi-Square Tests

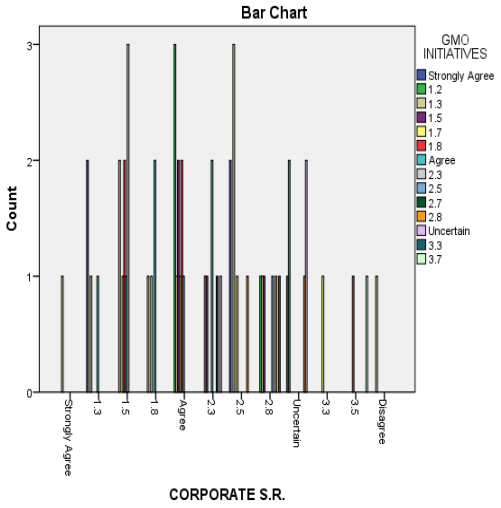
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	179.895[a]	91	.000
Likelihood Ratio	78.004	91	.832
Linear-by-Linear Association	4.083	1	.043
N of Valid Cases	57		

a. 112 cells (100.0%) have expected count less than 5. The minimum expected count is .02.

Since the P-value (0.000) is less than the significance level (0.05), we cannot accept the null hypothesis. Thus, we conclude that there is a strong relationship between customer satisfaction and GMO initiatives.

4.5.3 Corporate Social Responsibility and GMO initiatives

Figure 4.10 CORPORATE SOCIAL RESPONSIBILITY * GMO INITIATIVES



Chi-Square Tests

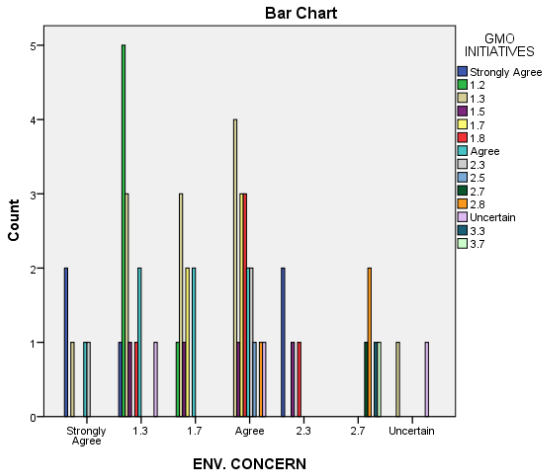
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	163.702[a]	143	.113
Likelihood Ratio	118.577	143	.933
Linear-by-Linear Association	2.814	1	.093
N of Valid Cases	57		

a. 168 cells (100.0%) have expected count less than 5. The minimum expected count is .02.

X_2(chi-square) tests for relationships between Corporate Social Responsibility and GMO initiatives. The null hypothesis (Ho) is that there is no relationship. To reject this we need a P-value < 0.05 (at 95% confidence). Here X2 is insignificant. Therefore we conclude that there is no significant relationship between Corporate social responsibility and GMO initiatives.

4.5.4 Environmental concern and GMO initiatives

Figure 4.11 ENVIRONMENTAL CONCERN * GMO INITIATIVES



Chi-Square Tests

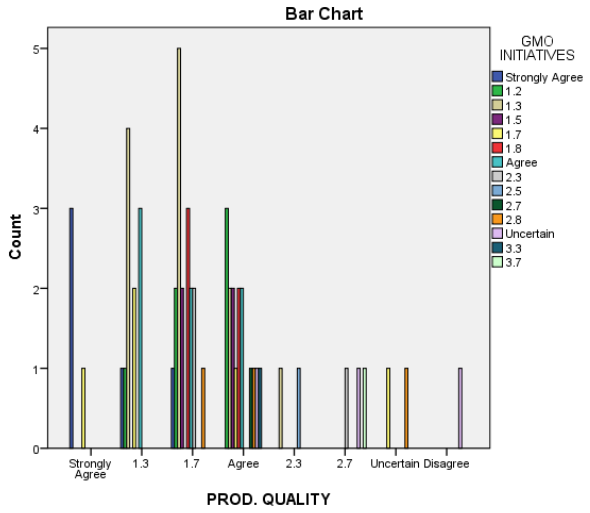
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	107.732[a]	78	.015
Likelihood Ratio	85.561	78	.261
Linear-by-Linear Association	12.502	1	.000
N of Valid Cases	57		

a. 98 cells (100.0%) have expected count less than 5. The minimum expected count is .04.

