GREEN MARKETING STRATEGIES, CUSTOMER SATISFACTION, REGULATORY FRAMEWORKS AND CUSTOMER LOYALTY IN MANUFACTURING FIRMS IN NAIROBI CITY COUNTY, KENYA

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DECLARATION

This Thesis is my original work and has not been submitted for examination in any other University.

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DEDICATION

This thesis is lovingly dedicated to my children, Amara and Rhett**,** whose unwavering inspiration, spiritual grounding, and moral support have been the cornerstone of my academic journey. May this work stand as a testament to the power of perseverance and ignite in you the courage to pursue excellence in all that life offers.

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ABSTRACT

The manufacturing sector is a key driver of socio-economic growth but also a major contributor to environmental degradation through its activities, processes, and products. In response to evolving consumer demands and sustainability pressures, manufacturing firms are increasingly adopting Green Marketing (GM) strategies to reduce environmental impacts while enhancing customer satisfaction and loyalty. These strategies promote environmental protection while creating new markets and employment opportunities. However, their influence within Kenya's manufacturing sector remains underexplored, and the extent of their impact on firm performance and sustainability is not well understood. The overall objective of this study was to establish how GM strategies, green customer satisfaction (GCS) and regulatory frameworks (RF) affect green customer loyalty in the manufacturing firms in Nairobi City County of Kenya. The specific objectives were to: establish the influence of green product quality on green customer loyalty in the manufacturing firms in Nairobi City County; determine the influence of green price on customer loyalty; assess the influence of green promotion on customer loyalty; establish the influence of green corporate image on customer loyalty; evaluate the extent to which green customer satisfaction intervenes in the relationship between GM strategies and customer loyalty; establish the moderating effect of regulatory frameworks on the relationship between GM strategies and customer loyalty; and determine the joint effect of GM strategies, green customer satisfaction and regulatory frameworks on customer loyalty. The study was anchored on the diffusion of innovation, expectancy disconfirmation paradigm and stakeholders' theories. The descriptive cross sectional survey design was employed using a target population of 725 manufacturing firms in the County from which a sample of 258 respondents was drawn. A pilot study of 20 randomly selected firms was conducted to test the reliability and validity of the research instruments. A self-administered questionnaire and interview guide were used to collect data. Descriptive and inferential statistics were generated, including percentages for profiling, the Chi-square for testing variable relationships, and the ordinal logistic regression to test hypotheses at a 5% significance level. The findings revealed that green product quality significantly influenced customer loyalty ($\beta = 0.804,\ p = 0.007$), indicating that perceived environmental and functional quality drives loyalty. However, green price, promotion, and corporate image did not show any statistically significant effects on loyalty ($\beta = -0.337,\ p = 0.403;\ \beta = 0.373,\ p = 0.197;\ \beta = -0.034,\ p = 0.428$). Green customer satisfaction was found to significantly mediate the relationship between GM strategies and loyalty (β *for GCS* $= 2.488,\ p = 0.000;\ \beta$ *for GM* $= 0.887,\ p = 0.041$). Although Regulatory frameworks had a strong independent effect ($\beta = 1.652,\ p = 0.000$), it did not significantly moderate the relationship ($\beta = -0.147,\ p = 0.445$). In the joint model, all three predictors significantly influenced loyalty, with customer satisfaction ($\beta = 2.512,\ p = 0.000$) and Regulatory frameworks ($\beta = 1.743,\ p = 0.000$) having positive impacts. However, GM strategies had a significant negative coefficient ($\beta = -1.298,\ p = 0.007$). The study concludes that customer loyalty is best achieved through quality green products, genuine customer satisfaction, and credible regulatory compliance. While GM strategies like price and promotion play supportive roles, they are insufficient on their own in influencing customer loyalty. The study suggests that in order to enhance customer loyalty, manufacturing firms need to adopt integrated strategies that align product quality, transparent pricing, and authentic promotion with customer expectations and existing regulatory standards.

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LIST OF ABBREVIATIONS AND ACRONYMS

B2B	Business-to-Business
B2C	Business-to-Consumer
CSR	Corporate Social Responsibility
DIT	Diffusion of Innovation Theory
EDP	Expectancy Disconfirmation Paradigm
EMCA	Environment Coordination Act
GCL	Green Customer Loyalty
GDP	Gross Domestic Product
GESIP	Green Economy and Strategy Implementation Plan
GM	Green Marketing
GoK	Government of Kenya
KAM	Kenya Association of Manufacturers
KFC	Kentucky Fried Chicken
NAMA	Nationally Appropriate Mitigation Act
NCCPF	National Climate Change Policy
NEMA	National Environment Management Authority
SDGs	Sustainable Development Goals
ST	Stakeholders' Theory
WOM	Word of Mouth
WHO	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Green Marketing Strategies: This is the strategic integration of environmentally conscious practices across product design, pricing, promotion, and brand positioning. This construct is captured through consumers' assessments of the firm's efforts in delivering green product quality, eco-conscious pricing, credible promotional messaging, and a sustainable corporate image.

Green Product Quality: This is a reflection of how customers perceive the environmental soundness of a firm's offerings. It includes evaluations of resource usage, adherence to environmental regulations, recyclability, and efforts to minimize ecological harm during production and use.

Green Price: This refers to the degree to which pricing aligns with sustainability values. It captures consumer perspectives on the fairness, acceptability, and justification of prices especially when products include eco-friendly features or command a premium price due to sustainable sourcing or production.

Green Promotion: This is the transparency, clarity, and credibility of a firm's communication about its environmental initiatives. It encompasses elements such as green advertising, eco-labels, environmental certifications, and sponsorships of ecological events, all of which shape consumer perceptions of authenticity and relevance to environmental preservation.

Green Corporate Image: This is the public's overall perception of the firm's environmental responsibility. It involves dimensions like customer trust, perceived credibility, and the reputation of the company in relation to sustainability practices.

Regulatory Frameworks: This acted as a moderating variable, representing external environmental laws and enforcement mechanisms. This includes conformance with NEMA regulations, adoption of clean technology standards, and responsiveness to environmental policy requirements, all of which can influence how consumers interpret and respond to a firm's green initiatives.

Green Customer Satisfaction: This is an intervening variable describing the ethical and emotional gratification that consumers experience when engaging with environmentally responsible products. It is assessed through factors such as decision confidence, environmentally friendly purchase processes, and concern for ecological impact.

Customer Loyalty: This refers to a consumer's lasting commitment to firms that exhibit environmental integrity. It is demonstrated through behaviors such as repeat purchases, advocacy via word-of-mouth, and willingness to pay a premium for sustainable products.

Business-to-Business Marketing (B2B): This refers to strategic marketing activities whereby a manufacturing firm promotes and delivers its green products or services directly to other organizations, institutions, or businesses rather than individual consumers.

Business-to-Consumer Marketing (B2C): These are marketing practices where a manufacturing firm promotes and sells its green products or services directly to individual consumers or households. The focus is on influencing personal buying

decisions through environmental appeals, product attributes, and consumer-level satisfaction linked to perceived ecological value.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Green marketing strategies have emerged as pivotal tools for promoting sustainability and enhancing customer loyalty in contemporary business environments. These variables are particularly significant in addressing growing environmental concerns such as climate change, global warming, deforestation, and toxic waste emissions, all of which threaten ecological balance and societal well-being. In Kenya, manufacturing firms play a central role in the country's socio-economic development, contributing to industrialization, job creation, and Gross Domestic Product (Migosi, 2022). However, their operations also pose environmental challenges due to population growth and intensive industrial activity (Levinson, 2018). As a response, both governmental and non-governmental organizations have initiated programs promoting environmental safety, green revolution initiatives, sustainable development, and natural resource protection (Al-dmour *et al.*, 2021). These interventions underscore the importance of exploring how green marketing strategies, customer-oriented sustainability efforts and regulatory frameworks collectively influence loyalty among environmentally conscious consumers in the manufacturing sector in Nairobi City County.

Goal 9 of the Sustainable Development Goals (SDGs) calls for building strong infrastructure, promoting inclusive and sustainable industrial growth, and encouraging innovation. To achieve this, manufacturing firms are expected to shift from traditional production methods to more sustainable ones (United Nations, 2023). The change is imperative in supporting economic progress, sustaining the environment and improving

social well fare. This study aimed at attaining this goal by fronting the GM strategies that were viable to be used by the B2B firms' managers in running the firms' marketing activities. Akude *et al.* (2025) notes that the shift towards sustainable manufacturing has led many firms to adopt green marketing practices which are essential for promoting environmental responsibility. GM involves the development and promotion of products based on their environmental benefits. These products are either eco-friendly or they are produced through sustainable processes. Notably, practices that include green product design, eco-conscious promotion and sustainable distribution help firms improve their environmental and social performance while enhancing brand reputation and customer loyalty (Braika *et al.,* 2024).

Green marketing (GM) is concerned with building lucrative customer relationship with care and concern on the environment to reduce the undesirable effects of the organization's activities on the environment (Mulandi, 2020). The GM policies drive marketing strategies by use of the marketing mix thereby ensuring that a product's design, price, packaging, promotion and selling strategies clearly emphasize sustainable environmental ideas (Amaoko *et al.*, 2022). GM is perceived as a firm's commitment towards the development of safe, eco-friendly goods and services by using recyclable and easily decomposable packaging, better pollution prevention methods and more efficient use of energy (Al-dmour *et al.*, 2021). Consumers and customers purchase various products that meet their needs and so environment conscious ones look for green products in their purchases. Green customer satisfaction is a sign of pleasure resulting from the ability of a product to meet the needs, wishes and desires of customer in an environmentally durable, sustainable and environment-friendly way (NielsenIQ, 2025).

A customer who is consistently satisfied by a green product is likely to make a repeat purchase from an organization and consequently become a loyal customer. Green customer loyalty is a customer's commitment to patronage a preferred product in the future so as to maintain a relationship with an environmentally concerned or a green business. Satisfaction of customers with the related product and the positive attitude towards the product or business are the main premises of customer loyalty (Çavusoglu *et al.*, 2020). A regulatory framework entails of the laws, principles, policies, and governance mechanisms that guide the conduct of individuals and firms to ensure compliance, transparency, and accountability. Environmentally conscious frameworks promote double benefits by driving economic performance and attracting sustainability-oriented consumers, thereby long-term competitiveness and environmental sustainability. (OECD, 2025).

Globally, multinational organizations in the west are focusing on the emerging markets for opportunities because growth has stagnated in most advanced economies for profits (Emerging Markets Institute, 2025). According to World Bank (2025), more people in developing countries are joining the middle and upper income groups. The growth in their spending is changing global buying trends especially in green manufacturing, where consumers are choosing sustainable and high-quality products more than ever before. When marketing strategies are formulated with the view of creating sustainability consciousness in consumers, they are considered to enable the attainment of the SDGs (Amaoko *et al.*, 2022). Green marketing strategies are moderately being adopted by firms across the globe to help in achieving the sustainability that is required. Some of the GM strategies that manufacturing firms should adopt include but not limited to green product quality, green price, green promotion, green distribution, green

people, green process and green corporate image. Many industries, firms and commercial enterprises world over have included green products to complete their product range or as an alternative to other non-green products. For example, in the Netherlands, green marketing is increasing steadily in the consumer market globally (Gelderman *et al.*, 2021).

Increasingly, GM is being used worldwide to protect the environment from the successive industrial revolutions and consequently pollution (AlQershi *et al.*, 2021). Multinational Corporations (MNCs) that are globally recognized are increasingly preferred by consumers due to their sustainability practices. This is supported by Unilever's 2017 study, which found that 33% of consumers prefer brands that support social or environmental responsibility, representing a $1.2 trillion market opportunity. Additionally, global sustainable investments surpassed $30 trillion in 2022, highlighting the untapped potential of green markets (Unilever, 2017; Global Sustainable Investment Alliance, 2022). According to Al-dmour *et al* (2021), Jordan faces a wide variety of environmental problems most of which are attributable to the inherent water supply-demand imbalance, agriculture/land and air pollution. This has led to a moderate adoption of green marketing by profitable organizations so as to enhance the corporate performance by these organizations. GM is viewed as one of the most important factors in sustainability because it brings forth products that are free from artificial chemicals and are made from recyclable materials that do not harm the environment. In Malaysia, GM strategies which include green image, green satisfaction, green loyalty and green trust were found to be very important in sustaining the environment by the large manufacturing firms. Similarly, in Pakistan, organizations

have started to adopt moderately green marketing strategies as a way of promoting sustainability and improving their competitive advantage (AlQershi *et al.*, 2021).

In the African region, manufacturing firms have not been left behind in taking responsibility on matters environment management. This is because according to Maziriri (2020), today's consumers want to know about where, how, when and what of the products, processes and services and are concerned about the impact their purchases will have on their health and the environment. Nyagadza (2021) noted that in Africa, unsustainable resource use is common practice hence the need to adopt green marketing strategies to create visibility for sustainable practices and to encourage their adoption to ensure sustainable environmental management. For instance, in South Africa, a number of businesses have actively embraced the notion of going green while incorporating green marketing strategies in their businesses (Maziriri, 2020) with the objective being the promotion of efficiency in resource utilization, reduction of carbon emissions and creation of green jobs. These have given rise to green business practices in general and green marketing practices specifically (Muposhi, 2019).

Ghana's national climate change policy framework (NCCPF) is based on three objectives namely low carbon growth, effective adaptation to climate change and social development as the country continues to make progress in implementing her environmental fiscal reform (GIZ, 2015). However, the influence is limited since the trend of sustainable business practice, production and consumption has not fully spread to other countries such as Nigeria. This is because citizens are yet to familiarize themselves with sustainability and green issues (GIZ, 2015). On the other hand, Ethiopia formulated its strategy for Climate-Resilient Green Economy in 2011 to

provide a national vision for economic development so as to achieve middle-income country status by 2025 through green growth with the key sectors of agriculture, forestry, power and transport being the pillars of the strategy (Harrison, *et al.*, 2015).

In Kenya, there are great losses which are often associated with environmental degradation. For instance, increasing pressure on water resources resulting from waste products from primary industries like agriculture and housing. Urban waste is also proving to be a potential problem since it would result in anticipated water shortage (Nyagadza, 2021). In many countries including Kenya, development policies have recently been formulated with clear targets of ensuring continued industrial development that are environmentally friendly and sustainable (Soezer, 2016; Koech & Munene, 2020). The first of these policies is Kenya's Vision 2030 that was launched in 2008 with the aim of transforming Kenya into a newly-industrializing country that provides a high quality of life to its citizens in a clean and secure environment. This was followed by the Climate Change Act of 2016 as well as Green Economy and Strategy Implementation Plan (GESIP) for 2016-2030. These were supported by the National Climate Change Action Plan (NCCAP) 2018-2022 and the Nationally Appropriate Mitigation Actions (NAMAs) based on the Circular Economy and the Solid Waste Management Approach (GoK, 2007; 2016a,b; 2018). Implementation of green marketing strategies by the manufacturing firms is expected to minimize the various forms of degradation that these firms cause to the environment. This will consequently lead to a clean and secure environment that will provide a high quality of life to the citizens as envisioned in Kenya's Vision 2030.

Nairobi City being the headquarters of Nairobi City County is where most manufacturing firms are located and hence it is the leading County where most of the environmental degradation and pollution occurs (Nairobi City County, 2022). Much of Nairobi's urban footprint is unplanned settlement that is driven by rapid population growth and urban poverty. Nairobi's large and growing population is one of the main forces driving the city's overwhelming environmental challenges. In particular, environmental issues that the city continues to address are environmental pollution and waste management. The city's water and air quality continue to be degraded by the ongoing rural to urban migration, high natural birth rates and poor or inappropriate city planning which in turn impact on human health and the economy (CCN, 2007). According to Cherotich and Maamun (2022), the government has put in place various interventions to make Nairobi one of the world-class green cities. The efforts have, however, not been sufficient in restoring the greening aspect in the city since the initiatives are still minimal since more vegetation and forest cover continue to be replaced with gray infrastructure. This challenge cannot be dealt with by the government alone and that is why other stakeholders such as the manufacturing firms should be involved to address the challenges by engaging in sustainable production and marketing activities.

Whereas the manufacturing firms are keen on sustainability, most of the green marketing strategies that they use majorly have focused on the customers in the Business-to-Consumer (B2C) markets globally (Chan *et al.*, 2012; Gelderman *et al.*, 2021; Suki, 2017). This is despite the fact that the production and manufacturing of goods and services for the Business-to-Business markets use more environmental resources compared to the B2C markets. Moreover, the manufacturing firms in the B2B

markets contribute majorly to the environmental degradation in the form of air, water and soil pollution hence causing a health hazard to the societal members (Achuora, 2018; Kapitan *et al.,* 2019). Green alternatives are therefore important to consumers and professional purchasers since they inform purchasing behavior besides addressing various global challenges such as environmental pollution, natural resource degradation, global warming, climate change, and biodiversity destruction (Hsieh, 2012 & Martinez, 2015).

A business-to-business (B2B) market refers to organizations that buy products and services for use in producing other products and services that are sold, rented or supplied to others. Retailing and wholesaling firms that acquire goods for the purpose of reselling or renting to others also belong to this type of a market (Kotler & Armstrong, 2001). Furthermore, Zimmerman and Blythe (2013) noted that other institutions like hospitals, government agencies and not-for-profit organizations are part of the B2B markets. Business-to-consumer (B2C) applies to businesses marketing their goods or services to individual consumers and/or households. B2B marketers have the skill to influence the purchase behavior in all of the business alongside the supply chain, including raw materials producers, manufacturers, channel intermediaries and end users (Wang & Lode, 2021). Some of the marketing strategies that marketers use to influence the purchase behavior of ecological/environmental products are GM strategies. Since extant literature is biased towards GM strategies in relation to green loyalty for the B2C markets, this study examined the role of GM strategies on green customer loyalty in a B2B setting. This is because it was not clear whether the GM strategies that are effective on green loyalty in the B2C markets can be successfully implemented in the B2B setting (Sharma, 2020).

1.1.1 Green Marketing Strategies

Green marketing (GM) encompasses all activities aimed at generating and facilitating exchanges that meet human needs with minimal impact on the natural environment. It represents a strategic management process that involves identifying, anticipating, and satisfying the requirements of both customers and society in ways that promote profitability and environmental sustainability (Nguyen *et al.*, 2025). The concept promotes environmentally friendly practices such as product modifications, eco-conscious packaging, and process improvements that enable organizations to align their goals with the preservation of natural ecosystems (Ezeh & Dube, 2025). Additionally, GM informs sustainable growth in modern markets by offering products that are organic, recyclable, decomposable, and safe for the environment—thus influencing consumer preferences and green purchase intentions (Majeed *et al*., 2022).

According to Hasan and Ali (2015), green marketing can broadly be applied on consumer goods, industrial goods, products and services. Vaccaro (2009) argued that business-to-business (B2B) green marketing (GM) is made up of a variety of activities related to product design, the manufacturing process, service delivery processes, packaging, construction and renovation of buildings, recycling and other areas like marketing communication. There are various indicators of GM strategies according to extant literature. Some of the key indicators include green marketing, green innovation, green promotion, green people, green products, green price and green distribution (Hasan and Ali, 2015; Eneizan and Wahab, 2016a).

According to Eneizan *et al* (2019), green marketing can be measured using seven indicators which are green product, green price, green distribution, green promotion,

green process, green physical evidence and green people or employees. These indicators have included the extended marketing mix variables for the purposes of the companies which are in the service industry. Liao et al. (2020) used environmental advertising and green word-of-mouth as indicators or measures of green marketing strategies. On the other hand, Gelderman *et al* (2021) used green product quality, green product price, green corporate image and salesperson's green expertise as indicators of green marketing strategies in a B2B setting. This study adopted four of the indicators of GM strategies from the extant literature viz green product quality, green price, green promotion and green corporate image.

Green product quality entails product dimension of features, design, package and production that are involved in energy saving, pollution prevention, waste recycling and being environmentally friendly (Gelderman *et al.,* 2021). Customer decisions are influenced by the knowledge of the quality of green products hence the close link with customer satisfaction and customer loyalty. Product quality is very important in that it affects the level of environmental degradation thereby influencing the choice of various stakeholders on product features in creating environmentally friendly products. For the purposes of this study, a green product quality was deemed or measured as one that meets environmental regulation; consumes least resources and energy; is easy to recycle, disassemble, decompose and reuse; and one that results in minimum environmental damage (Chang & Fong, 2010; Gelderman *et al.*, 2021; Suki, 2017).

Green price is the customer's assessment and associated emotions of whether the difference between a seller's price and the price of a comparative other party is reasonable, acceptable or justifiable (Konuk, 2018). It is related to the monetary cost of

products based on their value and quality hence it influences customer satisfaction and customer loyalty (Suki, 2017). Consumers are willing to pay a premium price for environmental-friendly products since their environmental knowledge influence their ecological behavior (Chen, 2010). This study adopted indicators of green product price as was stipulated by Konuk (2018) as measures of price which include price acceptability, price reasonability and price is fairness. Green promotion is the utilization of various marketing tools to promote eco-friendly products before consumers. It entails offering authentic product information in a manner that safeguard both moral and material interests of consumers (Hashem & Al-Rifai, 2011; Hossain & Rahman, 2018).