X_2(chi-square) tests for relationships between Environmental concern and GMO initiatives. The null hypothesis (Ho) is that there is no relationship. To reject this we need a P-value < 0.05 (at 95% confidence). Here X2 is significant. Therefore we conclude that there is significant relationship between Environmental concern and GMO initiatives.

4.5.6 Product quality and GMO initiatives

Figure 4.12 PRODUCT QUALITY * GMO INITIATIVES



Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	138.346[a]	91	.001
Likelihood Ratio	83.125	91	.709
Linear-by-Linear Association	16.904	1	.000
N of Valid Cases	57		

a. 112 cells (100.0%) have expected count less than 5. The minimum expected count is .02.

*X*2(chi-square) tests for relationships between Green product quality and GMO initiatives. The null hypothesis (Ho) is that there is no relationship. To reject this we need a P-value< 0.05 (at 95% confidence). Here X2 is significant. Therefore we conclude that there is significant relationship between Environmental concern and GMO initiatives.

4.5.7 Summary on the relationship of GMO initiatives and constructs

Table 4.6 Relationship between GMO and constructs

Construct	**P-value**	**Conclusion**
Green loyalty	0.001	Significant
Satisfaction	0.000	Significant
Corporate social responsibility	0.113	insignificant
Environmental concern	0.15	Significant
Product quality	0.001	Significant

Source: primary data

The results from Chi square test shows that green market orientation initiatives have significant relationship with the other entire constructs except Corporate social responsibility.

4.5.8 Correlations

A correlation matrix is simply a rectangular array of numbers that give correlation coefficients between a single variable and every other variable in the investigation (Tustin, et al., 2010). The Pearson's r is the most common measure adopted. It varies from 0 (random relationship) to 1 (perfect linear relationship) or -1 (perfect negative linear relationship). The significance of each correlation coefficient is also displayed in the correlation table (see table 4.7).

Table 4.7 Correlations

		SATISFACTION	LOYALTY	ENV. CONCERN	PROD. QUALITY	GMO INITIATIVES	CORPORATE S.R.
SATISFACTION	Pearson Correlation	1	.510**	.035	.126	.270*	.144
	Sig. (2-tailed)		.000	.793	.349	.042	.285
	N	57	57	57	57	57	57
LOYALTY	Pearson Correlation	.510**	1	.273*	.139	.499**	.383**
	Sig. (2-tailed)	.000		.040	.303	.000	.003
	N	57	57	57	57	57	57
ENV. CONCERN	Pearson Correlation	.035	.273*	1	.270*	.472**	.241
	Sig. (2-tailed)	.793	.040		.042	.000	.071
	N	57	57	57	57	57	57
PROD. QUALITY	Pearson Correlation	.126	.139	.270*	1	.549**	.254
	Sig. (2-tailed)	.349	.303	.042		.000	.056
	N	57	57	57	57	57	57
GMO INITIATIVES	Pearson Correlation	.270*	.499**	.472**	.549**	1	.224
	Sig. (2-tailed)	.042	.000	.000	.000		.094
	N	57	57	57	57	57	57
CORPORATE S.R.	Pearson Correlation	.144	.383**	.241	.254	.224	1
	Sig. (2-tailed)	.285	.003	.071	.056	.094	
	N	57	57	57	57	57	57

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: primary data

From the study, it is clear that constructs which are having a positive relationship with green market orientation initiatives are satisfaction, green loyalty, environmental concern and green product quality. Corporate social responsibility is insignificantly related to GMO initiatives. Other constructs with a significant relationship are corporate social responsibility and green loyalty. An insignificant relationship exists between the following constructs satisfaction, environmental concern, product quality and corporate social responsibility.

4.6 Conclusion

This chapter has presented and analysed the data gathered, and discussed the statistical results of the empirical study. It became evident that green market orientation initiatives used in the packaging industry are sustainable. The study showed that there is a strong positive relationship between GMO initiatives and other constructs, except for corporate social responsibility. It also became clear that GMO initiatives have a direct impact on performance of the packaging products and are closely to customer loyalty, satisfaction and environmental concern.

CHAPTER 5

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1 Introduction

In chapter 4, the results of the empirical study were presented and the findings of the research study were discussed in detail. This chapter provides an overview of the study, together with the conclusions, implications and recommendations for future study. The limitations encountered in conducting the study

5.2 Overview of the study

In Chapter 1, the problem statement was discussed in order to motivate the importance of this study. This is because there has been an increase in consumer concern with regards to restoration of ecological balance by presenting demands for eco-friendly products (Doyle, 1992). As an industry leader in the plastic packaging industry in South Africa, the Polyoak packaging group has a responsibility to manage its environmental impacts. This lead to the formulation of the research problem which was to analyse and evaluate sustainability of Green market orientation initiatives in the packaging industry of South Africa.

Chapter 2 focused on the theoretical objectives of the study. The chapter contains an in depth literature review that focuses on reviewing the sustainability of green market orientation initiatives in the packaging industry in general and within the South African context. Major constructs identified in the literature were customer satisfaction, green loyalty, corporate social responsibility, environmental concern and green product quality.

Chapter 3, discussed the research design and methodology used in the study. The questionnaire instrument was used to collect data among 180 respondents of which 57 respondent by returning completed questionnaires. The measuring instrument was thoroughly discussed including its components, ethical considerations, pilot study, analysis, reliability and validity.

Chapter 4, presented the survey results in the form of tables, pie charts and bar graphs. These results helped to analyse the data and come up with conclusions.

5.3 Conclusions, implications and recommendations as linked to the secondary objectives of the study

Under this section, the two secondary objectives formulated in Chapter 1, will be discussed individually below, drawing conclusions, implications as well as recommendations based on the literature review in Chapter 2, and empirical research results discussed in Chapter 4.

5.3.1 Secondary objective 1

To identify and explore GMO initiatives influencing packaging in general and specifically within packaging in the Polyoak group.

Conclusion:

Based on the literature review, it was concluded that the main aspects, namely:

- Customer satisfaction
- Green loyalty
- Environmental concern
- Green product quality
- Green market orientation initiatives,

were identified as being relevant and significantly influence the consumers when making buying decisions of packaging products.

These constructs were tested (see table 4.7) and they proved to be significant. Customers are satisfied in buying packaging products from Polyaok group and are willing to pay. This is in line with the findings of William and Naumann (2011), who found that satisfied customers spend lage share of their income and tend to be price sensitive. The research concludes that there is positive and significant relationship between green market orientation and satisfaction, loyalty, product quality and environmental concern

Implications:

Customer satisfaction, green loyalty, environmental concern, green product quality, is affected by green market orientation. The manufacturers of packaging products must consider these variables when developing new sustainable products. This is in line with the findings of Slater and Narver (1994a) who found significant influences of green market orientation on new product success, sales growth and return on investment

Recommendations:

New product design must be done through obtaining technical knowledge about the environmental requirements in the packaging industry so as to produce sustainable products. The packaging industry must apply the use of technologies such as as life cycle assessments, and carbon emission analysis in the manufacturing of packaging materials. The workers must be trained on green initiatives so as to improve their knowledge about managing sustainable green initiatives.

5.3.2 Secondary objective 2

To determine what influence the sustainability of GMO initiatives in general and specifically on packaging within the Polyoak group.