This study used green advertising, green packaging, eco-labeling and green sales promotion as measures of green promotion as stipulated by (Hossain & Rahman, 2018). Green corporate image refers to the perceptions developed from the interaction among the institute, personnel, customers and the community that are linked to the environmental commitments and environmental concerns (Gelderman *et al.*, 2021). Firms are responsible towards the environmental safety and protection in daily business operations which indirectly contribute in revenue maximization and competitive advantage (Suki, 2017). Green corporate image has been confirmed to have a positive association with customer satisfaction and loyalty (Chang & Fong, 2010). This study used four validated items as measures of green corporate image and they include credibility and stability of green products; sufficient ability to meet green customer needs; fine environmental reputation; and excellence performance in line with environmental management and green innovation.

1.1.2 Green Customer Satisfaction

Green customer satisfaction refers to satisfying or achieving the customer's environmental desires, sustainable expectations and green needs (Gelderman *et al.*, 2021). According to Wong *et al* (2023), green customer satisfaction is the consumers' belief that their purchase of a product/service would positively address a need, goal or desire related to environmental or green issues. It is the level of pleasant fulfillment associated with consumption in satisfying consumers' environmental desires, sustainability expectations and green needs (Chen *et al.*, 2015; Tariq, 2014). It is the perception that the company's offering of a product is within environmental scope or green concerns without harming the environment and in accordance with the requirements of environmental regulations and community sustainability, and that the product also met the objective designed to satisfy customer desire (Chang & Fong, 2010). According to Sarko and Sukawati (2021), green customer satisfaction is a very strong factor in influencing the level of consumer loyalty to environmentally friendly products.

The concept of green customer satisfaction has received very little research attention in relation to environmental concerns in the context of business-to-business (B2B) marketing studies. For example, Liu *et al.* (2025) introduced green customer satisfaction because it is useful in influencing green buying behavior. They observed that green customer satisfaction fulfils customers' needs, goals and desires about environmental concerns. According to Chen (2010), green customer satisfaction comprises of several parameters or variables such as environmental commitment, environmental performance, environmental concern and environmental friendly. Additionally, Gelderman *et al.* (2021) proposed six parameters that can be used to

measure green customer satisfaction in a B2B context including green product's purchase decision, purchase process of green products, ethics in buying the green products, environmental protection and sustainable development, environmental friendliness of the product and product's environmental concern. The study adopted the six parameters proposed by Gelderman *et al.* (2021) to measure green customer satisfaction.

1.1.3 Regulatory Frameworks

Regulatory frameworks comprise of policies, laws, institutions and various regulations which are formulated by governments to protect producers, consumers and the environment (Barney, 2007). According to Pathak (2017), implementation of such frameworks ensures that business activities and processes do not cause pollution to the environment and that customers are given an opportunity to raise any concerns about products if their needs and desires are not met. Hence, adoption of sustainable practices prevents regulatory sanctions and it helps in addressing social challenges related to the safety of products, product quality, pollution of the environment and social inequalities (Cheruiyot & Tarus, 2016; IISD, 2019). Governments and other institutions ought to protect consumers and society from adverse environmental impacts associated with business operations by minimizing production of harmful goods, modifying consumers' and the industry's use of harmful goods and ensuring that businesses provide accurate information on the environmental aspects of their activities and operations (Singh & Pandey, 2012).

According to Nzomo *et al* (2023), the Kenyan government in pursuit of greenness, has come up with a regulatory framework in consultation with key players in the

manufacturing sector. Through the Ministry of Environment, Climate Change and Forestry, the government has instituted various regulatory frameworks in relation to the environmental sustainability of firms. They include the Environment Coordination Act (EMCA) of 1999 as revised in 2012 (currently in *Cap 387* of the Laws of Kenya), Regulations relating to Environmental Impact Assessment and Audit (2003), Water Quality Regulations (2006), Waste Management Regulations (2006), Conservation of Biological Diversity Regulations (2006), Controlled Substances (ozone-depleting substances) Regulations (2007); Noise and Excessive Vibrations Regulations (2009) and Air Quality Regulations (2014). Afande (2015) noted that business organizations are expected to adopt green marketing to respond to various environmental regulations set by various regulatory bodies in Kenya, besides implementing those from elsewhere. Moreover, the regulatory mechanisms are enforced by orders or rules that compel firms and organizations to make necessary changes in their operational structures and processes.

According to Charter and Polonsky (2017), the regulations formulated by governments in relation to green marketing are meant to protect consumers through reduction of produced harmful goods or by-products; modification of consumer and industry's use and/or consumption of harmful goods; and the consumer's evaluation of composition of goods in regard to their impact on the environment. According to Nzomo *et al* (2023), three indicators or parameters that can be used to measure regulatory framework in environmental sustainability include environmental regulations, clean technologies regulation and conformance to the existing National Environment and Management Authority (NEMA) regulations. These indicators were applied in the current study as measures of the regulatory frameworks.

1.1.4 Green Customer Loyalty

Green Customer Loyalty (GCL) is the degree of repurchase by consumers and is driven by environmental motivation and sustainable commitment and green consumers are considered loyal if they repeat their daily purchases and maintain their tendency towards the green brand (Chen, 2016). Liu *et al.* (2025) observed that GCL is the desire of a customer to maintain a relationship with a firm which has green concerns and the commitment of the customer to repurchase a preferred product on a regular basis in the future. Satisfied customers have a tendency of making repeat purchases, recommending friends and family members, and craving less for other companies' offerings thereby staying loyal with green product consumption (Suki, 2017). According to Martinez (2015), green marketing can be used by firms to market products and increase green customer loyalty for these products. Consequently, a green brand image that cares about the environment contributes to green customer satisfaction and green customer loyalty. This study used three items as indicators of green customer loyalty namely purchase intentions, word of mouth intentions and willingness to pay a premium price (Chang & Fong, 2010; Martinez, 2015; Gelderman *et al.*, 2021).

1.1.5 Overview of the Manufacturing Sector in Kenya

The aim of Kenya's Vision 2030 is to transform the country into a newly industrialized, middle-income economy with a sustainable annual average Gross Domestic Product (GDP) growth rate of 10 percent. Within this development blueprint, the manufacturing sector is considered a socio-economic lever due to its immense potential for wealth creation, capital accumulation, knowledge spill-over, poverty alleviation, and employment generation. It is among the key productive sectors identified to steer economic development and deliver sustained growth. As part of the Vision 2030

agenda, the sector is now targeted to contribute 20 percent of GDP by 2030, driven by industrial expansion, job creation, and value addition. This strategic positioning aligns with Kenya's ambition to achieve export-led growth and global competitiveness through industrial transformation (GoK, 2024). However, according to WHO (2023), unsustainable industrial practices, including those in manufacturing, contribute significantly to environmental risk factors such as air pollution, chemical contamination, and poor waste management. These risks are linked to an estimated 7 million deaths annually from indoor and outdoor air pollution. The report emphasizes that unsustainable policies in sectors like industry, energy, and transportation are major contributors to emerging health threats and environmental degradation.

According to KAM (2022), one thousand one hundred and seventy three (1,173) manufacturing firms are operational in Kenya and are categorized into fourteen (14) sectors spread out across seven (7) regions in the country. Nairobi region has the highest share of the membership at sixty (62) percent while the remaining thirty-eight (38) percent are spread out in the other six (6) regions. This study was confined to the manufacturing firms located in the Nairobi City County as registered with the Kenya Association of Manufacturers (KAM). The choice of Nairobi city County was on the basis of the fact that the manufacturing firms in the County account for sixty-two (62) percent of the firms in the country besides the fact that the firms contribute significantly to the degradation and pollution of the environment due to their numerous activities, processes and operations.

1.2 Statement of the Problem

Manufacturing plays a vital role in global economic growth, contributing about 16% of global GDP and employing roughly 14% of the world's workforce (McKinsey & Company, 2024). However, its contribution to greenhouse gas emissions and natural resource depletion, estimated at nearly 36.9% of total global emissions, highlights the urgent need for sustainable production and marketing practices (Eaton, 2025; Ritchie *et al.*, 2024). In Kenya, the manufacturing sector is a key pillar for socio-economic transformation, targeted to contribute 20% to GDP by 2030 under Vision 2030 and the Bottom-up Economic Transformation Agenda (BETA, 2022–2027). The sector is instrumental in driving industrialization, job creation, and wealth generation (GoK, 2024). Despite these ambitions and the existence of supportive regulatory frameworks, the industry continues to struggle with inefficiency, environmental unsustainability, and reduced competitiveness. This persistent gap between policy intent and industrial outcomes suggests that Kenya's manufacturing sector has yet to fully integrate sustainable production and green marketing practices necessary for long-term competitiveness and environmental responsibility (Nzomo et al., 2023a).

Theoretically, the Diffusion of Innovation Theory (DIT) Rogers (1995) explains how firms adopt and implement green innovations, yet empirical research rarely tests its applicability in the B2B context in the manufacturing firms in Kenya, where adoption barriers differ from consumer markets. The Expectancy Disconfirmation Paradigm (EDP) Oliver (1980) emphasizes the role of satisfaction in driving loyalty, but little evidence exists on whether satisfaction mediates the GM–loyalty relationship in Kenya's manufacturing sector. The Stakeholder Theory (ST) Freeman (1984) underscores the influence of regulators and institutional actors, yet few studies examine

whether regulatory frameworks independently or conditionally shape customer loyalty outcomes in relation to Green Marketing. Therefore, this study addressed both the knowledge and theoretical gaps by examining the direct, mediating, and moderating effects of GM strategies, customer satisfaction, and regulatory frameworks on customer loyalty in manufacturing firms in Kenya operating in a B2B context. In doing so, it responds to the global call for sustainable industrial practices, while aligning with Kenya's Vision 2030 and BETA agenda, and contributes empirical evidence that extends the application of DIT, EDP, and ST to green marketing in manufacturing firms in developing economies.

Most previous studies on green marketing (GM) strategies and green customer loyalty (GCL) have singularly focused on specific sectors within business-to-consumer (B2C) contexts. For example, some studies have investigated the relationship between GM practices and firm performance in manufacturing contexts (AlQershi et al., 2021), while others have examined how GM strategies influence customer satisfaction and loyalty in B2C settings (González-Viralta *et al.*, 2023; Masitenyane & Dhurup, 2023). Still, other works have concentrated on variables apart from satisfaction and loyalty, such as trust or brand image, without fully exploring their mediating or moderating roles. However, Gelderman *et al.* (2021) and Jain *et al.* (2024) provide valuable insights into B2B settings by examining green marketing as an environmental practice and the role of green brand identity in shaping tactical marketing orientation. Nevertheless, since these studies were conducted in different contextual, environmental, and geographical settings, their findings cannot be generalized to manufacturing firms in the Kenya in a B2B context.

Empirical research in Kenya reflects a fragmented picture. More recent research has expanded to issues of green innovation strategies (Nzomo *et al.*, 2023a), environmental regulation compliance (Mdasha *et al.*, 2024), green procurement (Langat & Otieno, 2022) and green supply chains (Ngatia *et al.*, 2024). While these advances show growing awareness of sustainability, the studies remain fragmented, emphasize firm performance, and do not adequately address how Green Marketing (GM) strategies interact with customer satisfaction, regulatory frameworks, and loyalty in manufacturing in a B2B context. This study therefore addresses the critical question of whether, and through what mechanisms, Green Marketing strategies, Customer Satisfaction, and Regulatory Frameworks influence Customer Loyalty in Kenyan manufacturing firms. Understanding this relationship is essential for manufacturers to allocate resources efficiently towards sustainability initiatives that foster lasting customer relationships, for regulators to design and enforce standards that enhance consumer trust and improve market outcomes, and for consumers and civil society to more effectively evaluate and respond to firms' environmental claims.

1.3 Objectives of the Study

The overall objective of the study was to examine how green marketing strategies; customer satisfaction and regulatory frameworks influence green customer loyalty in the manufacturing firms in Nairobi City County. The specific objectives were to:

i. Establish the influence of green product quality on customer loyalty in the manufacturing firms in Nairobi City County;
ii. Determine the influence of green price on customer loyalty in the manufacturing firms;

iii. Assess the influence of green promotion on customer loyalty in the manufacturing firms;

iv. Establish the influence of green corporate image on customer loyalty in the manufacturing firms;

v. Evaluate the extent to which green customer satisfaction intervenes the relationship between green marketing strategies and customer loyalty in the manufacturing firms;

vi. Establish the moderating influence of regulatory frameworks on the relationship between green marketing strategies and customer loyalty in the manufacturing firms;

vii. Determine the joint influence of green marketing strategies, green customer satisfaction and regulatory frameworks on customer loyalty in the manufacturing firms in the County.

1.4 Justification of the Study

This study was justified by the fact that manufacturing firms have posed a serious threat to the environment in which the firms operate. The operations of these firms are majorly dependent on the environment for various key resources such as the raw materials, finance, human resources, water, and energy, among others. The threat posed by the various activities, operations and processes in the firms has motivated them to devise strategies towards minimizing the adverse impact of their operations on the environment. Among the strategies that should be adopted is green marketing which is imperative in most of the firms today. This is because green marketing ensures that the marketing process and activities are carried out in a manner to sustain the environment in which they exist. This is so because every firm depends on the environment for input

resources and for discharging the output resources. The environment, therefore, needs to be protected to prevent the deterioration of the natural resources which form the key inputs for the sustenance of the activities and operations of the manufacturing firms.

The study was also justified since the influence of green marketing strategies and customer loyalty in the manufacturing firms is not known and therefore the management of the firms may not be aware of which strategies to focus on for business continuity and sustainability from an environmental management perspective. This is because there is scant literature on the integration of green marketing strategies, green customer satisfaction, regulatory frameworks and customer loyalty in the manufacturing sector in a B2B context. This study addressed this gap based on selected manufacturing firms in Nairobi City County of Kenya.

1.5 Significance of the Study

The findings of the study are important and useful to various stakeholders. The management of the manufacturing firms and other firms will adopt the green marketing strategies examined in the study to undertake their marketing processes to satisfy green conscious customers in order to build customer loyalty in the long run. Consequently, other firms in non-manufacturing sectors can adopt these strategies in their operations with an aim of satisfying their customers which can ultimately convert them to loyal customers with time. Environmental policy professionals and regulators will also benefit from this study as they can use it as a reference point to understand what drives both businesses and consumers to shift towards green operations, products, services, supplies and green consumption behavior. This can provide guidance on what to focus on in formulating policies and regulations concerning the environment. The third

beneficiary is the community since the adoption of green marketing strategies by manufacturing firms will help in protecting and conserving the environment in which the members of the society live. This means that the health issues that emanate from a polluted environment will decrease hence enhancing the health of the people in both the society and the nation at large.

The Nairobi City County government will benefit from the findings of the study when the manufacturing firms adopt the various strategies examined in the study to carry out their marketing operations. This will in turn reduce the environmental degradation within the county hence making it conducive for the customers, investors and other firms operating within the county. The national government will also benefit by formulating regulatory frameworks that can enforce the adherence to green practices by all the firms across the country. Lastly, researchers can also benefit from the findings of this study by carrying out other related studies in various business sectors and in other Counties in the Country and elsewhere so as to build up on the knowledge in the relatively new field of green marketing.

1.6 Scope of the Study

This study focused on manufacturing firms registered with the Kenya Association of Manufacturers (KAM) and operating within Nairobi City County. The County was selected because it accounts for approximately 62% of all manufacturing firms in Kenya (KAM, 2022), making it representative of the sector's dynamics. The manufacturing sector is composed of fourteen subsectors, many of which are associated with significant environmental impacts. The study targeted 725 KAM-registered firms in Nairobi City County, with one respondent drawn from each firm. The time scope of

the study covered the period between December, 2024 and February, 2025 during which data was collected and analyzed.

1.7 Limitations of the Study

The study faced several limitations. First, the possibility of response bias existed, as some participants might have provided socially desirable answers rather than accurate reflections of their practices. This risk was mitigated by ensuring confidentiality and using anonymous self-administered questionnaires. Second, the study was limited to manufacturing firms in Nairobi City County, which may restrict the generalizability of findings to other counties or sectors. Lastly, time and resource constraints limited the breadth of the research, restricting the ability to explore additional variables or adopt more longitudinal approaches. Despite these constraints, the study employed rigorous procedures to ensure reliability and validity of the findings.

1.8 Chapter Summary

This chapter provided a comprehensive foundation for the study by outlining the significance of green marketing (GM) strategies in addressing environmental challenges and promoting customer loyalty within Kenya's manufacturing sector. It examined global, regional, and local perspectives on environmental sustainability, tracing key trends, policy frameworks, and consumer behavior shifts that emphasize the need of adopting green practices. The selection of Nairobi City County as the study location was justified, citing its dominance in manufacturing activities and the accompanying environmental impact. Various studies were highlighted in the problem statement so as to reveal the gaps the exist that led to the motivation of this study. Empirical literature on GM strategies, green customer satisfaction, regulatory

frameworks, and customer loyalty revealed key knowledge gaps, especially within B2B contexts. These gaps informed the development of the study's conceptual framework and hypotheses, which will guide the subsequent empirical analysis. Study objectives, scope, significance and justification of the study were also discussed. Limitations of the study as well as mitigations for the limitations were brought out at the end of the chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed the existing extant literature and discusses the strategies of Green Marketing (GM) that manufacturing firms focus on when they put the GM concept into practice. The theoretical anchorage of the study is reviewed as well. The chapter further provides an empirical review that explored how GM strategies, Customer Satisfaction and Regulatory Frameworks influence customer loyalty in the manufacturing firms with specific reference to Nairobi City County in Kenya. The conceptual model and the hypotheses of the study are presented in the chapter. The last section of the Chapter provides a summary of the knowledge gaps identified and highlights how the study contributes to the body of knowledge in filling the identified gaps.

2.2 Theoretical Foundation

This study was guided by three theories namely Diffusion of Innovation Theory (DIT), the Expectancy Disconfirmation Paradigm (EDP) theory, and the Stakeholders' Theory (ST). Details of each of these theories are described in the following sections.

2.2.1 Diffusion of Innovation Theory

This theory was proposed by Rogers (1962) who described it as the pattern and speed at which new ideas, practices and/products spread through a population. The theory is applicable to green marketing because green marketing includes new innovations such as products, services and processes. Applicability of the theory and its relationship to B2B green marketing strategies can serve as a guide on how to increase the rate of adoption of green products, services and processes to help organizations create a

competitive advantage as well as helping the world in moving towards greater ecological sustainability (Vaccaro, 2009). According to Rogers (1995), the theory has various disciplinary applications ranging from sociology to business. A number of studies have applied the theory in the realm of marketing but mainly focusing on the adoption of technological innovations by organizations (Vaccaro, 2009).

There are two distinct strategic orientations in green marketing that help to contextualize how innovations are adopted. The two were proposed by McDaniel and Rylander (1993) and further elaborated by Vaccaro (2009) and are defensive or reactionary and assertive or aggressive strategies. The reactive green marketing strategy follows regulations of environmental management, requires limited resources (not very expensive and low risk), has a low level of organizational commitment, requires low involvement of top management, and has a short-term orientation (Menon *et al.*, 1999; Miles & Covin, 2000). The B2B reactive green marketing strategies are related to the principle of eco-efficiency as it aspires to make the old destructive system less so and therefore only slows down the deterioration of nature with moral proscriptions and punitive demands (Chen *et al.,* 2008). Proactive green marketing strategy on the other hand requires much more resources (is more expensive and risky), has more organizational commitment including an environmental corporate policy which reflects high levels of top management and employee involvement, and has more long-term orientation (McDaniel & Rylander, 1993; Menon *et al.*, 1999; Peattie & Crane, 2005).

According to Peattie and Crane (2005), a genuine proactive marketing strategy focuses on the customers' needs, other company stakeholders, and future generations of customers and uses innovative solutions to fulfil those needs. Addressing the "*triple*

bottom line" of economic, social and ecological sustainability is the key objective of proactive B2B green marketing strategy (Elkington, 1997). Chen *et al* (2008) argued that proactive B2B green marketing strategy seeks an ultimate solution for ecological problems by leading to eco-effectiveness which requires a shift of the mindset and transformation of business models. Vaccaro (2009) highlighted seven specific areas of proactive B2B green marketing strategy and the diffusion of innovation characteristics related to the strategies which can lead to faster adoption of new innovations like products, services, and/or processes. These strategies focus on various areas such as marketing research, production, product, distribution, pricing, promotion and partnerships. The diffusion of innovation characteristics in relation to the B2B green marketing strategies bring about competitive advantage benefits such as enhanced corporate reputation for the firm and its alliances; more satisfied stakeholders such as suppliers, customers, employees, volunteers, government agencies and media; and greater brand differentiation and consumer brand loyalty (Vaccaro, 2009). Hence, managers of the manufacturing firms need to take into account the GM strategies that will lead to customer loyalty in the long run.