Conclusion

Based on the literature review and empirical findings, it was concluded that sustainability of GMO initiatives is positively influenced by:

- Customer satisfaction
- Green loyalty
- Environmental concern, and
- Green product quality.

The research found that Sustainability of GMO initiatives is not influenced by corporate social responsibility (see table 4.7). The research found that the adoption of green market orientation has a positive effect on the consumers' perception of green products. The adoption of green market orientation leads to customer loyalty.

Implications

Designing of new packaging products must consider customers as they belong to the stakeholders of the industry. The packaging industry adopts green initiatives in the entire business process so as become sustainable in the business practises.

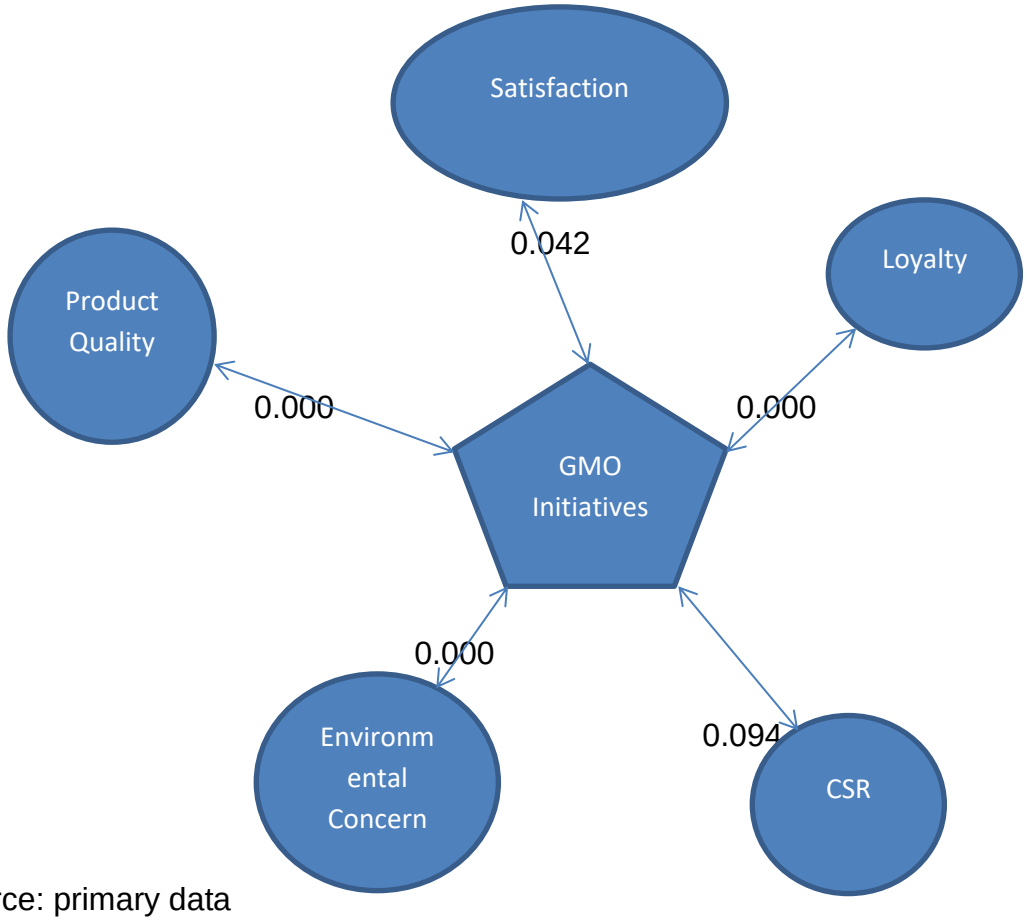
Recommendations

Top management of companies in the packaging industry must support green market orientation initiatives as adoption of such initiatives results in improved business performance, customer satisfaction, loyalty and environmental concern. More resources must be allocated to the department responsible for green marketing.