In the context of this study, the theory is directly linked to the first four objectives. Specifically, the quality of green products influences their adoption since superior relative advantage and compatibility enhance diffusion and subsequently promote customer loyalty. Similarly, green pricing strategies affect the adoption rate because affordability and perceived fairness influence the willingness of customers to adopt and remain loyal to such products. Furthermore, green promotion plays a central role in creating awareness and persuading customers to adopt green innovations, thereby strengthening customer loyalty. Finally, a firm's proactive adoption of green strategies

enhances its corporate image, which differentiates it in the market and builds long-term loyalty among customers. Thus, the Diffusion of Innovation Theory provides a robust explanation of how different green marketing strategies namely product quality, price, promotion, and corporate image, drive the adoption of environmentally friendly practices and influence customer loyalty in the manufacturing sector.

2.2.2 Expectancy-Disconfirmation Paradigm

The Expectancy-Disconfirmation Paradigm (EDP) as advanced by Oliver (1980) offers a framework for assessing customer satisfaction as well as customer loyalty. The Theory is used in the consumer behavior literature to study consumer satisfaction, post-purchase behavior and service marketing. It is applicable in business to consumer (B2C) as well as business to business (B2B) environments although research in the B2B area is not as well developed as that of consumer goods and/or services (Curtis, 2009; Patterson *et al.*, 1997). According to the EDP model, customers purchase goods and services with pre-purchase expectations about the product's performance and the expectation level becomes a standard against which the product is judged. After the usage of the product, performance of the product is compared against expectations. If the performance matches the expectation, confirmation occurs. Disconfirmation occurs when there is a difference between expectations and the product's performance. When a positive or negative difference occurs between expectations and perceptions, a customer is either satisfied or dissatisfied. Thus, a service performance that is better than a customer's initial expectation results in a positive disconfirmation between expectations and performance, hence satisfaction is experienced. When the service performance is as expected, there is a confirmation between expectations and perceptions which results in satisfaction.

Oliver (1980) observed that the stronger the disconfirmation, the greater the change in satisfaction and subsequent attitude and behavioral intentions will be. According to Oliver and DeSarbo, 1988), disconfirmation affects satisfaction due to emotions involved in the experience of the event in that the delight from positive disconfirmation increases satisfaction and the disappointment resulting from negative disconfirmation decreases satisfaction. Extant literature about the satisfaction-loyalty relationship indicate that satisfaction is the main driver of consumer loyalty (Curtis, 2009). Satisfaction is said to affect loyalty, willingness to recommend and word of mouth. It affects consumer choices which leads to improved consumer retention and satisfied customers stay loyal since they want to continue their relationship (Heitmann *et al.*, 2007).

Loyalty is a multidimensional concept that has four determinants namely commitment, trust, involvement and word of mouth (Dick & Basu, 1994). It is a bundle of promise or attribute that a consumer holds in relation to brand satisfaction. This gratification may be perceived as real, tangible or intangible and rational or emotional. Consumer satisfaction would, therefore, lead to customer brand loyalty hence a commitment to repurchase preferred brands (Ambler, 1992; Oliver, 1999). This paradigm is applicable to the fifth objective of the study, which sought to evaluate the extent to which green customer satisfaction intervenes in the relationship between green marketing strategies and customer loyalty. The EDP explains how satisfaction derived from green products, pricing, promotion, and corporate image mediates the link between firms' green strategies and the loyalty outcomes of their customers.

2.2.3 Stakeholders' Theory

The Stakeholders' Theory (ST) was first proposed by Ansoff (1965) and later advanced by Freeman (1984). The theory is based on the assumption that the interests and welfare of stakeholders and stockholders in an organization are most pivotal for a firm to realize its superior performance. Freeman (1984) defined stakeholders as individuals acting individually or collectively as a group whose actions can affect or influence a firm's objectives. According to Harrison *et al* (2015) stakeholders are individuals, groups and organizations that have an interest in the processes and outcomes of the firm and upon whom the firm depends on the achievement of its goals. Nzomo *et al.* (2023) noted that stakeholders of any organization include stockholders (investors), employees, creditors, suppliers, local community, public interest groups, customers and government agencies. The government is recognized as a key stakeholder because of the vital role it plays in influencing firms' operations through the regulatory frameworks it formulates. Regulatory frameworks and stakeholders are viewed as external push and imposed drivers of green innovation (Nzomo *et al.*, 2023a).

This theory is relevant for this study because green marketing practices by the manufacturing firms in Kenya are majorly informed by the available environmental regulatory frameworks (Afande, 2015b) as well as stakeholders such as customers and suppliers. The regulations ensure the firms come up with innovative green strategies such as green marketing so that they can satisfy the needs of customers who are environment conscious and convert them to loyal customers in the long run. In the context of this study, the theory is relevant to the sixth and seventh objectives. Specifically, regulatory frameworks, as key stakeholder instruments, moderate the relationship between green marketing strategies and customer loyalty. Furthermore, the

theory supports the joint examination of green marketing strategies, green customer satisfaction, and regulatory frameworks in influencing customer loyalty. This is because firms operate within a complex environment where internal strategies and external stakeholder pressures must be integrated to achieve sustainable performance outcomes.

2.3 Review of Empirical Literature

2.3.1 Green Product Quality and Customer Loyalty

Green product quality focuses on the dimension of features, design and package that are involved in energy saving, pollution prevention, waste recycling and being environmentally friendly. Decisions that customers make are influenced by the knowledge of the quality of green products (Gelderman *et al.*, 2021). Customer loyalty is the customer's desire to create and maintain a relationship with a firm whose environmental or green concerns is a priority; and the customer's commitment to rebuy a preferred product on a regular basis in the future. Many studies have been carried on the link between green product quality and customer loyalty. However, divergent and inconsistent findings have been reported. Although these findings were found in a B2C setting it is not clear whether a similar effect would be arrived at in a B2B context. These studies are were reviewed as follows:

Tarabieh (2018) investigated the impact of product quality on customer loyalty in the hospitality industry in Jordan and established that customer loyalty was affected more by the green product quality than other variables. Similarly, Wong *et al.* (2023) investigated the determinants of customer loyalty for a bottled water brand in Hong Kong from a Green Marketing perspective. Green product quality was found to be

significantly and directly correlated with green customer satisfaction but non-significantly affected customer loyalty. The findings of these two studies were at variance thus requiring further research to establish the link between green product quality and customer loyalty. Aslam *et al.* (2023) sought to establish the effect of green marketing and service quality on customer loyalty on Starbucks Coffee customers in Makassar City, Indonesia. GM and service quality were found to have a positive and significant effect on customer loyalty either directly or through customer satisfaction as an intervening variable. This was a case study done in a different environment and in a different context therefore its findings could not be generalized elsewhere.

Creignou and Nuangjamnong (2022) examined the influence of green product quality on green customer satisfaction and loyalty in the fashion industry in Thailand and established that green product quality had a significant impact on customer satisfaction but less impact on loyalty. In another study, Dewi *et al* (2023) established that green product quality was more dominant in affecting customer loyalty in the Philippines. The study findings by Handriana *et al* (2021) in Indonesia indicated that product quality influenced consumer trust and commitment but it did not have a direct influence on consumer loyalty. The findings in the three studies were contradicting hence the need to delve deeper into determining the relationship between green product quality and customer loyalty.

Gelderman *et al* (2021) examined the impact of green marketing strategies on the satisfaction and loyalty of Dutch professional buyers in a B2B setting in the cleaning industry in Netherlands. The findings emphasized the impact and importance of product quality, product price and corporate image on green loyalty. Whereas product quality

was found to have a positive and significant relationship with customer loyalty, sales person's expertise was found to have a strong impact on satisfaction and loyalty. While this study mirrored the current study, it was however a case study done in a different geographical environment and setting. The GM strategies that were found to influence customer loyalty may not necessarily be the ones that can influence green customer loyalty in Kenya because of the contextual differences in the two studies.

2.3.2 Green Price and Customer Loyalty

A green product price is the customer's assessment and associated emotions of whether a seller's price is reasonable, acceptable and/or justifiable compared to the price of another party with regard to environmental sustainability (Islam & Khan, 2024). Green products are costly because of the supplementary costs oriented to environment protection. Most of the customers are willing to pay a premium price for green products as long as the extra sacrifice is justified by sufficient extra value (Gelderman *et al.*, 2021). Empirical studies that seek to investigate the relationship between green price and customer loyalty are very few since these studies have been done on GM strategies as a composite where green price is factored in as an indicator of GM strategies. In Europe and Asia, Creignou and Nuangjamnong (2022) investigated the influencing factors of green product quality and price on green customer satisfaction and loyalty in the Fashion Industry. The study did not, however, test the relationship between green price and customer loyalty although it was established that green price had a positive and significant influence on green customer satisfaction.

Wilson (2022) carried out a study on 500 respondents in Indonesia to establish which factor between price satisfaction and product quality had more influence on loyalty for

green products. The unit of analysis for this study was individual customers who were consumers of green products, while the current study adopted the firm as a unit of analysis. Results from the study showed that price fairness and price confidence positively affected customer loyalty through customer satisfaction. It is important to note that studies that have adopted a firm as a unit of analysis are few, especially within the manufacturing sector. Elsewhere, Danko and Nifatova (2022) examined the influence of green branding on the loyalty of consumers of regular brand versus green brands in Ukraine using a sample size of 250 respondents in five supermarkets and found that consumer loyalty to the eco-brand exceeded the rate of consumer loyalty to the regular brand by 3%. Additionally, the price premium of a green brand was found to be influenced by consumer loyalty. These findings cannot be generalized to other geographical areas like in the current study since green price was used as a dependent variable in relation to customer loyalty as opposed to the current study which used green price as an independent variable in relation to customer loyalty.

In yet another study, Mohammadi *et al.* (2023) examined the effect of green pricing on brand loyalty of the employees and managers in the food exporting companies in Tehran, Iran and established that green price had a significant positive effect on brand loyalty. However, Yulisetiarini *et al.* (2024)'s study on the effect of green prices and service quality on customer loyalty using the Starbucks Coffee consumer satisfaction in Jember Regency found green price to have an insignificant effect on customer loyalty. In the Netherlands, Gelderman *et al* (2021) studied the impact of GM strategies on the loyalty of professional buyers in the cleaning industry in a B2B context and found green product price to be significant although it was less dominant in predicting customer loyalty. The study was carried out in a developed economy with different

socioeconomic and political settings. Besides, the study focused on only one sub-sector in the manufacturing sector therefore making it difficult to generalize its findings to other contexts and settings. There is therefore need for a more extensive and rigorous study to examine the influence of green product price on customer loyalty.

In Kenya, there is scanty literature on the relationship between green price and customer loyalty. Studies that have been done have related GM strategies or practices and green customer satisfaction and therefore their findings cannot be generalized. For instance, Macharia *et al* (2017) sought to establish the relationship between GM practices and customer satisfaction in the soft drinks industry in Nairobi whilst Onditi (2016) investigated the relationship between Green Marketing and Consumer satisfaction in supermarkets in Kisumu County, Kenya. The findings showed that supermarkets endeavored to achieve competitive advantage by using GM strategies that influenced consumers to buy green products. It is noted that the two studies were not specific on which GM strategies should be focused on besides their dependent variable being different from the one the current study looked at and the studies focused on the Business-to-Consumer (B2C) setting meaning that the findings are not generalizable.

2.3.3 Green Promotion and Customer Loyalty

Green promotion is the offering of authentic product information in a way to safeguard moral and material interests of consumers by customizing messages that engage environmentally conscious customers' interests and aspirations (Mahmoud *et al.*, 2024). Extant literature is very scanty on the studies that relate green promotion with customer loyalty with most of the available studies pointing at this relationship on the basis of green promotion being an indicator for GM strategies and not as a construct on

its own. The current study brought out this relationship to build up on the scarce information available. In Bangladesh, Hossain and Rahman (2018) determined the influence of green promotion on green purchase on the behavior of consumers and established that green promotion positively influenced the green purchasing behavior of consumers although it did not point out the specific green consumer behavior like customer loyalty.

In Indonesia, Suhaily and Darmoyo (2019) examined the effect of green product and green advertising on the relationship between satisfaction and loyalty with purchase decision as a mediating variable. Green advertising was found to have an indirect influence on customer loyalty through purchase decision and customer satisfaction. Green advertising is just a component of green promotion therefore generalizing this study's findings may not give accurate results in the current study. In yet another study, Jabeen and Kavitha (2020) established the effect that GM strategies had on customer loyalty in India. Green promotion having been one of the GM indicators was found to have a positive significant influence on customer loyalty. Elsewhere, Subiantoro and Budidharmanto (2021) explored the role of green product and green promotion on increased consumer loyalty at Starbucks coffee in Indonesia. According to the findings, green promotion partially had a positive and significant effect on consumer loyalty. The findings of these studies may not give similar results since they were done in a B2C setting and not the B2B which was the focus of the current study.

In India, Vinoth (2023) used data from 412 respondents to determine the role of green trust on the relationship between environmental concern, environmental advertising, environmental knowledge and green loyalty. The findings revealed that environmental

advertising increased green loyalty. In Ghana, Mahmoud *et al.* (2024) examined the role of green knowledge with regards to the relationship of GM mix and repurchase intention and found green to have a positive significant effect on repurchase intention. The two studies by Vinoth (2023) and Mahmoud *et al.* (2024) were conducted in different contexts in terms of the variables, scope, environment and geographical backgrounds. Previous research has enhanced the understanding on the effect of green promotion on customer loyalty in various contexts. However, there are still gaps in the literature regarding the relationship among various variables in the manufacturing sector in Kenya.

2.3.4 Green Corporate Image and Customer Loyalty

Empirical studies relating green corporate image and customer loyalty are scant. Most of the available studies have presented the green corporate image construct as an intervening variable as opposed to independent variable contrary to the current study. Martinez (2015) explored the antecedents of customer loyalty from a green perspective in the hospitality industry in Spain. The study outcome revealed that green overall image had a positive direct effect on green loyalty. A similar finding was obtained in Indonesia by Chrisjatmiko (2018) who analyzed a sample of 155 green products customers to determine the influence of green perceived risk, green image, green trust and green trust on green loyalty. Green image was found to have a positive influence on green loyalty. Although these two studies isolated the GM variables, they however focused on the antecedents of customer loyalty and so the findings cannot be generalized in other contexts like the current one.

Çavusoglu *et al.* (2020) conducted a survey in Turkey to determine the effect of attitude towards green behavior on green image, green customer satisfaction and customer loyalty and established that green image had a positive effect on green loyalty. On the other hand, Sarko and Sukawati (2022) carried out a survey of a sample of 160 customers of Kentucky Fried Chicken (KFC) in Denpasar City, Indonesia. The results indicated that green brand image had a positive and significant effect on customer loyalty. Note that the two studies were case studies therefore the findings are limited and cannot be generalized to other geographical contexts and settings. In yet another study, Handriana *et al.* (2021) analyzed the role of commitment-trust theory in shaping consumer loyalty to green products in Indonesia. Brand image was found to influence consumer trust and commitment to green products but not green consumer loyalty. The findings of this study are inconsistent with other studies thereby leaving the green corporate brand and customer loyalty link unresolved.

Dewi *et al.* (2023) analyzed a sample of 50 respondents in Indonesia to determine the effect of application of green product quality and green corporate image on customer loyalty in a hotel. Green corporate image was found to be less dominant in affecting customer loyalty. This study used a small sample whose findings leads to questioning about external validity and generalization of findings hence the need for more rigorous empirical research. In France, Watson *et al.* (2023) did a case study of mainstream fast food brands by examining the effects of green brand image on brand loyalty. A convenience sample of 2001 Gen Y and Z consumers was explored and the findings indicated that green brand image positively influenced brand loyalty. Green brand image also mediated the relationship between environmental concern and brand loyalty. The scope of this study is limiting both in the context and in the demographics of the

respondents and so its findings could not be conclusively generalized in the current study. To build on these studies, Thi and Oanh (2024) explored the factors that affect green product decisions with a green brand image being a mediator in Vietnam. Green brand image was found to have a direct positive influence on consumers' decisions to buy green products.

2.3.5 Green Marketing Strategies, Green Customer Satisfaction and Customer Loyalty

There are numerous studies that have been done to investigate the mediating role of green customer satisfaction on the relationship between GM strategies and customer loyalty. However, most of these studies have only shown partial relationships whose findings indicate a positive relationship between either of the two variables. Study findings in Hong Kong by Wong *et al.* (2023) showed that there is a significant positive relationship in the consumers' satisfaction loyalty link. However, green product quality, green corporate image and green trust were found to be directly correlated with green customer satisfaction but they non-significantly affected customer loyalty. Creignou and Nuangjamnong (2022) examined the influencing factors of green product quality and price on green customer satisfaction and loyalty in the fashion industry in Thailand. Green product quality and green product price were found to have a significant influence on green customer satisfaction and customer loyalty. These findings were inconsistent with those of Wong *et al.* (2023) who found that GM strategies insignificantly affected customer loyalty. This shows the need to delve into further research to establish the exact position in a B2B context in a different context and geographical setting such as the Kenyan one.

On the other hand, Sarko and Sukawati (2022), sought to establish the effect of green product quality, green brand image and green customer satisfaction on customer loyalty on Kentucky Fried Chicken (KFC) customers in Denpasar City, Indonesia. Green product quality, green brand image and green customer satisfaction had a positive and significant effect on customer loyalty. Additionally, Çavusoglu *et al.* (2020) sought to determine the effect of attitude towards green behavior on green image, green customer satisfaction and customer loyalty of green hotels in Turkey. Green customer satisfaction was found to affect customer loyalty. The findings of the above study agree with Chrisjatmiko (2018) whose study findings in Indonesia showed that green satisfaction has positive effects on customer loyalty. These two studies did not consider green product quality and green price which are key GM strategies in evaluating satisfaction and loyalty. The studies were also done in different contexts hence their findings could not be generalized in the current study.

2.3.6 Green Marketing Strategies, Regulatory Frameworks and Customer Loyalty

A green marketing strategy is the adoption of business practices that contribute to environmental protection, ecological responsiveness and social responsibility. It incorporates marketing practices, policies and procedures that align with and respond to consumer and society concerns about the natural environment while pursuing the objective of creating wealth for the owners (Leonidou *et al.*, 2012; X. Zhang *et al.*, 2011). According to Barney (2007), regulatory frameworks refer to the policies, laws, institutions and various regulations formulated by governments to protect consumers, producers and the environment. Customer loyalty is the level of repurchase intention caused by strong environmental attitudes and sustainable commitment to a certain object such as products, services, companies, brands or groups.

Previous literature on green marketing strategies in relation to customer loyalty has focused on other variables as moderators of the relationship but regulatory frameworks rarely appeared in that literature. In their study in Beijing, Zhang *et al*. (2023) observed that between the year 2002 to 2022, various constructs were used as moderating variables in green loyalty literature. Variables that were used as moderators included green knowledge, green consciousness, gender and inter-generational. Their findings also indicated that these variables were moderating the relationship between independent variables such as green practice, green image, green marketing, corporate social responsibility and green innovation in relation to customer loyalty.

Regulatory frameworks stand out as a moderating variable that has rarely been tested in a GM strategies versus customer loyalty relationship. However, a study by Nzomo *et al*. (2023) pointed that regulatory frameworks negatively moderated the relationship between green innovation strategy and the performance sustainability of ISO 14001 certified manufacturing firms in Kenya. These findings cannot be generalized to the current study since it focused on different constructs compared to the current study whose focus was on determining the moderating effect of regulatory frameworks on the relationship between GM strategies and customer loyalty.

2.3.7 Green Marketing Strategies, Green Customer Satisfaction, Regulatory Frameworks and Customer Loyalty

There is generally a lack of an integrated framework that links the variables of green marketing strategies, green customer satisfaction, regulatory frameworks and customer loyalty in the manufacturing firms. Conceptual frameworks that involve GM strategies, green customer satisfaction, and regulatory frameworks as variables affecting customer

loyalty have partial explanations (Çavusoglu *et al.*, 2020; Chrisjatmiko, 2018; Creignou & Nuangjamnong, 2022; Moise *et al.*, 2018; Sarko & Sukawati, 2022; Wong *et al.*, 2023; Yusof *et al.*, 2017). Moreover, these studies have mainly concentrated on the B2C markets as opposed to the B2B. A combination of the three variables of GM strategies, green customer satisfaction and regulatory frameworks are believed to have a joint effect on customer loyalty which the current study sought to investigate.

Significant advances have been done on the GM strategies literature in relation to customer loyalty but conclusions drawn from available studies are contradictory hence further research was warranted because of various reasons. Firstly, a large number of these studies have been done in of the B2C context and therefore the findings may not conclusively reflect the same position when it comes to the B2B context. Secondly, a large number of the studies have focused on some and not all the variables jointly like what the current study focused on. Thirdly, most of the studies were conducted in developed countries having different socioeconomic and political backgrounds from developing countries. Most of the studies have also been conducted in a single manufacturing subsector which may manifest differently if all the subsectors in the manufacturing sector are examined. Lastly, there was scant literature on the relationship between GM strategies and customer loyalty with green customer satisfaction and regulatory frameworks as intervening and moderating variables respectively in the Kenyan context.