5.4 Conclusions, implications and recommendations as linked to the primary objectives of the study

Through the accomplishment of the secondary objectives, it is evident that the primary objective of the study (To review the sustainability of a GMO initiatives in the packaging industry used by the Polyoak group) has been met.

Figure 5.1 Relationships of GMO initiatives with constructs



Source: primary data

The findings clearly show that the adoption of green market orientation initiatives by the packaging industry has a significant relationship with its consumers. The research found positive relationship on consumers' perception about environmental concern and product quality. This led to customer satisfaction and customer loyalty.

5.5 Limitations of the study

Limitations of the study in terms of both the literature review as well as empirical research is discussed separately below.

5.6.1. Limitations in the Literature Review

In terms of the literature review the following limitations were identified:

- Some research showed that green market orientation is contained in the corporate social responsibility construct (Menguc and Ozanne, 2006), however this research has shown the opposite
- Limited research exists in the space of green market orientation.

5.6.2. Limitations in the Empirical Research

With reference to the empirical research, the following limitations were identified:

- The study had a low response rate. Follow-up e-mails were utilised to encourage responses but they yielded little results. Higher response rate would potentially have led to more statistically significant results.
- As consumers only were sampled to participate in the study, the results of the research cannot be generalised to represent the views of other stakeholders in the packaging industry.
- The sample size was relatively small.

5.7 Recommendations for future research

- Future research on green market orientation must focus on the broader stakeholder approach.
- Future research must explore limitations founded in the research such as response rate and low sample size.
- Future research must test the same construct using a different scale.
- Future research should explore the scale validation of green market orientation in the packaging industry.

Furthermore, it is recommended that research of this nature is conducted on a larger scale, more appropriately in different countries such that the results can be generalised and utilised in the packaging industry of the whole country.

5.8 To summarise

Sustainability of green market orientation initiatives needs to be improved so as to have sustainable environmental products which save the needs of the consumers. Green market orientation needs to be implemented across the packaging sector as it leads to improved business performance. Customer satisfaction, loyalty, green product quality and environmental concern constructs were found to be significantly important for the sustainable implementation of green market orientation initiatives in the packaging industry. Adoption of green market orientation was found to be leading to customer satisfaction and loyalty in the packaging industry.

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Annexure A: Self-administered Questionnaire

Section A: Respondents information

Please indicate your answer by marking the correct tick in the appropriate box block [√].

Please indicate your age.			
1. Under 20 years		4. 40-49 years	
2. 20-29 years		5. 50-59 years	
3. 30-39 years		6. 60 + years	

Gender

Please indicate your gender:			
1 Male		2. Female	

Work experience

Please indicate the number of years you worked with for your current employer			
1. Less than 2 years		4. More than 10 years	
2. 2-5 years			
3. 6-10 years			

Post level

What is your post level in your organisation?			
1. Senior management		4. Non managerial	
2. Middle management			
3. Junior management			

Race

Please indicate your race			
1. Black African		4. White	
2. Coloured		5. Other (Specify)…….	
3. Indian			

Academic qualifications

What is your highest academic qualification?			
1. Less than matric		5. Bachelor's degree	
2. Matric		6. Honours degree	
3. Certificate		7. Master's and Doctoral degree	
4. Diploma			

Section B: Specific Questionnaire

Please indicate your level of agreement with each of the following statements. Tick the answer that represents your honest opinion. The interpretation of the rating scale is as follows: 1= Strongly Agree (SA), while 5= Strongly Disagree (SD).

No.	QUESTION	ANSWER				
	CUSTOMER SATISFACTION	**Strongly Agree**	**Agree**	**Uncertain**	**Disagree**	**Strongly Disagree**
		1	2	3	4	5
1.	I am satisfied with company products.					
2.	I am happy with the products of this company.					
3.	I am contented to do business with the company.					
	GREEN LOYALTY					
4.	I always chose this company as my first choice.					
5.	I will buy from this company regardless of other competitors having similar products.					
6.	I will spread positive word of mouth about the company to my family and friends.					
7.	I will do business in future with this company					
	CORPORATE SOCIAL RESPONSIBILTY					
8.	This company has good corporate reputation and image in the market.					
9.	This company gives back part of its profits to charity.					
10.	The company is involved in helping non-profit making organisations.					
11.	This company ploughs back to the society where it does business.					
	ENVIRONMENTAL CONCERN					
12.	This company is conserving water and energy use in its production process.					
13.	This company is concerned about wildlife, species conservation and waste conservation.					
14.	Tough environmental regulation will protect environment.					
	GREEN PRODUCT QUALITY					
15.	The products of this company are easy to recycle, dispose and reuse.					
16.	The products of this company meet environmental regulations.					
17.	This company offers green products which are environmentally friendly.					
18.	This company improves quality of its products over time.					

Section C: Ranking of Green Market Orientation (GMO) initiatives

Please rank the following green market orientation initiatives in order of your preference.
1= most preferred and **5**=least preference.

		1	2	3	4	5
19.	Reduction of energy consumption					
20.	Reduction of carbon footprint					
21.	Reduction of water consumption					
22.	Reduction of waste to landfill					
23.	Increase consumption of recycled material					

Thank you very much for participating in the survey.

Annexure B: Original constructs and their sources

CONSTRUCT	ARTICLE TITLE	QUESTIONS	NEW QUESTIONS DEVELOPED
Customer loyalty (Martinez, 2015)	Customer loyalty: exploring its antecedents from a green marketing perspective	• I generally chose this company as my first option • I would buy from this company although other competitors had the same products • I will chose this company as my first option in the future • I will make positive comments about this company to my family and friends.	• I always chose this company as my first choice. • I will buy from this company regardless of other competitors having similar products. • I will spread positive word of mouth about the company to my family and friends. • I will do business in future with this company
Environmental concern (Thieme, Royne, Jha, Levy, & Barnes McEntee, 2015).	Factors affecting the relationship between environmental concern and behaviors	• Environmental concern of wildlife (poaching, rainforest protection, wildlife, species conservation). • Environmental concern for waste (landfill, waste reduction, toxic waste, waste control, waste disposal). • Environmental concern for energy (energy conservation, energy efficiency, resource conservation and citizen participation)	• This company is conserving water and energy use in its production process. • This company is concerned about wildlife, species conservation and waste conservation. • Tough environmental regulation will protect environment.
Green product quality (Chang and Fong, 2010)	Green product quality, green corporate image, green customer satisfaction, and green customer loyalty	• The products of this company meet or exceed the requirements of environmental regulation • The products of this company consume the least amount of resources and energy	• The products of this company are easy to recycle, dispose and reuse. • The products of this company meet environmental regulations. • This company offers green

		• The products of this company are easy to recycle, disposable, decompose and reuse. • The products of this company results in minimum environmental damage.	products which are environmentally friendly. • This company improves quality of its products over time.
Customer satisfaction (adapted from Ramirez, 2010 based on instrument developed by Oliver, 1980)	Measuring antecedents and consequences of satisfaction decisions.	• I am satisfied with the service/goods I receive from this company. • I am happy with the service/goods I receive from this company. • I am delighted with the service/goods I receive from this company.	• I am satisfied with company products. • I am happy with the products of this company. • I am contented to do business with the company.
Corporate social responsibility (Lichtenstein, Drumwright & Braig, 2004)	The effect of corporate social responsibility on customer donations to corporate-supported non-profits.	• This company is committed to using a portion of its profits to help non-profits. • This company gives back to the communities in which it does business. • This company integrates charitable contributions into its business activities. • This company is involved in corporate giving	• This company has good corporate reputation and image in the market. • This company gives back part of its profits to charity. • The company is involved in helping non-profit making organisations. • This company ploughs back to the society where it does business.