2.4 Literature Overview and Research Gaps

This chapter reviewed both theoretical and empirical studies with a focus on green marketing strategies, green customer satisfaction, regulatory frameworks and customer

loyalty. A great emphasis was put on the B2B customers as opposed to business to customer (B2C) customers. The theories on which this study was anchored on suggest that firms that use GM strategies effectively and efficiently satisfy environment conscious customers and other stakeholders. Customers who experience continuous satisfaction become loyal customers in the long run (Vaccaro, 2009). The studies reviewed were not conclusive on the precise measures/indicators of green marketing strategies which means that green marketing strategies are varied and their impact on customer loyalty is different. The effect of GM strategies on customer loyalty in the B2B context is not empirically fully understood leading to recommendations for further investigations. The study's focus on the B2B context is because most of the environmental resources are used in the production and manufacturing of goods for B2B markets (Gelderman *et al.*, 2021; Kapitan *et al.*, 2019).

Consequently, the production processes and activities of the manufacturing firms have a major contribution to environmental degradation (Achuora, 2018). This argument was supported by Kapitan *et al.* (2019) who stated that environmental sustainability is more pertinent to B2B manufacturing firms since they engage in activities that require large amounts of resources and produce materials that are harmful to the environment. It is, therefore, believed that adoption of green production processes and activities by these firms will have a greater impact on the sustainability of the environment compared to giving more focus on the B2C customers. From the reviewed empirical literature, a summary of key studies is provided in **Table 2.1** showing the author(s), study focus, research design and major findings, knowledge gaps and current study focus.

Table 2.1: Summary of Gaps in the Reviewed Literature

Author(s)	Study Focus	Research Design and Major Findings	Knowledge Gaps	Current Study Focus
Yulisetiarini *et al* (2024)	The influence of green price and service quality on customer loyalty through Starbucks coffee customer satisfaction in Jember Regency, Indonesia	Purposive sampling technique was used to collect data by use of a questionnaire. Although green price was found to have a significant effect on customer loyalty through customer satisfaction, it had an insignificant effect on customer loyalty	Since this study was done in a different environment and context, the findings may not be generalized on the current study	The current study seeks to establish the direct influence of green price on customer loyalty
Mahmoud *et al* (2024)	Green marketing mix and repurchase intention: The role of green knowledge	Purposive sampling method was used to collect data	This study was done in the beverage industry and from a different environment so its findings cannot give conclusive results in the current study	The current study will focus on a wider scope therefore the findings will be a representative of the entire manufacturing sector
Wong *et al* (2023)	Determinants of Customer Loyalty from a Green Marketing Perspective	An online questionnaire was used to collect data. Convenience and snowball sampling methods were used to sample the respondents The findings indicated that there was a significant positive relationship in the satisfaction-loyalty link	This study used a direct relationship between the independent variable and dependent variable. The study was done in Hong Kong based on a brand of bottled water. There exist conceptual, methodological and contextual gaps	The current study will use green customer satisfaction to mediate the relationship between GM strategies and customer loyalty. The study will also cover a wider scope of the B2B customers in the manufacturing sector in Kenya.
Nzomo *et al* (2023)	Green Innovation Strategy as Antecedent of Performance Sustainability among ISO 14001-Certified Manufacturing Firms in Kenya: Does Regulatory	The study was a census survey. The findings indicated that regulatory frameworks had a significant negative moderating effect on the relationship between	The study was a census and had different study variables.	The current study will use a representative sample to test the relationship of the variables

	Framework Play a Moderating Role?	green innovation strategy and performance sustainability		
Sarko and Sukawati (2022)	The Effect of Green Product Quality, Green Brand Image and Green Customer Satisfaction on Green Customer Loyalty	A Case study research design was used for this study. Purposive sampling method was used to select the study elements. Multiple linear regression analysis technique was used to analyze the data. Green product quality, green brand image and green customer satisfaction were found to have a positive and significant effect on customer loyalty in the study results.	This study was only limited to KFC B2C customers based in Denpasar City hence making it a case study. The study focused on only two of the GM's aspects in establishing its relationship with customer loyalty. It is not clear as to whether green satisfaction mediates the relationship between the independent variable and the dependent variable.	The current study will investigate on how B2B customers in the manufacturing sector in Kenya respond to GM strategies in relation to green customer satisfaction and customer loyalty.
Creignou and Nuangjamnong (2022)	The Influencing Factors of Green Product Quality and Price on Green Customer Satisfaction and Loyalty: A Case Study of the Fashion Industry	This was case study research with a focus on the B2C customers in the fashion industry. Data was processed by use of Cronbach's Alpha and Multiple Linear Regression. The study results showed that green product quality had a positive and significant influence on green customer satisfaction while green customer satisfaction was found to have a positive and significant influence on customer loyalty.	This was case study research which was done in Thailand and it used only two aspects of GM strategies. The sample population of interest comprised of B2C customers from the fashion industry. There are conceptual, contextual and methodological gaps that are apparent in the study.	The current study will use a survey research design and it will have a wider focus focusing on the B2B customers in the manufacturing sector in Kenya. The study will examine several GM strategies to test how they influence green customer loyalty with green customer satisfaction mediating the relationship.
Gelderman *et al.* (2021)	Green marketing as an environmental practice: The	The study used Partial Least Square (PLS) and Structural	The study focused on the relationship between GM	The current study will focus on establishing the relationship

	impact on green satisfaction and green loyalty in a business-to-business context	Equation Model (SEM) for data analysis. The findings indicated that Salesperson expertise has a strong impact on green customer satisfaction and customer loyalty.	strategies, green customer satisfaction and customer loyalty in the cleaning industry in Netherlands. There exists a contextual gap in this study.	between GM strategies, green customer satisfaction and customer loyalty in the manufacturing sector in Nairobi City County. The study will examine product, price, promotion and distribution as GM strategies.
Çavusoglu *et al.* (2020)	The effect of Attitudes toward Green Behaviors on Green Image, Green Customer Satisfaction and Green Customer Loyalty	The study used a case study research design. Smart Partial Least Squares (PLS) 3 was used to test the hypotheses. Green customer satisfaction was found to have a positive effect on customer loyalty.	This was a case study that only focused on the B2C customers who visited green hotels in Turkey. The study sought to investigate the effect that green behaviors had on green image, green customer satisfaction and green loyalty. Conceptual, contextual and methodological gaps were clear in the study.	The proposed study will use a survey research design while focusing on the B2B customers in the manufacturing sector in Kenya. The study will seek to establish the interrelationship of GM strategies, green customer satisfaction and customer loyalty.

Source: Summarized from various studies by Researcher, 2025

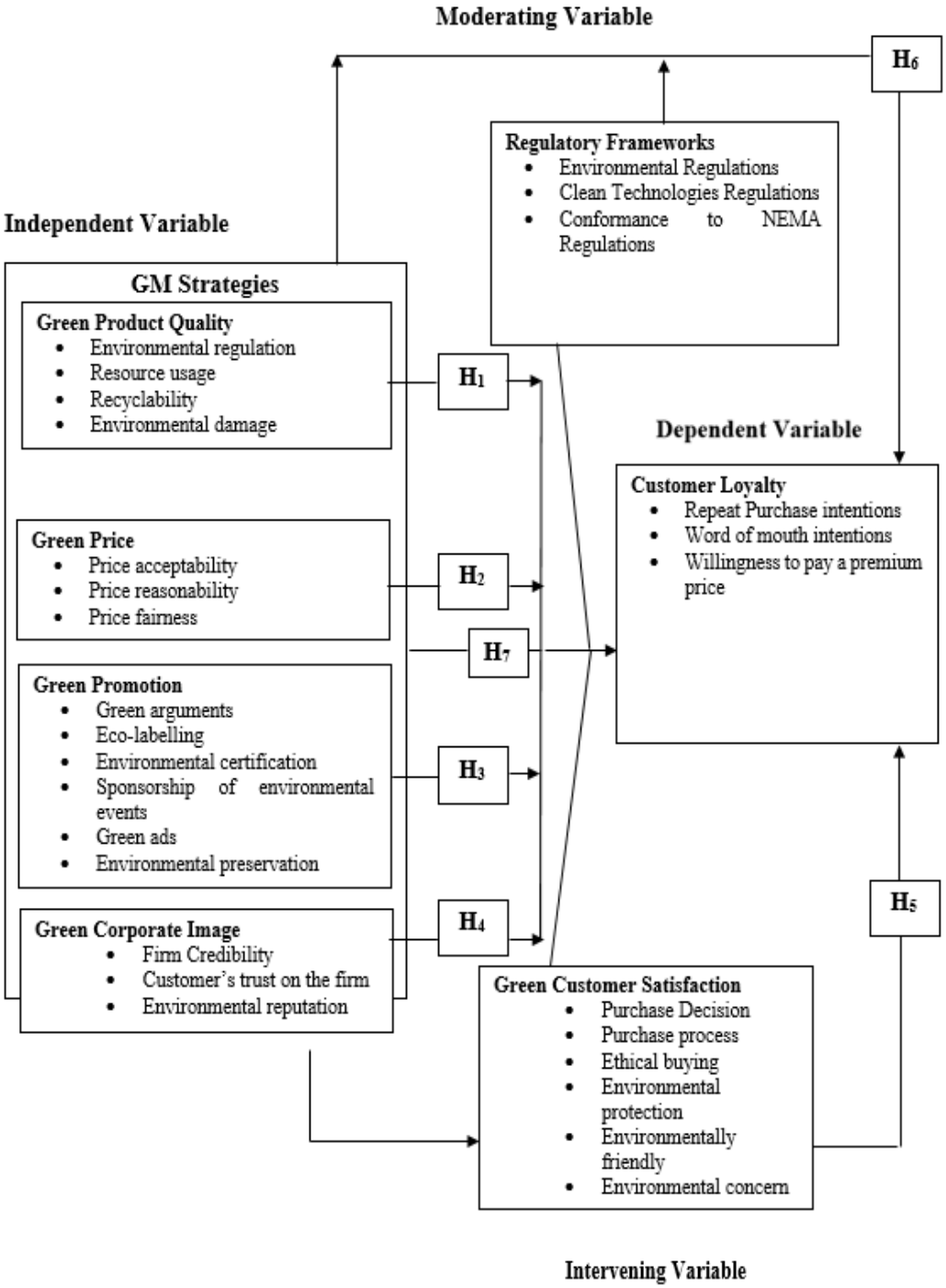

Figure 2.1: Conceptual Model

Source: Modified from Ansoff (1965); Gelderman *et al* (2021); Oliver (1980) & Rogers (1995).

The conceptual model in **Figure 2.1** shows the relationship among the four variables of the study. The independent variable was the Green Marketing strategies while the dependent variable was customer loyalty. Green customer satisfaction intervened on the relationship between GM strategies and customer loyalty and Regulatory Frameworks moderated the relationship between GM strategies and customer loyalty. The conceptual model in **Figure 2.1** was based on the three reviewed theoretical models of Diffusion of Innovation Theory (DIT), Expectancy- Disconfirmation Paradigm (EDP) theory and the Stakeholders' Theory (ST). Vaccaro (2009) noted that the Diffusion of Innovation characteristics in relation to B2B green marketing strategies bring about benefits such as corporate image, reputation, satisfaction to stakeholders (that is, customers, suppliers, employees, volunteers, government agencies, and media), greater brand differentiation and customer loyalty.

2.6 Conceptual Hypotheses

The conceptual hypotheses developed from the relevant literature and the conceptual model in **Figure 2.1** are as indicated:

***H_1*:** There is no significant relationship between green product quality and customer loyalty in the manufacturing firms in the County.

***H_2*:** There is no significant relationship between green price and customer loyalty in the manufacturing firms in the County.

***H_3*:** There is no significant relationship between Green Promotion and customer loyalty in the manufacturing firms in the County.

***H_4*:** There is no significant relationship between green corporate image and customer loyalty in the manufacturing firms in the County.

***H_5*:** Green customer satisfaction does not significantly intervene the relationship between green marketing strategies and customer loyalty in the manufacturing firms in the County.

***H_6*:** Regulatory frameworks do not significantly moderate the relationship between green marketing strategies and customer loyalty in the manufacturing firms in the County;

***H_7*:** There is no joint effect of Green Marketing Strategies, Regulatory Frameworks and Green Customer Satisfaction on Customer Loyalty in the manufacturing firms in the County.

2.7 Chapter Summary

This chapter presented the theoretical foundation of the study as well as a detailed review of empirical literature on GM strategies, green customer satisfaction, regulatory frameworks and customer loyalty. The existing knowledge gaps were identified from the theoretical review as well as the empirical review. Finally, the conceptual model and conceptual hypotheses were consequently formulated to guide the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the methodology that was adopted in the study is described in various sections which include research philosophy, research design, the population, the sampling frame, the sampling technique, the data collection instruments and data collection procedure, the pilot testing and data analysis. Appropriate details are presented in various sections of the chapter.

3.2 Research Philosophy

A research philosophy presents assumptions that guide the study hence it is a significant part of research methodology. The assumptions help in shaping the researcher's choice of research questions, data collection procedures and interpretation of findings to solve an identified research problem (Jonker & Pennink, 2010). The concepts of epistemology, ontology and axiology are upon which these assumptions are rooted (Saunders *et al.*, 2011). Creswell (2014) observed that epistemology is the assumption of what represents valid and permissible knowledge and how to communicate knowledge to others while ontology is based on the nature of reality and this influences what to investigate during research. Axiology, on the other hand, describes the role of values and ethics when conducting research. Various research philosophies such empiricism, positivism, pragmatism, phenomenology (interpretivism), and rationalism as can be distinguished from the above assumptions.

According to Eriksson and Kovalainen (2008), phenomenology and positivism are the most common philosophies in the field of social sciences. Phenomenology is

descriptive of a lived experience as opposed the one stipulated by pre-existing theoretical preconception. It is of the view that the world is perceived differently by the individuals who have experienced a phenomenon out of their own perceptions and lived experiences. Positivism on the other hand is built on the assumptions that the world is composed of observable, measurable, perceptible and quantifiable phenomena whose experience is based on the five sensory organs (Creswell, 2013). Weinreich (2009) noted that this philosophy applies quantitative methods of data collection to ensure objectivity, reliability and generalizability of findings with an assumption that researchers should take a neutral role to avoid influencing the phenomena being studied. Positivists develop hypotheses from the theories that are specified at the start of a study after which the hypotheses are verified and confirmed using statistical techniques.

This study adopted the positivism view because of its predictive power to test theories and determine the relationship among the variables of interest for purposes of generalization. The study sought to establish the influence of green marketing strategies on customer loyalty through the intervention of green customer satisfaction with the regulatory framework moderating the relationship. The study reviewed related extant literature and developed appropriate hypotheses using the existing theories. The basis for collecting and analyzing data was through the formulated hypotheses which provided a foundation for their testing. A positivist approach was therefore the most appropriate one in the study.

3.3 Research Design

The choice of research design is guided by the data needed, the procedures to be utilized in data collection and how this will provide the answer to the research questions

(Creswell, 2014). This study employed a descriptive cross sectional survey design because it allows for the collection of data from a sizeable population besides the fact that it enables the identification of hidden patterns or characteristics of the phenomena in question using a profile of factors (Sekaran, & Bougie, 2010). According to Awino (2011), the approach places high priority in identifying linkages between and amongst variables, besides allowing for generalization of the sample survey findings of the manufacturing firms in Nairobi City County. The design also allowed for the generalization of the study hypotheses, identification of possible research questions for further investigation as well as the establishment of the strength of the relationships between variables without inferring causality. Cross-sectional studies are conducted when time or resources for more extended, research is limited and it involves a close analysis of a situation at one particular point in time to give a snap-shot result (Neville, 2007). The cross-sectional design was used to determine the association that exists between green marketing strategies, green customer satisfaction, regulatory frameworks and customer loyalty. Other similar studies that have adopted the descriptive cross-sectional design include Mwaura *et al.* (2016), Onditi (2016), Macharia (2017) and Mwaura (2021).

3.4 Target Population

The target population of this study included all the manufacturing firms operating in Nairobi City County. Based on the Kenya Manufacturers and Exporters Directory of the period 2021-2022, there were seven hundred and twenty-five (725) manufacturing firms in the County from which a representative sample of firms was determined. The manufacturing sector was selected because it is widely recognized as a major contributor to environmental challenges, making it a relevant context for examining

green marketing strategies. The unit of analysis for the study was the respective manufacturing firm. The data was collected from specific individual respondents, each of whom represented a specific manufacturing firm operating within one of the fourteen (14) sub-sectors of the manufacturing industry in Nairobi City County. The study's focus was organizational, exploring firm-level strategies, practices and outcomes related to green marketing, customer satisfaction and regulatory compliance. This approach aligned well with the research objectives, which sought to understand how manufacturing firms, rather than individuals, implement green initiatives and foster customer loyalty. The selected respondent from each sampled manufacturing firm served as an informant, providing insights on behalf of the firm and enabling a coherent analysis at the firm level. **Table 3.1** shows a list of the fourteen manufacturing subsectors with the total number of firms per subsector and in the county.

Table 3.1: Number of Manufacturing Firms per Sub-Sector

Name of Sector	Number of Manufacturing Firms
Service and Consultancy	109
Textile & Apparel	43
Timber wood & Furniture	22
Building, Mining & Construction	25
Chemical & Allied	90
Energy, electrical & electronics	44
Food & Beverage	120
Agriculture	6
Leather & Footwear	14
Metal & Allied	62
Automotive	36
Paper & Board	57
Pharmaceutical & Metal Equipment	26
Plastic & Rubber	71
Total	**725**

Source: Kenya Association of Manufacturers (2021)

3.5 Sampling Frame

A sampling frame is a list or device that delimits, identifies and allows access to the elements of the target population and sample elements are selected from the sampling frame using an appropriate probability scheme (Kulshreshtha, 2013). The sampling frame used in the study was drawn from the Kenya Manufacturers and Exporters Directory, 2021-2022 Edition which gave a total of seven hundred and twenty-five (725) manufacturing firms that were registered in the County as shown in **Appendix V**.

3.6 Sampling Technique

The study employed stratified random sampling in combination with systematic sampling to select respondents from manufacturing firms within Nairobi City County. The sampling frame was drawn from the *Kenya Manufacturers and Exporters Directory (2021).* This Directory provided an up-to-date and comprehensive list of registered manufacturing firms in the county. According to Taherdoost (2016), stratified random sampling technique divides the population into strata (that is, sub-groups) and a random sample is selected from each stratum. The technique is often used where there is a high variation within the population hence it helps in ensuring that every stratum is adequately represented (Mukherjee, 2019). The sampling frame used in the study indicated that the manufacturing firms in the County are categorized into fourteen (14) sub-sectors which were used to form fourteen strata.

The use of stratified sampling was justified by the fact that green marketing strategies are highly influenced by the sub-sector that a firm falls into. Similarly, green customer satisfaction of firms differs significantly in each sub-sector. Within each stratum,

systematic sampling was then used to select individual firms that were included in the sample. A sampling interval was arrived at by dividing the population size (*N*) by the sample size (*n*) and was used to identify the *nth* element. In this study, the sampling interval was three (3) implying that every third (3^{rd}) element in the sampling frame was included in the study. Every *nth* element was selected to make up the sample for each stratum (Mukherjee, 2019) as illustrated in **Table 3.2**.

The unit of analysis for the study was the manufacturing firms in Nairobi City County from which an authorized and designated Officer to fill in the questionnaire was selected. The designated Officer was deemed to be better placed to give the required information with regard to the study variables. The sample size at 95 percent confidence level and at a precision error of 5 percent was computed using the equation as shown (Taro, 1967):

$$n = \frac{N}{1 + N\,(e)^2}$$

Where:

n = Sample Size

N = Population size

e = level of precision desired $\Longrightarrow$ e = 1- Confidence level

Hence,

$$n = \frac{725}{1 + 725\,(0.05)^2} = 257.82361$$

$$n = 258$$

The formula was preferred because of its simplicity in its usage and its applicability for large populations (Taro, 1967). The sample size in each stratum was arrived at through stratified sampling with a sampling fraction interval of 3. The sampling interval was calculated by dividing the population size (*N*) with the sample size (*n*).

Sample fraction = $\frac{\text{Population Size } (N)}{\text{Sample size } (n)} = \frac{725}{258} = 2.81 \cong 3$

The stratified sample for each stratum was as indicated in **Table 3.2**.

Table 3.2: Sample Size Calculation

Sectors/Stratum	Population (No. of Firms)	Proportion of Population (%)	Stratified Sample Size
Service and Consultancy	109	15	39
Textile & Apparel	43	6	15
Timber wood & Furniture	22	3	8
Building, Mining & Construction	25	3	9
Chemical & Allied	90	12	32
Energy, electrical & electronics	44	6	16
Food & Beverage	120	17	43
Agriculture	6	1	2
Leather & Footwear	14	2	5
Metal & Allied	62	8	22
Automotive	36	5	13
Paper & Board	57	8	20
Pharmaceutical & Metal Equipment	26	4	9
Plastic & Rubber	71	10	25
Grand Total	**725**	**100**	**258**
Sample Size	**258**		
Sampling Interval	**3**		

Source: Modified from the Kenya Manufacturers and Exporters Directory (2021) Edition

3.7 Data Collection Instrument

This study mainly used primary data which was collected using a semi-structured questionnaire adapted from previous empirical surveys. The use of questionnaires has an advantage in that the questionnaires are less susceptible to misinterpretation and can also be used to compare findings from related studies. The questions were modified to suit the specific research objectives. The questionnaire was subdivided into five main

sections covering different aspects of the study. Section one collected background information about the firm and the respondent. Section two focused on data about the green marketing strategies and it was measured by green product quality, green product price, green promotion and green corporate image. Section three sought for information on green customer satisfaction with the firms' goods, products and/or services. Section four was used to collect data on the regulatory frameworks that govern manufacturing firms on matters environment and section five collected data regarding customer loyalty and it was measured by purchase intentions, word of mouth intentions and willingness to pay a premium price.

The questionnaire had the *Likert scale* questions with open-ended questions. The use of structured questions was preferred because they minimize response variation, take less time to code and transcribe besides having increased response rates. *Likert scale* questions were used because they help in measuring attitudes in a scientifically accepted and validated manner by quantifying the attitudes (Joshi *et al.,* 2015). The scale produces *ordinal* data, which reflects ordered responses without assuming equal intervals between them. The Green marketing strategies construct was measured on a 5-point *Likert scale* ranging from 1 to 5 where *5 = Very Large Extent; 4 = Large Extent; 3 = Moderate Extent; 2 = Small Extent; 1 = Not at all*.

The other three constructs (that is, Green Customer Satisfaction, Regulatory Frameworks and Customer Loyalty) required the respondents to state whether they agreed or disagreed with the indicated statements related to specific variables on a continuum of 1 to 5 where *5=Strongly Agree; 4=Agree; 3=Indifferent; 2=Disagree; 1=Strongly Disagree* (See Appendix I). It is important to note that the questions and

statements on the questionnaire were not about a specific brand but just a green brand of a specific manufacturing firm according to the respective respondent. This helped in ensuring the validity and generalizability of the responses given. In addition to the questionnaire, the study used an interview guide in order to gain more insight on the study variables.

3.8 Data Collection Procedure

Questionnaires and interview guides were self-administered to key informants identified by the manufacturing firm's management as the ones best placed to provide the required data as per the study variables. Electronic mail and drop and pick up later methods were used to collect the data. Follow-up telephone calls and *e-mails* were made to the respondents to increase and improve the response rates. These methods ensured confidentiality, allowed clarification of difficult questions and enhanced control of the data collection process. Initial contact was done to all the 258 manufacturing firms by way of emails, telephone calls and/or physical visits so as to confirm the physical address, firm's eligibility, and the name and title of the key respondent.

Follow up telephone calls and personal visits to the respondent organizations were made to enhance required support from them. Two research assistants were deployed to assist in the data collection process. The assistants received an induction training which enabled them acquire the necessary and relevant understanding and skills to administer the questionnaires. The research assistants were randomly visited during the data collection exercise period to ensure that the exercise was being conducted in an acceptable and satisfactory manner. The researcher echoed the insights by Kangu (2017) that the respondents' names and the names of their firms be excluded from the

questionnaire because of the confidentiality and sensitivity of the data that was being collected.

The necessary approvals of data collection were obtained from manufacturing firms' management before the commencement of the data collection exercise. Sampled manufacturing firms were presented with an authorization letter and research permit which had earlier been provided by the National Commission for Science, Technology and Innovation (NACOSTI) to collect data from the manufacturing firms. An introduction letter from Machakos University was used to introduce the researcher to the respondents as a bonafide student at the university.

3.9 Pilot Testing

A pilot test will be conducted in order to ascertain reliability, validity and reduce the measurement error (Dillman, 2000). A pilot test is a small-scaled version of a trial run to ensure that a full-fledged study is carried out successfully (Memon *et al*., 2017). It is a small-scale research project that will be conducted before the final full-scale study that will help a researcher to test in reality how likely the research process will work so as to decide how best to conduct the final research study. It will also help in verifying the chosen direction, formulating the assumptions for work and checking the correctness of the developed questionnaire for the survey study (Dźwigoł, 2020; Ismail *et al*., 2018). According to Monette *et al* (2002), a survey study is recommended to have a total of twenty (20) respondents for pilot testing of the questionnaire to be successful. The current study will therefore select 20 respondents form the target population to pretest the questionnaire. The respondents will be drawn from the same sampling frame that is similar to the one that will be used for the actual survey in terms of the background features and familiarity with the study topic. This will enable for gathering

of a variety of key reactions (if any) that will be useful in refining the questionnaire for use during the actual study.

3.10 Reliability, Validity and Diagnostic Tests

The questionnaire will be subjected to both reliability and validity tests which are tools of an essentially positivist epistemology. Extant literature indicates a divergence in the definitions of reliability and validity on the grounds that tests of reliability show whether the result is replicable while validity tests indicate how accurate the means of measurement is and whether they are actually measuring what they are intended to measure (Winter, 2000). Diagnostic tests will be run to test statistical assumptions of multicollinearity and Goodness of model fit assumption.

3.10.1 Reliability Test

The questionnaire was subjected to both reliability and validity tests which are tools of an essentially positivist epistemology. Extant literature indicates a divergence in the definitions of reliability and validity on the grounds that tests of reliability show whether the result is replicable while validity tests indicate how accurate the means of measurement is and whether they are actually measuring what they are intended to measure (Winter, 2000). Reliability is the consistency of measurement or stability of measurement over a variety of conditions in which basically the same results should be obtained (Ritter, 2010). It is concerned with obtaining findings that are free from random errors even after repeated trials with a similar population (Nunnally, 1978).

Smallbone and Quinton (2004) observed that a reliable measure is characterized by stability over time and internal consistency. When a measure is reliable, the results are said to be more accurate and so is the ability to make comparisons (Chakrabartty, 2011).

Reliability can be assessed by use of various methods (Neville, 2007) with each method allowing computation of a reliability coefficient. The most common method of testing for internal consistency in behavioral science is *coefficient alpha* which was popularized by Cronbach (1951) who recognized its general usefulness. It is often referred to as Cronbach's alpha (α).

This study computed reliability using *Cronbach alpha* coefficient value expressed as a digit ranging from 0 to 1. This technique estimate correlation between answers by respondents in a questionnaire. An alpha coefficient of *zero (0)* shows absence of a correlation while that of 1 signifies absolute internal consistency of items in the scale. Various scholars have suggested different levels of measures that are acceptable. Nunnally (1967) explained that Cronbach's level of 0.5 to 0.6 can suffice in measuring reliability. This measure was revised to between 0.6 and 0.7; and 0.7 and 0.8 respectively (Kaplan & Saccuzo, 2009; Nunnally, 1978). Hair *et al* (2010) recommended a Cronbach alpha value of 0.6 and above as the one acceptable in social science research. The study therefore used an alpha coefficient of 0.6 and above as an indicator of satisfactory reliability.

3.10.2 Validity Test

Validity tests estimate that the data collected during the survey accurately measures what it purports to measure (Saunders *et al.*, 2011). According to Babbie (2010), validity can be tested in various ways including content validity, face validity and construct validity. Content validity was tested in this study by randomly selecting 20 manufacturing firms to conduct a pilot study on them. According to Monette *et al.* (2002), a pretest of 20 respondents is useful in identifying flaws in a questionnaire.

Feedback was sought on all items of the questionnaire including length, cognitive aspects, layout, and order of the questionnaire. According to Allen *et al*. (2023), face validity is a legitimate form of validity that is reflected in the clarity, relevance, difficulty, and sensitivity of a measure to its intended audience and it can be assessed using qualitative or quantitative methods in the population of interest.

Construct validity provides confidence that the components in the questionnaire measure what they propose to measure. The operationalization of a construct requires a set of measurable attributes or behavior to be hypothesized so as to correspond with the constructs developed. This study determined construct validity by using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). According to Hare and Neumann (2008), factor analysis reduces the overall number of observations into a few variables that can best explain constructs under investigation. While EFA was used to identify the underlying factor structure, CFA was used to test the hypothesized measurement model and assess the goodness-of-fit between observed data and the theoretical constructs. It provides a more rigorous validation of the factor structure by evaluating model fit indices (Brown, 2015; Nye, 2023). The use of CFA in this study strengthens the validity of the instrument by confirming that the observed indicators load appropriately on the latent constructs as evidenced by acceptable factor loadings and model fit indices (Distefano & Hess, 2005).

3.10.3 Diagnostic Tests

Diagnostic tests are done to assess the underlying assumptions since violating the assumptions results to over or underestimating results. In light of the ordinal structure of the data, common diagnostic tests associated with linear regression such as normality

test, test of linearity and homoscedasticity were not applicable to this study. This is because ordinal logistic regression accommodates non-linear relationships and category-specific variance, making such tests unnecessary (Joshi *et al.*, 2015). Therefore, assumptions that were of primary concern were multicollinearity and Goodness of model fit assumption.

According to Creswell (2013), multicollinearity is the assumption that the independent variables are not highly correlated resulting to skewed or misleading results. This was examined using the Variance Inflation Factor (VIF) values and Tolerance Indices (TIs). Chatterjee and Simonoff (2013) observed that when VIF value exceed 10, the degree of multicollinearity is high resulting to unreliable estimates of individual coefficients. To assess the overall adequacy of the ordinal *logistic regression* model, *Pearson Chi-Square* and *Deviance Chi-Square* statistics were used. These tests evaluated how well the observed data aligned with the expected values generated by the model. A non-significant *p-value* ($p > 0.05$) from these tests indicates that there is no substantial difference between the observed and expected values, suggesting that the model fits the data well.

3.11 Operationalization of Study Variables

The study variables were operationalized using the measures that were obtained from past studies. Different five-point *Likert type* of scales were used to operationalize and measure the variables by use of indicators. A *Likert scale* is a standardized psychometric response scale that is mainly used in questionnaires to obtain the respondent's preferences or the extent to which they agree with a statement or a set of statements (Vogt, 1999). The *Likert scale* that was used for GM strategies ranged from

1 = Not at all (NAA), 2 = Small Extent (SE), 3 = Moderate Extent (ME), 4 = Large Extent (LE) and 5 = Very Large Extent (VLE). Green customer satisfaction, regulatory frameworks and customer loyalty used the same *Likert type* scale that ranged from *1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Indifferent (I), 4 = Agree (A) and 5 = Strongly Agree (SA).*

Table 3.3 shows operationalization of the study variables.

Table 3.3: Operationalization of Study Variables

Variable	Nature of variable	Indicators	Measure	Scale type	Investigating Question section
Green Product Quality	Independent Variable	Environmental regulations Resource usage Recyclability Environmental damage	Five-points Likert Scale 1 = Not at all (NAA); 2 = Small Extent (SE); 3 = Moderate Extent (ME); 4 = Large Extent (LE); 5 = Very Large Extent (VLE)	Ordinal	Section 2
Green Price	Independent Variable	Price acceptability Price reasonability Price fairness	Five-points Likert Scale 1 = Not at all (NAA); 2 = Small Extent (SE); 3 = Moderate Extent (ME); 4 = Large Extent (LE); 5 = Very Large Extent (VLE)	Ordinal	Section 2
Green Promotion	Independent Variable	Green arguments Eco-labelling Environmental certification Sponsorship of environmental events Green ads Environmental conservation Use of e-marketing	Five-points Likert Scale 1 = Not at all (NAA); 2 = Small Extent (SE); 3 = Moderate Extent (ME); 4 = Large Extent (LE); 5 = Very Large Extent (VLE)	Ordinal	Section 2
Green Corporate Image	Independent Variable	Firm Credibility Customer's trust on the firm Environmental reputation	Five-points Likert Scale 1 = Not at all (NAA); 2 = Small Extent (SE);	Ordinal	Section 2

			3 = Moderate Extent (ME); 4 = Large Extent (LE); 5 = Very Large Extent (VLE)		
Green customer satisfaction	Intervening Variable	Purchase Decision Purchase process Ethical buying Environmental protection Environmentally friendly Environmental concern	1 = Strongly Disagree; 2 = Disagree; 3 = Indifferent; 4 = Agree 5 = Strongly Agree	Ordinal	Section 3
Regulatory frameworks	Moderating Variable	Environmental Regulations Clean Technologies Regulations Conformance to NEMA Regulations	1 = Strongly Disagree; 2 = Disagree; 3 = Indifferent; 4 = Agree 5 = Strongly Agree	Ordinal	Section 4
Customer loyalty	Dependent Variable	Repeat Purchase intentions Word of mouth intentions Willingness to pay a premium price	1 = Strongly Disagree; 2 = Disagree; 3 = Indifferent; 4 = Agree 5 = Strongly Agree	Ordinal	Section 5

Researcher's Construction (2025)

3.12 Data Analysis

After field work, data was cleaned to remove all the incomplete questionnaires. Both descriptive and inferential statistics were used to conduct data analysis (Gujarati & Porter, 2009; Islam *et al*., 2022). Descriptive statistics were used to calculate percentages to help in profiling the respondents and the manufacturing firms. The *Chi-square* was used to test the relationship among the variables with a focus on the manufacturing firms in the fourteen subsectors in the manufacturing sector in Nairobi City County. Ordinal Regression analysis (ORA) was used to test the hypotheses by use of different models. All hypotheses were tested at the 5% level of significance. In ordinal logistic regression, the *Wald Chi-Square* statistic was used to assess the significance of individual predictor coefficients. A coefficient was deemed significant if its p-value was less than 0.05, indicating sufficient evidence to reject the null hypothesis (Agresti, 2013). The first four hypotheses (***H₁*** to ***H₄***) used the Ordinal Regression Model to establish the association between the GM strategies and customer loyalty. The **model equation 3.1** depicts the ordinal regression analysis as follows:

$$\log\left\{\frac{P(Y \leq j)}{P(Y > j)}\right\} = \beta_0^j + \beta_1 GPQ + \beta_2 GP + \beta_3 GPM + \beta_4 GI \ldots\ldots\ldots\ldots\ldots \quad 3.1$$

Where:

Y= Customer Loyalty

j=Loyalty threshold level

β_0^j = the intercept for the j-th threshold (i.e., the cut-off points between loyalty categories).

$P(Y \leq j)$ = the probability that the dependent variable Y (customer loyalty) is less than or equal to the j-th category.

P(Y> j) = the probability that the dependent variable is greater than the *j-th* category.

β_0^j = the intercept for the j-th threshold (i.e., the cut-off points between loyalty categories).

j = the thresholds for the cumulative probabilities of loyalty levels.

β1, β2, β3 and *β4* = Coefficients of GPQ, GP, GPM and GI, respectively.

GPQ=Green Product Quality

GP=Green Price

GPM=Green Promotion

GI=Green Corporate Image

Path analysis as proposed by Baron and Kenny (1986) was used to test the fifth hypothesis (***H*$_5$**) so as to determine the intervening role of green customer satisfaction on the relationship between GM strategies and customer loyalty. Other researchers that have successfully utilized path analysis include Maore (2019); Njonjo (2023) and Nzomo *et al.* (2023a). Several regression analyses were conducted and the significance of the coefficients examined in each step. **Model equation 3.2** was used to establish whether there was a relationship between GM strategies as an independent variable and Customer Loyalty as a dependent variable. To determine how the GM strategies and green customer satisfaction (acting as a dependent variable) were related, **model equation 3.3** was used. **Model equation 3.4** was used to establish if green customer satisfaction (acting as independent variable) had a relationship with customer loyalty. Finally, **model equation 3.5** was used to determine if green customer satisfaction played a mediating role on how the independent variable and the dependent variable relate.

Thus;

$$CL = \varphi_0 + \varphi_1 GM + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 3.2$$

$$CS = \varphi_0 + \varphi_1 GM + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 3.3$$

$$CL = \varphi_0 + \varphi_1 CS + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 3.4$$

$$CL = \varphi_0 + \varphi_1 GM \ + \varphi_2 CS + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 3.5$$

Where: *CL* = customer loyalty

GM = Green Marketing Strategies

CS = Green Customer Satisfaction

φ_0 = Constant/Intercept

φ_i = The slope

ε = Error term

The decision on mediation was made by adopting the model by Baron and Kenny (1986) as shown on **Table 3.4**.

Table 3.4: Criteria for Mediation Decision

	Outcomes	Conclusions
1.	If φ_1 in model 3.5 is significant	There is a relationship that can be mediated
2.	If φ_1 in model 3.5 is not significant	There is no relationship that can be mediated
3.	If φ_1 in model 3.5 is significant If φ_1 in model 3.6 is significant If φ_1 in model 3.7 is significant If φ_1 in model 3.8 is significant	Partial Mediation
4	If φ_1 in model 3.5 is significant If φ_1 in model 3.6 is significant If φ_1 in model 3.7 is significant If φ_1 in model 3.8 is insignificant	Full mediation
5.	If φ_1 in model 3.5 is significant/insignificant If φ_1 in model 3.6 is not significant If φ_1 in model 3.7 is significant If φ_1 in model 3.8 is not significant or equal to φ_1 in model 3.5 and φ_2 in model 3.8 is not significant	No Mediation

Source: Baron and Kenny (1986)

To test hypothesis six (***H*****$_6$**), path analysis model proposed by Baron and Kenny (1986) was used. A stepwise analysis was used to test the extent to which regulatory framework moderates the relationship between GM strategies and customer loyalty. This analysis explores the extent to which one or a combination of the independent variables predicts the changes in the dependent variable while controlling for the preceding variables. A two-step analysis was used to evaluate the overall ability of the model to predict the relationships. In step one, the independent variable (that is, GM strategies) and moderating variable (which is regulatory frameworks) were entered into the model as a predictor of the outcome variable (that is, customer loyalty).

Baron and Kenny (1986) observed that the independent variables do not have to be statistically significant predictors of dependent variable (customer loyalty) in order to test for an interaction term. In step two, an interaction term (the product of GM strategies and regulatory frameworks) was calculated. An interaction term presents a joint relationship between the two variables and thus accounts for additional variance in the dependent variable beyond what was explained by either of the variables (GM strategies and regulatory framework). If the interaction term explains a statistically significant amount of variance in the dependent variable, then the moderation effect was deemed present. The two-step approach of testing the moderation is illustrated in model equations 3.6 and 3.7.

$$CL = \varphi_0 + \varphi_1 GM + \varphi_2 RF + \varepsilon \quad \text{3.6}$$

$$CL = \varphi_0 + \varphi_1 GM + \varphi_2 RF + \varphi_3 GM * RF + \varepsilon \quad \text{3.7}$$

Where;

CL = Customer loyalty

GM = Green Marketing strategies

RF = Regulatory Frameworks

*GM*RF* = Interaction term between GM strategies (predictor) and Regulatory Frameworks (moderator)

φ_0 = Constant (Intercept)

φ_1 and φ_2 = Coefficients of GM strategies and Regulatory Frameworks, respectively

φ_3 = Regression coefficient for the interaction term

ε = Error term

Hypothesis seven (***H*$_7$**) predicts that there is no joint effect of GM strategies, green customer satisfaction and regulatory framework on green customer loyalty and it was tested by use of a multiple regression analysis. The general regression model equation 3.8 of the study variables for hypothesis seven (***H*$_7$**) was:

$$CL = \varphi_0 + \varphi_1 GM + \varphi_2 CS + \varphi_3 RF + \varepsilon \quad \ldots\ldots 3.8$$

Where;

CL = composite score of customer loyalty

GM = composite score of *GM* strategies

CS = composite score of green customer satisfaction

RF = composite score of regulatory frameworks

φ_0 = Constant (Intercept)

φ_1, φ_2, and φ_3 = Coefficients of *GM* strategies, *CS* and *RF* respectively

ε = Error term

Table 3.5: Summary of Analytical Models

Study Objectives	Study Hypotheses	Analytical Model	Interpretation
Objective 1, 2, 3 & 4: To establish the influence of GM strategies (green product quality, green price, green promotion and green image) on customer loyalty in the manufacturing firms in Nairobi City County	***H_1, H_2, H_3, & H_4*:** There is no significant relationship between GM strategies (green product quality, green price, green promotion and green image) and customer loyalty in the manufacturing firms in the County	$log\left\{\frac{P(Y \leq j)}{P(Y > j)}\right\} = \beta_0^j + \beta_1 GPQ + \beta_2 GP + \beta_3 GPM + \beta_4 GI$	When all the independent variables (green product quality, green price, etc.) are at zero, intercept β_0^j indicate that the log-odds of the dependent variable (customer loyalty) are in category j or lower
Objective 5: Evaluate the extent to which green customer satisfaction intervenes the relationship between green marketing strategies and customer loyalty in the manufacturing firms;	***H_5*:** Green customer satisfaction does not significantly intervene the relationship between green marketing strategies and customer loyalty in the manufacturing firms in the County	$CL=\varphi_0 + \varphi_1 GM + \varepsilon$ …… 1 $CS=\varphi_0 + \varphi_1 GM + \varepsilon$ …….. 2 $CL=\varphi_0 + \varphi_1 CS + \varepsilon$……. 3 $CL=\varphi_0 + \varphi_1 GM + \varphi 2CS + \varepsilon$ …….4 Where; *CL* = Composite score of green customer loyalty *GM* = Composite index of GM Strategies *CS* = Composite score of Green Customer Satisfaction φ_0 = Constant/Intercept φ_1 and φ_2 = Coefficients of *GM* and *CS* respectively ε = Error term	An increase in R^2 from Model 1 to Model 4 would suggest that green customer satisfaction plays a substantial mediating role. An additional variance would indicate that green marketing strategies positively impact green customer satisfaction, which in turn enhances customer loyalty
Objective 6: Establish the moderating effect of regulatory	***H_6*:** Regulatory frameworks do not significantly moderate the	$CL=\varphi_0+\varphi_1 GM+\varphi_2 RF+\varphi_3 GM*RF+\varepsilon$ Where;	The moderator influence would be present if the interaction term explained a

frameworks on the relationship between green marketing strategies and customer loyalty in the manufacturing firms in the County	relationship between green marketing strategies and green customer loyalty in the manufacturing firms in the County	*CL* = Composite score of customer loyalty *GM* = Composite score of GM strategies *RF* = Regulatory Frameworks *GM*RF* = Interaction term between GM strategies (predictor) and Regulatory Frameworks (moderator) φ_0 = Constant (Intercept) φ_1 and φ_2 = Coefficients of *GM* strategies and Regulatory Framework respectively φ_3 = Regression coefficient for the interaction term ε = Error term	statistically significant amount of variance in the dependent variable A significant change in adjusted R^2 upon introduction of Regulatory frameworks will confirm a moderating effect of the term
Objective 7: To determine the joint effect of green marketing strategies, green customer satisfaction and regulatory frameworks on customer loyalty in the manufacturing firms in the County.	***H*$_7$:** There is no joint effect of Green Marketing Strategies, Regulatory Frameworks and Green Customer Satisfaction on Customer Loyalty in the manufacturing firms in the County.	$CL=\varphi_0+ \varphi_1 GM+ \varphi_2 CS+ \varphi_3 RF+\varepsilon$ Where; *CL* = composite score of customer loyalty *GM* = composite score of GM strategies *CS* = composite score of green customer satisfaction *RF* = composite score of regulatory frameworks φ_0 = Constant (Intercept) φ_1, φ_2, and φ_3 = Coefficients of *GM* strategies, *CS* and *RF*, respectively ε = Error term	R^2 was used to assess change in customer loyalty as a result of the joint effects by the independent variables

Source: Researcher (2025)

To complement the quantitative findings and provide deeper insight into the perceptions of B2B customers, a qualitative content analysis was conducted using open-ended questionnaire responses and interview guide data collected from a sample obtained from the 14 manufacturing and service sub-sectors in Nairobi City County. These responses addressed key constructs of green marketing strategies (green product quality, green price, and green promotion), regulatory frameworks, and customer loyalty, offering a rich contextual layer to the study's core variables.