Annexure C: Consent form to participate

CONSENT TO PARTICIPATE IN THIS STUDY

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

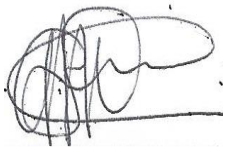
I have read (or had explained to me) and understood the study as explained in the information sheet. I have had sufficient opportunity to ask questions and am prepared to participate in the study. I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable). I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.

I have received a signed copy of the informed consent agreement.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name of Researcher: Shumba Tinayeshe



Signature of Researcher:

Date: 28-08-2015

Annexure D: Participant information sheet

TEMPLATE DOCUMENTS

PARTICIPANT INFORMATION SHEET

14 September 2015

Title: Sustainability of green market orientation initiatives in the South African packaging industry: the Polyoak group.

Dear Prospective Participant

My name is Shumba Tinayeshe and I am doing research with Klopper HB, a professor in the Department of Strategy and Marketing towards an MBL at the University Of South Africa School of Business Leadership. We are inviting you to participate in a study entitled Sustainability of green market orientation initiatives in the South African packaging industry: the Polyoak group.

WHAT IS THE AIM/PURPOSE OF THE STUDY?

The aim of this study is to review the sustainability of GMO initiatives in the packaging industry used by the Polyoak group.

I am conducting this research to find out what influence the sustainability of GMO initiatives in general and within the Polyoak packaging group as well to evaluate important GMO initiatives in the packaging industry.

WHY AM I BEING INVITED TO PARTICIPATE?

Why did you choose this particular person/group as participants?

You were chosen by virtue of being customers of the polyoak group. Your contact details were obtained from the company database. The appropriate number of participants in the study is 60.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY / WHAT DOES THE RESEARCH INVOLVE?

The study involves self-administered questionnaires. The questionnaire is divided into two parts namely general information and specific information. Under general information you will

be required to complete your background information namely age, race, gender, academic qualifications, post level and experience within the organization. The specific section requires your honest opinion on the green market orientation constructs on the study namely customer satisfaction, customer loyalty, green product, corporate social responsibility and environmental concern.

You will be required to tick on the appropriate box showing your response on the questions provided. The questionnaire will take approximately ten minutes of your time.

The questions which will be asked are shown below (see annexure A).

CAN I WITHDRAW FROM THIS STUDY?

Being in this study is voluntary and you are under no obligation to consent to participation. Participation is voluntary and that there is no penalty or loss of benefit for non-participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason. If you have submitted non-identifiable material like a questionnaire you may not withdraw.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Taking part in the study will help companies in the packaging sector to review sustainability of their green market orientation initiatives. The society will also benefit as they will consume environmentally friendly goods and services.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

Possible inconveniences are that you will have to spend some of your time in completing the questionnaire and this could be around ten minutes. The following is the questionnaire which you will complete.

Annexure A: Self-administered Questionnaire

Section A: Respondents information

Please indicate your answer by marking the correct tick in the appropriate box block [√].

Please indicate your age.			
1. Under 20 years		4. 40-49 years	
2. 20-29 years		5. 50-59 years	
3. 30-39 years		6. 60 + years	

Gender

Please indicate your gender:

1 Male		2. Female	

Work experience

Please indicate the number of years you worked with for your current employer			
1. Less than 2 years		4. More than 10 years	
2. 2-5 years			
3. 6-10 years			

Post level

What is your post level in your organisation?			
1. Senior management		4. Non managerial	
2. Middle management			
3. Junior management			

Race

Please indicate your race			
1. Black African		4. White	
2. Coloured		5. Other (Specify)……	
3. Indian			

Academic qualifications

What is your highest academic qualification?			
1. Less than matric		5. Bachelor's degree	
2. Matric		6. Honours degree	
3. Certificate		7. Master's and Doctoral degree	
4. Diploma			

Section B: Specific Questionnaire

Please indicate your level of agreement with each of the following statements. Tick the answer that represents your honest opinion. The interpretation of the rating scale is as follows: 1= Strongly Agree (SA), while 5= Strongly Disagree (SD).