The analysis followed Braun and Clarke's (2006) thematic analysis framework, which provided a systematic approach to identifying, analyzing, and reporting patterns within the qualitative data. The process began with familiarization, where the researcher immersed herself in the data through repeated reading and initial observations. This was followed by the generation of initial codes, where meaningful phrases and expressions were extracted and labeled. Related codes were then clustered into broader themes aligned with the study's objectives. These themes were reviewed, refined, and interpreted in light of the conceptual framework and triangulated with quantitative findings and relevant literature to enhance credibility and depth.

3.13 Ethical Considerations

The integrity, reliability and validity of research findings depend significantly on the researcher's adherence to well-established ethical principles (Snyder, 2019). Ethical conduct forms the backbone of credible academic inquiry, regardless of the methodology employed. In this study, both general research ethics and those tailored to qualitative and quantitative research contexts were considered, as recommended by (Mohajan, 2018). The following ethical dimensions were observed.

3.13.1 Ethical Research Approval

This study received formal ethical research approval and clearance from the National Commission for Science, Technology and Innovation (NACOSTI), which is the authorized and regulatory government entity responsible for ensuring research meets ethical, legal, and professional standards. Approval was granted following submission of the research proposal, data collection instruments, and a justification of the study's relevance and methodology. The clearance confirmed that the study complied with institutional requirements for conducting research involving human participants. According to Israel and Hay (2006), ethical research approval serves as a safeguard that upholds the dignity, safety, and rights of the research participants because it ensures that researchers have clearly and thoughtfully assessed potential risks, considered consent procedures, and planned for appropriate data protection procedures. The NACOSTI's involvement further guaranteed that the study adhered to national guidelines and regulations such as the Science, Technology and Innovation Act (2013), which mandates ethical conduct for all research undertaken in Kenya. Beyond regulatory compliance, securing ethical clearance reflects the researcher's commitment to responsible scholarship and promotes public trust in academic inquiry (Resnik, 2020). The NACOSTI research permit was therefore attached to the questionnaire to securely the necessary confidence and trust of the respondents before filling in the questionnaire.

3.13.2 Voluntary and Informed Consent

In accordance with ethical research standards, participants must knowingly, voluntarily, and intelligently consent to take part in a study (Nelson, *et al.*, 2011). Informed consent entails introducing participants to the purpose of the study, explaining the criteria for

their selection, and describing the procedures to be followed. It is equally important to disclose any potential risks, discomforts, or privacy concerns, as well as anticipated benefits, whether personal or scientific. This transparency helps participants make well-considered and informed decisions about their involvement. To uphold these principles, each respondent was provided with a detailed introductory sheet outlining the study's purpose, objectives, research procedures, potential risks, and expected benefits. The informed consent process ensured that the respondents were respected as autonomous individuals, consistent with standard ethical guidelines for research involving human subjects (Beauchamp & Childress, 2019). This approach also promoted trust between the researcher and the respondents thereby encouraging honest, openness and transparent contributions and interactions in the study.

3.13.3 Confidentiality and Anonymity

Confidentiality and anonymity are closely aligned with key ethical principles such as kindness, respect for dignity, and fidelity (Fouka & Mantzorou, 2011). Anonymity is upheld when a participant's identity cannot be linked to their personal responses at any stage of the research process. In cases where anonymity cannot be guaranteed, a researcher is obligated to ensure confidentiality, in terms of responsibly managing private information so as to protect individual identities. As Christensen *et al.* (2011) noted, confidentiality grants participants the freedom to decide what information to share, with whom, and to what extent. The one conducting research bears the responsibility of safeguarding this trust, going beyond routine courtesy to maintain ethical fidelity throughout the study process.

In this research, participants' names and organizational identifiers were deliberately excluded during data collection and reporting hence respondents provided their insights

anonymously. This enabled participants to engage with the study candidly and without fear of reprisal, thereby enhancing the credibility and authenticity of the data. To uphold confidentiality, all data was used exclusively for academic purposes, and securely stored to prevent unauthorized access. These measures ensured that ethical obligations related to privacy and dignity were fulfilled in line with best practices in human-subject research.

3.13.4 Respect for Privacy

Respecting respondents' privacy is a core principle of ethical research. Snyder (2019) noted that invasion of privacy occurs when personal information such as beliefs, attitudes, opinions, or records is shared without the individual's consent, knowledge or express permission. In this study, the participants' privacy was protected throughout the data collection process. During interviews, if any respondent felt that a question encroached upon their personal or sensitive areas, their preference not to respond was fully accepted and duly respected. All the respondents were assured that they were under no obligation whatsoever to answer any question they deemed intrusive. This approach ensured participant dignity, promoted trust, and safeguarded respondent's autonomy.

3.13.5 Data Protection

Protecting respondent data is essential to maintaining both ethical integrity and legal compliance. Agoi (2017) affirmed that all forms of research data, whether personal facts, opinions, or identifying details, must be securely stored and responsibly handled. Data protection practices help guarantee individuals' rights to privacy, particularly when sensitive or confidential information is involved. As Kivunja and Kuyuni (2017)

emphasized, sound data protection involves clear regulations on how personal information is processed and accessed. In this study, all the data collected were stored electronically in a password-protected computer. Access to these files was strictly limited to the principal researcher and appropriately designated research assistants. The hard-copy instruments, where applicable, were stored securely until digitization, after which they will be appropriately disposed of. These procedures ensure the privacy and security of respondent contributions and reinforce the academic rigor of the study.

3.14 Chapter Summary

This chapter outlined the research methodology adopted to investigate the influence of green marketing strategies on customer loyalty within manufacturing firms in Nairobi City County. The study was anchored on the positivist paradigm, enabling hypothesis testing through a descriptive cross-sectional survey design. A stratified and systematic sampling approaches were applied to a target population of 725 firms. Data was collected using a semi-structured questionnaire and interview guide. Reliability and validity were confirmed through established tests such as Cronbach's alpha, Exploratory Factor Analysis, and Confirmatory Factor Analysis. Diagnostic tests addressed multicollinearity and model fit using appropriate statistical measures. The operationalization of variables employed validated Likert-type scales, and data analysis comprised descriptive statistics, chi-square tests, ordinal regression, path analysis, and multiple regression to test seven hypotheses covering mediation, moderation, and joint effects. Ethical integrity was upheld throughout the research process, with approvals from NACOSTI, strict informed consent procedures, guaranteed confidentiality, privacy protection, and secure data management.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings and discussion of the study results on green marketing strategies, customer satisfaction, regulatory frameworks, and customer loyalty among manufacturing firms in Nairobi City County. It is organized into six sections covering response rates; pilot test results; respondents' and firms' background information; diagnostic tests of variables; descriptive analysis; Chi-square and regression analyses; and the combined effect model. The study findings are systematically presented using frequency distribution tables to enhance clarity and facilitate appropriate interpretations.

4.2 Response Rate

Of the distributed questionnaires, 185 were returned, yielding a response rate of 71.7%. According to Richardson (2005), a response return rate exceeding 60% is considered fairly good, while one of 70% and above is deemed to be very good. Similarly, Rubin and Babbie (2016) asserted that response rates of 50% are acceptable for analysis, 60% are good, and over 70% are very good. Given these benchmarks, the study's response rate was deemed very good and satisfactory, providing a solid foundation for drawing reasonable and viable conclusions from data collected and analyzed.

4.3 Validity and Reliability Tests

Reliability and validity are two essential concepts for evaluating research quality. They help ensure that collected data is replicable and that findings are accurate, contributing to the rigor of a study. Reliability refers to the consistency of results, indicating whether

similar outcomes can be obtained under comparable conditions. Validity, on the other hand, pertains to the accuracy of a measurement, ensuring that the research method effectively captures what it is intended to measure (Creswell, 2014).

4.3.1 Test of Construct Validity

The researcher was guided by the factor analysis exploratory tool to decide whether the investigated variables could explain the dependent variable (Patton, 2002). Therefore, validity of the variables in this study was tested using the Exploratory Factor Analysis (EFA) so as to account for the covariation between observed variables. When observed variables are correlated with each other, it means that there is an influence of common latent variables. Exploratory factor analysis was carried out to find how the variables were related and to help confirm that the measurement tool accurately captured what it was meant to.

Before carrying out exploratory factor analysis, the data was first assessed to ensure it was suitable for the analysis. This was done using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity. A KMO value closer to 1 suggests that patterns of correlations are compact and factor analysis would yield reliable factors, while a significant Bartlett's test ($p < 0.05$) indicates that correlations between items are sufficient for factor analysis (Hair *et al.*, 2010). Factors were extracted using principal component analysis based on eigenvalues, which indicate how much variance each factor explains. Factors with eigenvalues above 1 were retained, as they were considered meaningful. To refine the structure, factor rotation was conducted using the Direct Oblimin method, allowing for correlated factors to be evident. Items with factor

loadings below 0.3 were excluded, as they did not meaningfully contribute to any factor (Field, 2013).

4.3.1.1 Exploratory Factor Analysis on Green Product Quality

The results of the suitability of the data based on the KMO and Bartlett's test are presented in **Table 4.1**.

Table 4.1: KMO and Bartlett's Test on Green Product Quality

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.780
Bartlett's Test of Sphericity	Approx. *Chi-Square*	120.240
	Df	45
	Sig.	0.000

The KMO value of 0.780 indicates sufficient sampling adequacy, while Bartlett's Test was significant at $p < 0.05$. These results confirm that the data was appropriate for Exploratory Factor Analysis (EFA). Further, the results of the Principal Component Analysis (PCA) to extract the significant factors based on the Eigen values are shown in **Table 4.2**.

Table 4.2: Total Variance Explained for green product Quality

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.009	50.086	50.086	5.009	50.086	50.086	4.131
2	1.984	19.843	69.930	1.984	19.843	69.930	4.020
3	.946	9.462	79.391				
4	.587	5.867	85.259				
5	.528	5.281	90.539				
6	.368	3.679	94.219				
7	.240	2.395	96.614				
8	.164	1.643	98.256				
9	.108	1.084	99.340				
10	.066	.660	100.000				

The computed results in **Table 4.2** show that green product quality construct had 10 factors. The results further showed that two items had an Eigen value greater than 1, explaining about 69.93% of the total variance and were thus retained for further analysis.

In addition to the eigenvalue criterion, the scree plot was examined to determine the number of factors to retain for the green product quality construct. **Figure 4.1** presents the eigenvalues of the components in descending order, plotted against the component numbers.

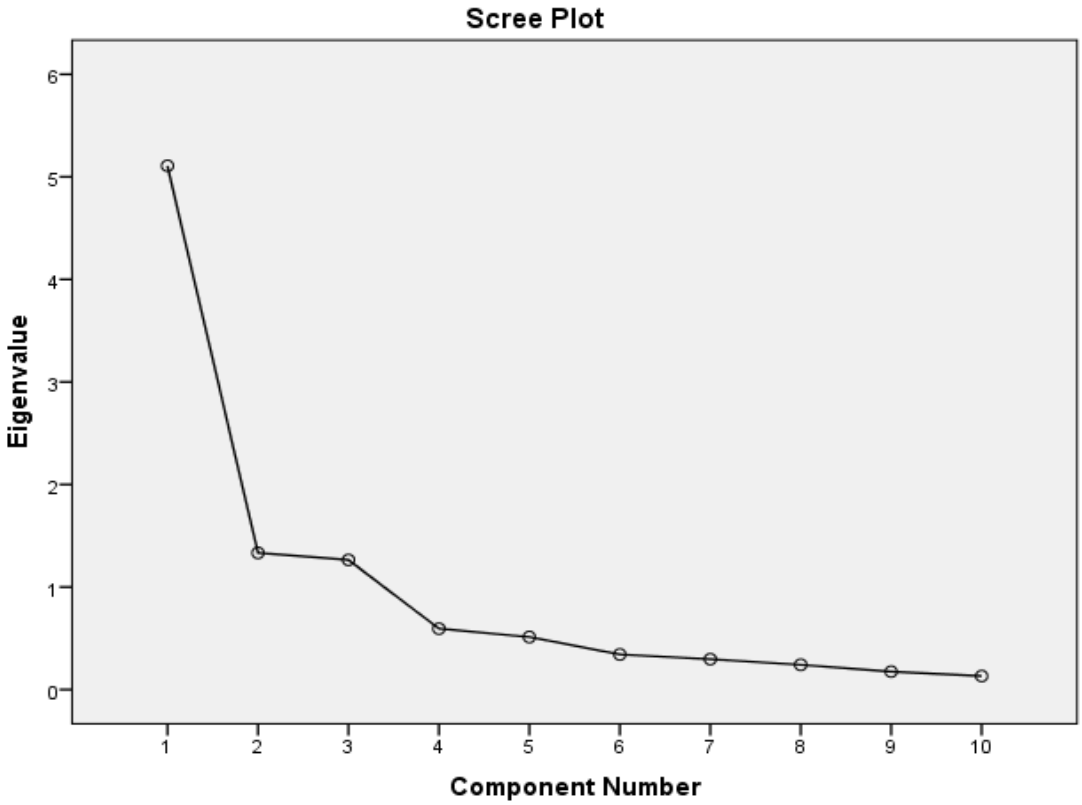

Figure 4.1: Scree plot on Green Product Quality

Figure 4.1 shows a distinct inflection point that is visible after the second component, where the curve begins to flatten. This pattern suggests that components beyond the second contribute marginally to the overall variance. Consistent with Kaiser's criterion, the scree plot confirmed that the first two components had eigenvalues greater than 1, while the remaining eight components fell below 1. This provides visual evidence supporting the decision to retain two factors, which together accounted for nearly 70% of the total variance explained **(see Table 4.2)**.

A further test on factor rotation using direct Oblimin's method was done to confirm the validity of the items and the factor loadings from the results are presented in **Table 4.3**.

Table 4.3: Rotated Factor Loadings for Green Product Quality

Items Retained	Factor Loadings Extracted	Factor Formed
GQ.1	0.652	
GQ.2	0.832	
GQ.3	0.889	
GQ.4	0.424	
GQ.5	0.684	Green Product Quality
GQ.6	0.757	
GQ.7	0.871	
GQ.8	0.461	
GQ.9	0.829	
GQ.10	0.693	

From **Table 4.3**, all the ten items loaded strongly on a single construct, with factor loadings ranging from 0.424 to 0.889. Given that all items exceeded the 0.30 threshold, they were deemed valid and reliable indicators of the green product quality construct.

Although the results of the Total Variance Explained **(Table 4.2)** and the scree plot **(Figure 4.1)** suggested the presence of two factors with eigenvalues greater than one, the rotated factor loadings **(Table 4.3)** indicated that all ten items loaded strongly onto a single factor. This outcome implies that, while a two-factor solution was statistically justifiable, the factors were not meaningfully distinct in practice, as the items demonstrated high cross-loadings on a common dimension. Therefore, a one-factor solution was considered more concise and theoretically consistent with the conceptualization of green product quality as a unidimensional construct. Accordingly, all ten items were retained under a single construct, Green Product Quality, thereby confirming the validity and reliability of the measurement.

4.3.1.2 Exploratory Factor Analysis on Green Price

A KMO and Bartlett's test results were presented in **Table 4.4.**

Table 4.4: KMO and Bartlett's Test on Green Price

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.630
Bartlett's Test of Sphericity	Approx. *Chi-Square*	85.578
	Df	21
	Sig.	0.000

The KMO value of 0.630 indicates excellent sampling adequacy, and the Bartlett's test was significant at $p < .05$, confirming that the factor items were appropriate for Exploratory Factor Analysis (EFA). The Principal Component Analysis (PCA) was applied and the extracted eigenvalues were as shown in **Table 4.5**.

Table 4.5: Total Variance Explained for Green Price Using Principal Component Analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.975	56.782	56.782	3.975	56.782	56.782	3.972
2	1.165	16.650	73.432	1.165	16.650	73.432	1.190
3	.803	11.474	84.906				
4	.554	7.916	92.822				
5	.328	4.682	97.504				
6	.119	1.695	99.199				
7	.056	.801	100.000				

Results of the Eigenvalues in **Table 4.5** show that only two items had an eigenvalue greater than 1 accounting for 73.43%. These two factors were considered for further analysis.

In addition to the eigenvalue criterion, the scree plot was examined to determine the number of factors to retain for the green price construct. **Figure 4.2** displays the eigenvalues of the extracted components plotted against their respective component numbers.

Figure 4.2: Scree plot on Green Price

As shown in **Figure 4.2**, a noticeable inflection point occurs after the second component, where the curve begins to level off. This indicates that additional components contribute minimally to explaining variance in the construct. Consistent with Kaiser's criterion, two components with eigenvalues above 1 were initially suggested for retention, while the remaining five components had eigenvalues below 1. A further confirmatory test was done using factor rotation via direct Oblimin's method

and all the seven items loaded satisfactorily on the green price factor and the results were presented in **Table 4.6**.

Table 4.6: Rotated Factor Loadings for Green Product Price

Items Retained	Factor Loadings Extracted	Factor Formed
GPP.1	0.668	
GPP.2	0.859	
GPP.3	0.754	Green Product Price
GPP.4	0.711	
GPP.5	0.679	
GPP.6	0.678	
GPP.7	0.790	

Table 4.6 results show that all the seven items loaded strongly on a single construct, with factor loadings ranging from 0.668 to 0.859. Since all items exceeded the minimum threshold of 0.30, they were deemed valid indicators of the green price construct. Although the Total Variance Explained **(Table 4.5)** and the scree plot **(Figure 4.2)** suggested the retention of two factors, the rotated factor loadings **(Table 4.6)** revealed that all items converged on a single underlying factor. This suggests that, while a two-factor solution was statistically justifiable, the factors were not practically distinct. Instead, the items measured a single coherent dimension.

Accordingly, a one-factor solution was considered more concise and theoretically consistent with the conceptualization of green product price as a unidimensional construct. All seven items were therefore retained under the single construct Green Product Price, confirming its validity and reliability.

4.3.1.3 Exploratory Factor Analysis on Green Promotion

The Kaiser- Meyer- Olkin (KMO) statistic was computed for the green promotion variable to assess the suitability of the data for factor analysis and the results are shown in **Table 4.7**.

Table 4.7: KMO and Bartlett's Test on Green Promotion

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.795
Bartlett's Test of Sphericity	Approx. *Chi-Square*	76.999
	Df	21
	Sig.	0.000

The *p- value* from the results in **Table 4.7** was 0.000. Since the *p-value* was less than 0.05 it implied that the items were fit to be included in the exploratory Factor analysis. A further test of the Principal Component Analysis was done and the eigenvalues of the items were estimated to determine the number of factors to retain and the results are summarized in **Table 4.8**.

Table 4.8: Total Variance Explained for Green Promotion Using Principal Component Analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.356	62.235	62.235	4.356	62.235	62.235
2	.930	13.292	75.527			
3	.712	10.173	85.699			
4	.400	5.717	91.417			
5	.272	3.882	95.299			
6	.214	3.059	98.358			
7	.115	1.642	100.000			

The results in **Table 4.8** show that out of the seven components, only one had an eigenvalue greater than 1, accounting for 62.23% of the total variance. This suggests that the green promotion construct was unidimensional, and only one factor was

retained for further analysis. To complement the eigenvalue criterion, the scree plot was also examined. **Figure 4.3** displays the eigenvalues of the components against their respective component numbers.

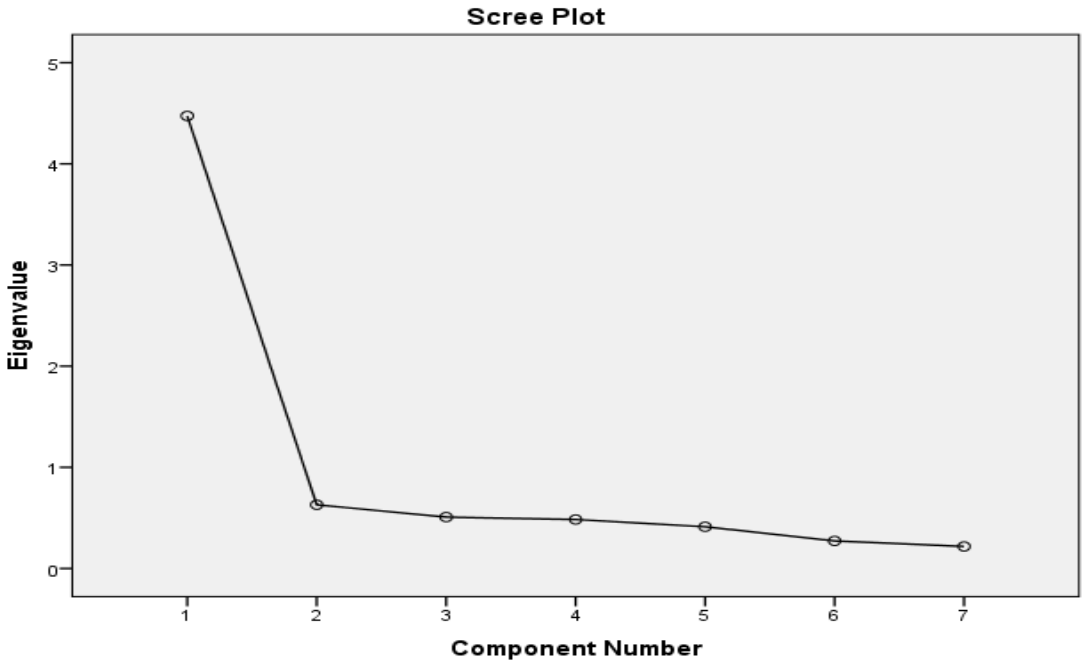

Figure 4.3: Scree plot on Green Promotion

The curve drops steeply after the first component before gradually leveling off from the second component onward as shown in the results in **Figure 4.3**. The distinct "elbow" observed after the first factor confirms that only one meaningful factor should be retained, while the remaining six factors contributed minimally to the explained variance. Thus, the scree plot provided further support for the one-factor solution.

To confirm the validity of the items, a factor rotation using Direct Oblimin was performed and the results were summarized and presented in **Table 4.9**.

Table 4.9: Rotated Factor Loadings for Green Promotion

Items Retained	Factor Loadings Extracted	Factor Formed
GPR.1	0.763	
GPR.2	0.682	
GPR.3	0.627	Green Promotion
GPR.4	0.727	
GPR.5	0.624	
GPR.6	0.508	
GPR.7	0.425	

From **Table 4.9**, all seven items loaded significantly on a single construct, with factor loadings ranging from 0.425 to 0.763. Since all values exceeded the minimum threshold of 0.30, the items were deemed valid and reliable indicators of the green promotion construct.

Both the Total Variance Explained **(Table 4.8)** and the scree plot **(Figure 4.3)** indicated a one-factor solution. The rotated factor loadings **(Table 4.9)** further confirmed that all items converged on a single underlying construct. Therefore, the green promotion variable was retained as a unidimensional construct comprising seven items, consistent with the theoretical conceptualization of green promotion.

4.3.1.3 Exploratory Factor Analysis on Green Corporate Image

A KMO and Bartlett's tests were conducted on green corporate image to determine if the construct was viable for exploratory factor analysis test. The results were presented in **Table 4.10**.

Table 4.10: KMO and Bartlett's Test on Green Corporate Image

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.527
Bartlett's Test of Sphericity	Approx. *Chi-Square*	15.958
	Df	6
	Sig.	.000

The KMO value of 0.527 is relatively low, indicating only modest sampling adequacy. However, Bartlett's Test of Sphericity was significant ($p < 0.05$), suggesting that the data were still appropriate for Exploratory Factor Analysis (EFA).

Principal Component Analysis (PCA) was then applied to extract factors, and the total variance explained is presented in **Table 4.11**.

Table 4.11: Total Variance Explained for Green Corporate Image Using Principal Component Analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.978	49.443	49.443	1.978	49.443	49.443
2	.945	23.622	73.065			
3	.827	20.677	93.742			
4	.250	6.258	100.000			

The results from **Table 4.11** indicate that out of the four items, only one component had an eigenvalue greater than 1, accounting for 49.44% of the variance. Based on Kaiser's criterion, a single factor was retained for further analysis.

The scree plot for green corporate image as shown in **Figure 4.4** was examined to complement the eigenvalue criterion.

Figure 4.4: Scree Plot on Green Corporate Image

The plot revealed a clear inflection after the first factor, with subsequent factors leveling off. This confirms that only one factor was meaningful, consistent with the eigenvalue results. While the second factor approached an eigenvalue of 1 (0.945), it was not retained since it contributed relatively little additional variance and did not meet the threshold. Thus, the scree plot further supported a one-factor solution.

A Direct Oblimin rotation was conducted to confirm the item loadings and assess construct validity. The results are shown in **Table 4.12**.

Table 4.12: Rotated Factor Loadings for Green Corporate Image

Items Retained	Factor Loadings Extracted	Factor Formed
GCI.1	0.753	
GCI.2	0.740	
GCI.3	0.222	Green Corporate Image
GCI.4	0.263	

Results in **Table 4.12** indicate that only two of the factor loading values extracted from the four items were greater than 0.3 and therefore the two items were valid for inclusion in the green corporate image construct.

Taken together, the Total Variance Explained **(Table 4.11)**, the scree plot **(Figure 4.4)**, and the rotated factor loadings **(Table 4.12)** indicate that green corporate image is best represented as a single construct. However, due to weak factor loadings for two items, only two items were retained as valid measures of the construct. While the results support the existence of the construct, the relatively low KMO value and the limited number of valid indicators suggest that the green corporate image measure may benefit from further refinement in future research.

4.3.2 Reliability Test

This study utilized a structured questionnaire to collect data corresponding to the constructs outlined in the conceptual framework. In line with the need to ensure dependable measurement, it was essential to assess the reliability of the scale items employed. Reliability reflects the consistency of measurement results obtained from the instrument (Neuman, 2006). To evaluate internal consistency, the study applied Cronbach's alpha coefficient across all constructs. While no universally fixed threshold exists, a Cronbach alpha of 0.70 is widely regarded as the acceptable minimum, with

values above 0.60 still considered adequate in exploratory research (Bryman & Bell, 2015). A substantially low alpha value may signal heterogeneity among items, which would weaken the integrity of the construct. **Table 4.13** summarizes the computed *Cronbach alpha* (α) values for each of the key constructs measured.

Table 4.13: Reliability of Measurement Scales

Construct	Coefficient Alpha (α)
Green Product Quality	0.881
Green Product Price	0.818
Green Promotion	0.895
Green Corporate Image	0.614
Green Customer Satisfaction	0.865
Regulatory Frameworks	0.872
Customer Loyalty	0.806

As shown in **Table 4.13**, all constructs, except for green corporate image, had the *Cronbach alpha* values exceeding the 0.70 benchmark, indicating strong internal consistency. However, since the alpha value for green corporate image was at 0.614, it still falls within the acceptable range for exploratory studies, supporting the reliability of all scale items used in the analysis.

4.4 Demographic Statistics of the Respondents, the Firm and Responses on Variables

This section presents the frequency distribution and demographic characteristics derived from the data about the firm's subsector, firm ownership status, ISO 14000 certification, gender of the CEO/Managing Director (MD), respondents' years of experience, the number of years the company has operated and respondent's responses on the study variables.

4.4.1 Manufacturing Sector of the Firms

Upon receipt of the questionnaires, responses were sorted based on the manufacturing sub-sector to which each firm belonged. The results are summarized in **Table 4.14**.

Table 4.14: Manufacturing sub-sector of the firms

Sub-Sectors	Frequency	Percent	Cumulative Percent
Building & Construction	7	3.8	3.8
Chemical & Allied Sector	28	15.1	18.9
Energy Electrical and Electronics Center	12	6.5	25.4
Food and Beverage	33	17.8	43.2
Fresh Products Center	2	1.1	44.3
Leather and Footwear	5	2.7	47.0
Metal & Allied	16	8.6	55.7
Motor Vehicle Assemblies & Accessories	7	3.8	59.5
Paper & Board	10	5.4	64.9
Pharmaceutical & Medical Equipment	5	2.7	67.6
Plastic & Rubber	13	7.0	74.6
Service & Consultancy	24	13.0	87.6
Textile & Apparel	15	8.1	95.7
Timber, Wood & Furniture	8	4.3	100.0
Total	**185**	**100.0**	

The findings in **Table 4.14** indicate a broad representation across Kenya's manufacturing sectors. Firms from the food and beverage (17.8%), chemical and allied (15.1%), and service and consultancy (13.0%) sub-sectors formed the largest proportions. The balanced distribution across other categories, such as metal & allied, textile & apparel, energy & electronics, and plastic & rubber, demonstrates the heterogeneity of the selected sample. This cross-sectoral representation enhances the

generalizability of the study's findings, suggesting that the conclusions drawn may reflect broader trends and behaviors within Kenya's manufacturing sector.

4.4.2 The Company Profile

This subsection summarizes descriptive information regarding the company profiles of the participating manufacturing firms. Specifically, data was collected on firm ownership status, ISO 14000 certification, gender of the CEO/Managing Director (MD), years of executive experience, and the number of years the company/firm was in operation. The results are presented in **Tables 4.15** and **4.16**, respectively.

Table 4.15: Status of the Firm, ISO certification and Gender of CEO/MD

Variable	Category	Frequency	Percent
Status of the Company/Firm	Multinational	67	36.2
	Private Locally owned	118	63.8
If Company is ISO 14000	No	37	20.0
certified?	Yes	148	80.0
Gender of company CEO/MD	Female	48	25.9
	Male	137	74.1

Table 4.15 indicates that a majority of the firms (63.8%) were privately and locally owned, while multinational corporations comprised 36.2% of the sample. Notably, 80.0% of companies/firms were ISO 14000 certified, signifying a strong commitment to environmental management practices and systems across the sector. With respect to leadership, 74.1% of CEOs/MDs were male, while 25.9% were female, highlighting huge differences in terms of top-level executive management and positioning within the industry.

4.4.3 Years of Respondent's Experience and Firm Operations

To assess organizational maturity and leadership experience across the sampled firms, data was collected on the number of years each company had been in operation and the tenure of the respondent in the firm. The descriptive statistics and normality test results using the Shapiro-Wilk test are presented in **Table 4.16**.

Table 4.16: Years of Respondent's Experience and Firm Operation

Variable	Observation	Minimum Statistic	Maximum Statistic	Mean Statistic
Number of years respondent has worked at the Firm	185	2.0	23.0	10.565
Number of years the Firm has been in operation	185	5.0	103.0	33.14

As shown in **Table 4.16**, the participating firms varied substantially in age, ranging from 5 to 103 years, with a mean of 33.14 years. This reflects a mature manufacturing and industrial landscape, potentially affecting how green marketing strategies are conceived and implemented. Similarly, the tenure of respondents ranged from 2 to 23 years, averaging 10.57 years of experience. These attributes suggest that the insights gathered stem from individuals with significant institutional knowledge, which may influence their perspectives on regulatory frameworks, customer satisfaction, and green loyalty dynamics within their respective manufacturing firms.

4.4.4 Responses on the Study Variables

The study sought to understand the perceptions and experiences of manufacturing firms in Nairobi City County regarding green marketing strategies and their influence on

customer and loyalty. Key insights about the evaluation of green product quality, pricing, promotional efforts, were provided by the descriptive statistics. The results are presented in **Table 4.17**.

Table 4.17: Responses on the Study Variables

Variable	N	Min	Max	Mean	Std. Deviation	Skewness	
							Std. Error
Green Product Quality	185	2.00	5.00	3.9351	.71938	-.700	.179
Green Product Price	185	2.00	5.00	3.9351	.54783	-.642	.179
Green Promotion	185	2.00	5.00	4.0216	.63380	-.665	.179
Green Corporate Image	185	3.00	5.00	4.3162	.59322	-.221	.179
Customer Satisfaction	185	2.00	5.00	4.3622	.62002	-.706	.179
Regulatory Frameworks	185	2.00	5.00	4.0378	.47052	-.192	.179
Customer Loyalty	185	3.00	5.00	4.5351	.53172	-.470	.179
Valid N	185						

Results in **Table 4.17** generally reveal favorable perceptions of green marketing strategies by the respondents among manufacturing firms in Nairobi City County. All the independent variables namely green product quality, green product price, green promotion, and green corporate image exhibited mean scores exceeding 3.9. This is an indication that there is a strong organizational alignment with environmentally sustainable practices. Green corporate image received the highest mean score ($M = 4.32$, $SD = 0.59$), which shows that firms are viewed as credible and environmentally responsible. Past literature supports this by emphasizing the reputational benefits of proactive green marketing (Vaccaro, 2009). The skewness presented negative values, giving an indication that most respondents showed higher agreement levels reinforcing the strategic relevance of these constructs in fostering customer loyalty. The findings

suggest the importance of reinforcing green marketing mix elements as mechanisms for establishing trust and brand value in competitive B2B markets.

Green customer satisfaction and Customer Loyalty displayed the highest mean values (*M = 4.36, SD = 0.62) and (M = 4.54, SD = 0.53*), respectively thereby indicating strong customer commitment among environmentally aligned firms. This implies that customers not only perceive the value rooted in sustainable practices but also reflect behaviors aligned with long-term loyalty, such as repeat purchases and positive word-of-mouth. These insights support the strategic positioning of sustainability as a loyalty driver and highlight the important role of customer satisfaction in bridging green marketing initiatives with loyalty outcomes. There was moderate consistency in views on regulatory frameworks with a mean of (*M = 4.04, SD = 0.47*) suggesting that while compliance structures are present, their perceived effectiveness may vary. This is an implication that there is a potential need for more robust policy engagement. These findings support the hypothesis that marketing sustainability efforts reinforced by a favorable regulatory climate can elevate brand loyalty within the Kenyan manufacturing sector.

4.5 Chi-Square Tests

This section sought to examine whether green marketing strategies namely green product quality, green price, green promotion and green corporate image significantly influence customer loyalty. Given the categorical nature of the measured variables, the Pearson Chi-Square test was used as the appropriate statistical method. The decision rule was based on a significance level of 5%, where a *p-value* less than 0.05 led to the

rejection of the null hypothesis. The study findings are presented in the subsequent sections.

4.5.1 The Influence of Green Product Quality on Customer Satisfaction and Customer Loyalty

The results on whether there was a significant effect of green product quality on customer loyalty according to the first hypothesis (H_1) are summarized in **Table 4.18**.

Table 4.18: Chi-Square Test Results for Green Product Quality and Customer Loyalty

	Green Product Quality		
Variable	*Chi Square* Value	Df	p – value (sig.)
Customer Loyalty	205.673	20	0.000

The results in **Table 4.18** show that the computed Chi-Square value was *205.673* with *20 degrees of freedom* and a significance level of *p = 0.000*. At a 5% significance level, the critical Chi-Square value for df = 20 is *31.410*. Since the calculated value (205.673) is substantially greater than the critical value (31.410), and the p-value is less than 0.05, the null hypothesis was rejected.

This implies that green product quality significantly influences customer loyalty among manufacturing firms. In practical terms, customers are more likely to remain loyal when firms deliver eco-friendly products that meet high-quality standards, as the environmental benefits reinforce their trust and satisfaction.

4.5.2 The Influence of Green Product Price on Customer Loyalty

The results on whether Green Product Price had a significant effect on Green Customer Loyalty according to hypothesis two (H_2) are presented in **Table 4.19**.

Table 4.19: Chi Square Tests results for Green Product Price and Customer Loyalty

	Green Product Price		
Variable	Chi Square Value	Df	p – value (sig.)
Customer Loyalty	121.088	20	0.000

The results in **Table 4.19** indicate that the computed Chi-Square value was *121.088* with *20 degrees of freedom* and a significance level of *p = 0.000*. At a 5% significance level, the critical Chi-Square value for df = 20 is *31.410*. Since the calculated value (121.088) is substantially greater than the critical value (31.410), and the p-value is below 0.05, the null hypothesis was rejected. This finding indicates that green product price had a statistically significant influence on customer loyalty. The results suggest that pricing strategies which incorporate environmental considerations such as fair pricing, eco-inclusive cost structures, or green-premium justification play an important role in shaping customer loyalty in manufacturing firms.

4.5.3 The Influence of Green Promotion on Customer Loyalty

The results of the analysis on whether Green Promotion had a significant effect on Customer Loyalty (***H₃***) are summarized in **Table 4.20**.

Table 4.20: Chi-Square Test Results for Green Promotion and Customer Loyalty

	Green Promotion		
Variable	Chi Square Value	Df	p – value (sig.)
Customer Loyalty	157.463	16	0.000

The results in Table 4.20 indicate that the computed Chi-Square value was *157.463* with *16 degrees of freedom* and a significance level of *p = 0.000*. At a 5% significance level, the critical Chi-Square value for df = 16 is *26.296*. Since the calculated Chi

Square value *(157.463)* is substantially greater than the critical value *(26.296)*, and the p-value is less than 0.05, the null hypothesis was rejected. This indicates that green promotional strategies significantly influence customer loyalty in the manufacturing sector in Kenya.

4.5.4 The Influence of Green Corporate Image on Customer Loyalty

The results on whether Green Corporate Image significantly influenced Green Customer Loyalty using the H_4 hypothesis are shown in **Table 4.21**.

Table 4.21: Chi-Square Test Results for Green Corporate Image and Customer Loyalty

	Green Corporate Image		
Variable	*Chi Square* Value	Df	p – value (sig.)
Customer Loyalty	98.579	16	0.000

The results in **Table 4.21** show that the computed Chi-Square value was *98.579* with *16 degrees of freedom* and a significance level of *p = 0.000*. At a 5% significance level, the critical Chi-Square value for df = 16 is *26.296*. Since the calculated Chi Square value *(98.579)* is substantially greater than the critical value *(26.296)*, and the p-value is less than 0.05, the null hypothesis was rejected. This confirms that green corporate image significantly influences customer loyalty in the manufacturing sector in Kenya.

4.5.5 Summary of Chi-Square Test Findings

The Chi-Square tests conducted in this study provided robust evidence of statistically significant associations between the examined green marketing strategies and customer loyalty. At the 5% significance level, all tested relationships yielded *p-values* of less

than 0.05, leading to the rejection of the respective null hypotheses. The key findings are summarized in **Table 4.22**.

Table 4.22: Summary of Chi-Square Test Findings for Various Green Marketing Strategies

Green Marketing Strategy	Dependent Variable	Chi-Square Value	df	p-value	Conclusion
Green Product Quality	Customer Loyalty	205.673	20	0.000	Significant Effect; H_1 rejected
Green Price	Customer Loyalty	121.088	20	0.000	Significant Effect; H*2* rejected
Green Promotion	Customer Loyalty	157.463	16	0.000	Significant Effect; H_3 rejected
Green Corporate Image	Customer Loyalty	98.579	16	0.000	Significant Effect; H_4 rejected

The findings in **Table 4.22** indicate that green product quality, price, promotion, and corporate image all exhibited statistically significant associations with customer loyalty in the context of the manufacturing firms in Kenya. The results agree with the theoretical propositions of the Expectancy-Disconfirmation Paradigm, the Diffusion of Innovation Theory, and Stakeholders' Theory, all of which underscore the importance of aligning environmental strategies with stakeholder expectations to drive favorable customer behaviors.