No.	**QUESTION**	**ANSWER**				
	CUSTOMER SATISFACTION	**Strongly Agree**	**Agree**	**Uncertain**	**Disagree**	**Strongly Disagree**
		1	2	3	4	5
1.	I am satisfied with company products.					

2.	I am happy with the products of this company.					
3.	I am contented to do business with the company.					
	GREEN LOYALTY					
4.	I always chose this company as my first choice.					
5.	I will buy from this company regardless of other competitors having similar products.					
6.	I will spread positive word of mouth about the company to my family and friends.					
7.	I will do business in future with this company					
	CORPORATE SOCIAL RESPONSIBILTY					
8.	This company has good corporate reputation and image in the market.					
9.	This company gives back part of its profits to charity.					
10.	The company is involved in helping non-profit making organisations.					
11.	This company ploughs back to the society where it does business.					
	ENVIRONMENTAL CONCERN					
12.	This company is conserving water and energy use in its production process.					
13.	This company is concerned about wildlife, species conservation and waste conservation.					
14.	Tough environmental regulation will protect environment.					
	GREEN PRODUCT QUALITY					
15.	The products of this company are easy to recycle, dispose and reuse.					
16.	The products of this company meet environmental regulations.					
17.	This company offers green products which are environmentally friendly.					
18.	This company improves quality of its products over time.					

Section C: Ranking of Green Market Orientation (GMO) initiatives

Please rank the following green market orientation initiatives in order of your preference.
1= most preferred and **5**=least preference.

		1	2	3	4	5
19.	Reduction of energy consumption					
20.	Reduction of carbon footprint					
21.	Reduction of water consumption					
22.	Reduction of waste to landfill					
23.	Increase consumption of recycled material					

Thank you very much for participating in the survey.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

Your name will not be recorded anywhere and no one will be able to connect you to the answers you give. Your answers will be given a fictitious code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

The data transcriber or external coder will sign the confidentiality agreement to maintain confidentiality. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

Your anonymous data may be used for other purposes, e.g. research report, journal articles, conference presentation, etc. Privacy will be protected in any publication of the information. *A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.*

Please keep in mind that it is sometimes impossible to make an absolute guarantee of confidentiality/anonymity, e.g. when focus groups are used as a data collection method. *While every effort will be made by the researcher to ensure that you will not be connected to the information that you share during the focus group, I cannot guarantee that other participants in the focus group will treat information confidentially. I shall, however, encourage all participants to do so. For this reason I advise you not to disclose personally sensitive information in the focus group.*

HOW WILL INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet at no. 1249 Mountain view, gaKgapane, 0838; the researcher's home for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. The information will be destroyed by deleting the electronic copies from the computer and also tearing apart hard copies of your responses.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Unfortunately there is no payment for participating in the study.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has received written approval from the SBL Research Ethics Committee, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS?

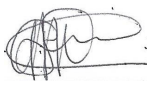
If you would like to be informed of the final research findings, please contact Shumba Tinayeshe on +27785373535 or tinashumba2000@yahoo.com The findings are accessible for five years.

Should you require any further information or want to contact the researcher about any aspect of this study, please contact Shumba Tinayeshe on tinashumba2000@gmail.com or +27785373535. Should you have concerns about the way in which the research has been conducted, you may contact Associate Professor Klopper HB, on hb.klopper@monash.edu , internal phone number +27119504020 and fax +27119504022.

Please note that the study has been approved by the SBL Research Ethics Committee with Ethics certificate number (2015_SBL_207_FA) and you can report to the Chair (ramphrr@unisa.ac.za) should you want to raise any concerns on the process and conducting of the research.

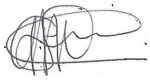
Thank you for taking time to read this information sheet and for participating in this study.

Thank you.



Shumba Tinayeshe

Yours sincerely



Shumba Tinayeshe
Principal researcher