4.6 Regression Analysis

This section presents the results of the ordinal regression analysis conducted to assess the influence of four green marketing strategies namely green product quality, green price, green promotion, and green corporate image on customer loyalty. The section further presents the results of the intervening and moderating role of Green Customer Satisfaction and Regulatory Frameworks respectively. Finally, the results of the joint effect of the GM strategies, Green Customer Satisfaction and Regulatory Frameworks on Customer Loyalty are presented.

4.6.1 Direct Influence of Green Marketing Strategies on Customer Loyalty

Before estimating the cumulative logit model, a multicollinearity test was conducted to ensure that the independent variables did not exhibit excessive correlation. The results are presented in **Table 4.23.**

Table 4.23: Multicollinearity Test for Model 3.1

Model	**Collinearity Statistics**	
	Tolerance	**VIF**
Green Product Quality	.570	1.755
Green Product Price	.503	1.987
Green Promotion	.709	1.411
Green Corporate Image	.955	1.047
Dependent Variable: Customer Loyalty		

Table 4.23 shows that the Variance Inflation Factor (VIF) values for green product quality, green price, green promotion, and green corporate image were 1.755, 1.987, 1.411, and 1.047 respectively. Since all VIF values were below the recommended cut-off of 10, the results confirmed that there was no multicollinearity problem in the model.

To further assess the adequacy of the cumulative logit model, a goodness-of-fit test was performed. The results are summarized in **Table 4.24**.

Table 4.24: Estimates for Goodness of Fit for Model

	Chi-Square	**Df**	**Sig.**
Pearson	122.222	48	.000
Deviance	108.810	48	.000

The Pearson Chi-Square statistic was 122.222 with 48 degrees of freedom (*p = 0.000*), and the Deviance statistic was 108.810 with 48 degrees of freedom (*p = 0.000*). Since both values were statistically significant at the 5% level, the model was deemed to have a good fit, indicating that the predictors reliably explained variability in customer loyalty.

The general form of the cumulative logit model estimated was expressed in **Equation 3.1** in Chapter 3 as shown:

$$\log\left\{\frac{P(Y \leq j)}{P(Y > j)}\right\} = \beta_0^j + \beta_1 GPQ + \beta_2 GP + \beta_3 GPM + \beta_4 GI \ldots\ldots\ldots\ldots\ldots \quad 3.1$$

The regression results from the model estimation are presented in **Table 4.25**.

Table 4.25: Parameter Estimates for the Cumulative Logit Model in Equation 3.1

	Estimate	**Std. Error**	**Wald**	**df**	**Sig.**	**95% Confidence Interval**	
						Lower Bound	**Upper Bound**
Customer loyalty = 3.00]	-1.103	1.311	.709	1	.400	-3.672	1.465
Customer loyalty = 4.00]	2.970	1.244	5.703	1	.017	.532	5.407
Green prod quality	.804	.300	7.197	1	.007	.216	1.391
Green Price	-.337	.403	.700	1	.403	-1.127	.453
Green promotion	.373	.289	1.662	1	.197	-.194	.939
Green Corporate image	-.034	.044	.627	1	.428	-.120	.051

The regression results presented in **Table 4.25** indicated that among the four green marketing strategy predictors, only green product quality emerged as a statistically significant factor influencing customer loyalty *(β = 0.804, p = 0.007)*. The positive direction of the coefficient indicates that higher levels of green product quality are associated with greater odds of a customer reporting higher levels of loyalty. This result supports the rejection of H_1 and aligns with the findings of the works of Tarabieh (2018), Aslam *et al.* (2023), Dewi *et al.* (2023) and (Gelderman *et al.*, 2021) who all emphasized the pivotal role of green product quality in strengthening customer trust, satisfaction, and loyalty. It also resonates with studies such as Vaccaro (2009) and Gelderman *et al.* (2021) which noted that sustainable features of products foster brand attachment and repeat patronage. However, this result contrasts with studies like Wong *et al.* (2023) and Creignou and Nuangjamnong (2022) who found that while product quality significantly shaped satisfaction, its direct impact on loyalty was weaker or non-significant. The mixed results in prior research suggest that product quality may be context-dependent, exerting stronger influence in environments such as Kenya's manufacturing sector where B2B clients value functional reliability and environmental performance as key procurement considerations.

By contrast, green price was not a significant predictor of customer loyalty in this study *(β = –0.337, p = 0.403)* since it did not attain statistical significance at the 5% level hence hypothesis H_2 was not rejected. This insignificance mirrors findings by Yulisetiarini *et al.* (2024) who also reported that green price had no direct effect on loyalty in the Indonesian coffee sector. Yet, it differs from studies such as Wilson (2022) and Mohammadi *et al.* (2023) which demonstrated that fair and confidence-inspiring pricing could strengthen loyalty, often through the mediating role of

satisfaction. In the B2B manufacturing context of Kenya, the non-significance may be attributed to firms' heightened sensitivity to production costs and return on investment. Buyers may not view premium pricing of green products as justifiable unless accompanied by demonstrable value-additions in quality, efficiency, or compliance with regulations. This reflects the argument advanced by Gelderman *et al.* (2021) that while green price can influence loyalty, it is often less dominant than other strategic factors.

The results also revealed that green promotion had no statistically significant effect on customer loyalty *($\beta = 0.373$, $p = 0.197$)* at 5% significant level therefore the hypothesis $\boldsymbol{H_3}$, was not rejected. This outcome is at odds with prior findings such as Subiantoro and Budidharmanto (2021) and Jabeen and Kavitha (2020) who observed a positive and significant relationship between green promotion and loyalty in consumer-facing industries. Similarly, Vinoth (2023) and Mahmoud *et al.* (2024) highlighted the potential of green advertising and communication to enhance loyalty and repurchase intention. The difference could be explained by the study's context in that while promotional messages are highly significant in B2C markets where consumer attitudes and perceptions drive purchasing behavior, B2B buyers in Kenya's manufacturing sector are more influenced by technical, contractual, and relational factors than by promotional campaigns. This suggests that green promotion, though potentially useful for brand positioning, may not by itself guarantee loyalty in B2B settings.

Finally, green corporate image exhibited a negative but statistically insignificant relationship with customer loyalty *($\beta = -0.034$, $p = 0.428$)* at 5% significant level hence the hypothesis $\boldsymbol{H_4}$ was not rejected. This finding diverges from much of the literature,

including Çavusoglu *et al.* (2020), Sarko and Sukawati (2021) and Watson *et al.* (2023) all of whom reported a positive influence of green image on loyalty, often in service or consumer markets. However, it is more consistent with Handriana *et al.* (2021) and Dewi *et al.* (2023) who noted that while green image could build trust or satisfaction, its direct effect on loyalty was weak or non-significant. The insignificance in the current study may stem from the Kenyan B2B manufacturing context, where procurement decisions are less swayed by perceptions of image and more by cost-benefit analysis, compliance with regulations, and long-term operational value.

The specific estimated regression equation, based on the model parameters, is given as shown in the following equation:

$$CL = \begin{matrix} -1.103 \\ 2.970 \end{matrix} + 0.804GPQ - 0.337GP + 0.373GPM - 0.034GI \quad \ldots\ldots\ldots\ldots\ldots\ldots \; 3.1$$

This expression reflects how the log-odds of falling at or below a given loyalty level are shaped by changes in each green marketing strategy.

In summary, the findings suggest that while green product quality remains a strong and reliable driver of customer loyalty, other strategies such as green price, promotion, and corporate image do not exert statistically significant direct effects in Kenya's manufacturing sector. This contrasts with the predominantly positive associations reported in B2C and service-oriented contexts, underscoring the contextual nature of green marketing strategies. In B2B environments, tangible, performance-oriented attributes such as product quality appear to outweigh symbolic or perception-based factors in shaping customer loyalty.

4.6.2 Intervening role of Green Customer Satisfaction on the Relationship between Green Marketing Strategies and Customer Loyalty

Path analysis by Baron and Kenny (1986) was used to test the fifth hypothesis ($\mathbf{H_5}$) so as to determine the intervening role of green customer satisfaction on the relationship between GM strategies and customer loyalty. A four-step mediation analysis was conducted using ordinal regression models to assess whether green customer satisfaction played an intervening role in the relationship between green marketing strategies and customer loyalty. In the first step, green marketing strategies were entered as the independent variables and customer loyalty served as the dependent variable by use of model equation 3.2 in Chapter 3.

Path analysis by Baron and Kenny (1986) was applied to test the fifth hypothesis (H5), which sought to determine the intervening role of green customer satisfaction in the relationship between green marketing strategies and customer loyalty. Mediation analysis was conducted through four sequential steps using ordinal regression models.

Before estimating the regression model, diagnostic tests were performed. The multicollinearity test results are presented in **Table 4.26**.

Table 4.26: Multicollinearity Test for Model 3.2

Coefficients			
Model		**Collinearity Statistics**	
		Tolerance	**VIF**
1	(Constant)		
	Green Marketing Strategies	1.000	1.000
Dependent Variable: Customer Loyalty			

The results in **Table 4.26** show that the variance inflation factor (VIF) for green marketing strategies was 1.000. Since this value is below the threshold of 10, no multicollinearity problem was detected, and the variable was deemed suitable for inclusion in the regression model.

Next, the goodness-of-fit test was performed to assess model adequacy. The results are summarized in **Table 4.27**.

Table 4.27: Goodness of Fit for Model 3.2

	Chi-Square	**Df**	**Sig.**
Pearson	38.504	9	.000
Deviance	21.560	9	.010

The results in **Table 4.27** indicate that both the Pearson Chi-Square (p = 0.000) and the Deviance statistic (p = 0.010) were significant at the 5% level, confirming that the model provided an adequate fit to the data.

The regression results for Model 3.2 are presented in **Table 4.28**.

Model 3.2 is as shown:

$$CL = \varphi_0 + \varphi_1 GM + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 3.2$$

Table 4.28: Parameter Estimates for Model 3.2

	Estimate	**Std. Error**	**Wald**	**df**	**Sig.**	**95% Confidence Interval**	
						Lower Bound	**Upper Bound**
Customer loyalty = 3.00	-1.220	1.327	.846	1	.358	-3.820	1.380
Customer loyalty = 4.00	2.740	1.248	4.822	1	.028	.294	5.186
Green marketing strategies	.722	.305	5.604	1	.018	.124	1.320

The results in **Table 4.28** reveal that Green Marketing strategies had a positive and statistically significant direct effect on Customer Loyalty *($\beta = 0.722$, $p = 0.018$)*. This implies that as firms intensify the adoption of green marketing practices, customer loyalty improves correspondingly. The finding satisfies the first condition for mediation according to Baron and Kenny (1986). The estimated equation from the results in **Table 4.28** were used to estimate the general ordinal equation 3.2 and the Model was expressed as follows:

$$CL = \begin{matrix} -1.220 \\ 2.740 \end{matrix} + 0.722GM \quad \ldots\ldots\ldots\ldots\ldots\ldots \; 3.2$$

This formulation reflects how the log-odds of reporting a given or lower level of customer loyalty are influenced by the adoption of green marketing strategies.

The second step involved evaluating the effect of green marketing strategies on customer satisfaction. Before estimating Model 3.3, a multicollinearity test was conducted to ensure that the independent variable did not exhibit redundancy. The results are presented in **Table 4.29**.

Table 4.29: Multi-collinearity for Model 3.3

Model		**Collinearity Statistics**	
		Tolerance	**VIF**
1	(Constant)		
	Green Marketing Strategies	1.000	1.000
a. Dependent Variable: Customer Satisfaction			

The variance inflation factor (VIF) for Green Marketing strategies was 1.000, which is well below the threshold of 10, confirming that there was no multicollinearity problem in the model. The adequacy of the model was then assessed through goodness-of-fit tests, with results summarized in **Table 4.30**.

Table 4.30: Goodness of Fit Estimates for Model 3.3

	Chi-Square	**df**	**Sig.**
Pearson	38.032	14	.001
Deviance	36.796	14	.001

From **Table 4.30**, the deviance statistic yielded a p-value of 0.001, which is less than 0.05, indicating that the model provided a good fit to the data.

To estimate Model 3.3, Green Marketing strategies served as the independent variable, while customer satisfaction was treated as the outcome variable. Model equation 3.3 was stated as follows:

$$CS = \varphi_0 + \varphi_1 GM + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 3.3$$

The parameter estimates of the model are presented in **Table 4.31**.

Table 4.31: Parameter Estimates for Model 3.3

	Estimate	**Std. Error**	**Wald**	**df**	**Sig.**	**95% Confidence Interval**	
						Lower Bound	**Upper Bound**
Customer Satisfaction = 2.00	6.905	1.526	20.466	1	.000	3.913	9.896
Customer Satisfaction = 3.00	9.052	1.549	34.136	1	.000	6.016	12.089
Customer Satisfaction = 4.00	13.420	1.792	56.096	1	.000	9.908	16.932
Green marketing strategies	3.184	.435	53.487	1	.000	2.331	4.037

The regression results in **Table 4.31** show that Green Marketing strategies had a strong and statistically significant positive effect on customer satisfaction *($\beta = 3.184$, $p < 0.001$)*. This implies that as firms increase their adoption of environmentally friendly marketing practices, customer satisfaction significantly improves. The estimated regression equation based on Model 3.3 is expressed as follows:

$$CS = \begin{matrix} 6.905 \\ 9.052 \\ 13.420 \end{matrix} + 3.184GM \text{ …….. } 3.3$$

This confirms that Green Marketing strategies significantly predict customer satisfaction, thereby meeting the second condition for mediation as outlined by Baron and Kenny (1986).

In the third step, the third equation for testing the fifth hypothesis sought to estimate the relationship between customer loyalty and customer satisfaction. Before estimating Model 3.4, a multicollinearity test was carried out to ensure the absence of redundancy in the predictor variable. The results are presented in **Table 4.32**.

Table 4.32: Multicollinearity test for Model 3.4

Model		**Collinearity Statistics**	
		Tolerance	**VIF**
1	(Constant)		
	Customer Satisfaction	1.000	1.000

The variance inflation factor (VIF) for Customer Satisfaction was 1.000, which is well below the threshold of 10. This indicates that the model did not suffer from multicollinearity problems. The adequacy of Model 3.4 was further evaluated using goodness-of-fit tests, with the results summarized in **Table 4.33**.

Table 4.33: Goodness of Fit for Model 3.4

	Chi-Square	**df**	**Sig.**
Pearson	11.280	5	.046
Deviance	10.881	5	.054

The Pearson statistic yielded a p-value of 0.046, which is less than 0.05 as shown in **Table 4.33**. This result indicates that the model provided an adequate fit to the data at

the 5% significance level. Model 3.4 was used to test the hypothesis and it was stated as follows:

$$CL = \varphi_0 + \varphi_1 CS + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 3.4$$

The parameter estimates for Model 3.4 are presented in **Table 4.34** as shown:

Table 4.34: Parameter Estimates for Model 3.4

	Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Customer loyalty = 3.00	3.822	1.243	9.459	1	.002	1.387	6.258
Customer loyalty = 4.00	8.674	1.344	41.639	1	.000	6.039	11.308
Customer Satisfaction	2.041	.310	43.441	1	.000	1.434	2.648

Results from **Table 4.34** indicate that customer satisfaction had a strong and statistically significant positive effect on customer loyalty *($\beta = 2.041$, $p < 0.001$)*. This finding suggests that higher levels of customer satisfaction substantially increase the likelihood of higher customer loyalty, confirming the theoretical expectation that satisfaction is a critical antecedent to loyalty in marketing and relationship management.

The regression equation based on Model 3.4 can be expressed as follows:

$$CL = \begin{matrix} 3.822 \\ 8.674 \end{matrix} + 2.041CS \ldots\ldots\ldots\ldots\ldots\ldots 3.4$$

This satisfies the third condition for mediation as outlined by Baron and Kenny (1986).

In the final step of the mediation analysis, Model 3.5 was estimated with both Green Marketing strategies and Customer Satisfaction entered simultaneously as predictors of customer loyalty. This approach was designed to establish whether Customer Satisfaction mediates the relationship between Green Marketing strategies and Customer Loyalty.

Before evaluating the parameter estimates, the model was tested for multicollinearity, with results summarized in **Table 4.35**.

Table 4.35: Multicollinearity Test for Model 3.5

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Customer Satisfaction	.656	1.525
	Green Marketing Strategies	.656	1.525

The variance inflation factors *(VIF = 1.525)* for both predictors were below the threshold of 10, confirming that multicollinearity was not a concern. The goodness-of-fit test results for Model 3.5 are presented in **Table 4.36**.

Table 4.36: Goodness of Fit for Equation 3.5

P	Chi-Square	Df	Sig.
Pearson	35.586	20	.017
Deviance	35.758	20	.016

Both the Pearson and Deviance statistics returned p-values below 0.05 as shown in **Table 4.36**, indicating that Model 3.5 adequately fit the data at the 5% significance level.

To assess the presence of mediation, a fourth model (Model 3.5) was estimated and stated as:

$$CL = \varphi_0 + \varphi_1 GM + \varphi_2 CS + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 3.5$$

The parameter estimates for Model 3.5 are provided in **Table 4.37**.

Table 4.37: Parameter Estimates for Model 3.5

	Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Customer Loyalty = 3.00	2.213	1.447	2.339	1	.126	-.623	5.050
Customer Loyalty = 4.00	6.970	1.528	20.822	1	.000	3.977	9.964
Customer Satisfaction	2.488	.396	39.447	1	.000	1.712	3.264
Green Marketing strategies	0.887	.434	4.183	1	.041	-1.738	-.037

Model 3.5 revealed that both Customer Satisfaction *($\beta = 2.488$, $p < 0.001$)* and Green Marketing strategies *($\beta = 0.887$, $p = 0.041$)* remained statistically significant predictors of customer loyalty. Importantly, while the direct effect of Green Marketing strategies on loyalty remained significant, the coefficient decreased slightly compared to the earlier direct-effect model (from $\beta = 0.722$ in Model 3.2 to $\beta = 0.887$ in Model 3.5). This reduction in magnitude, combined with the continued significance of Customer Satisfaction, provides evidence of partial mediation.

The estimated regression equation for Model 3.5 is expressed as:

$$CL = \begin{matrix} 2.213 \\ 6.970 \end{matrix} + 2.488CS + \ 0.887GM \ \ldots\ldots\ldots\ldots\ldots\ldots\ 3.5$$

The findings from the four models are consistent with several studies that emphasize satisfaction as a mediator in the green marketing–loyalty link. Sarko and Sukawati (2022) found that green product quality, brand image, and satisfaction positively influenced loyalty in Indonesia. Similarly, Çavusoglu *et al.*, 2020) demonstrated that satisfaction significantly predicts loyalty in green contexts, while Creignou and Nuangjamnong (2022) highlighted the role of product quality and price in driving both satisfaction and loyalty in Thailand. The current results therefore converge with this

strand of literature, highlighting satisfaction as a key mechanism through which green practices enhance loyalty.

However, the study's findings contrasts with findings by Wong *et al*. (2023) who found that although green marketing elements influenced satisfaction, they did not significantly affect loyalty, suggesting weaker mediation pathways in their Hong Kong context. This inconsistency underscores the importance of context in that unlike prior studies conducted largely in B2C contexts such as hotels, food chains, and fashion, the present study explored B2B manufacturing in Kenya, a setting where clients may place greater emphasis on both sustainable practices and satisfaction with business processes.

Overall, the evidence shows that while green marketing strategies directly build loyalty, their effectiveness is amplified when they also enhance customer satisfaction. By rejecting the null hypothesis ($\mathbf{H_5}$), the study establishes that satisfaction partially mediates the relationship, thereby enriching the understanding of how GM strategies contribute to loyalty. From a managerial perspective, this implies that firms should not only implement eco-friendly initiatives but also ensure that these practices lead to meaningful improvements in customer satisfaction. This dual emphasis is more likely to generate enduring loyalty among clients in the manufacturing sector.

4.6.3 Moderating Role of Regulatory Frameworks on the Relationship between Green Marketing Strategies and Customer Loyalty

To examine whether regulatory frameworks significantly moderate the relationship between green marketing strategies and customer loyalty, path analysis model proposed by Baron and Kenny (1986) was used. A two-step ordinal regression analysis was conducted.

Before estimating the model, multicollinearity was tested using the Variance Inflation Factor (VIF). The results are presented in **Table 4.38**.

Table 4.38: Multicollinearity test for Model 3.6

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Green Marketing Strategies	.892	1.121
	Regulatory Frameworks	.892	1.121

The results in **Table 4.38** show that the VIF values for Green Marketing strategies and Regulatory Frameworks were both 1.121, well below the threshold of 10. This indicated the absence of multicollinearity, thus validating the inclusion of both predictors in the model.

To determine the adequacy of the model, goodness-of-fit tests were conducted, and the results are summarized in **Table 4.39**.

Table 4.39: Goodness of Fit for Model 3.6

	Chi-Square	**Df**	**Sig.**
Pearson	78.150	24	.000
Deviance	47.782	24	.003

Both the Pearson and Deviance Chi-Square tests were statistically significant ($p < 0.05$) as shown in **Table 4.39**. This indicates that Model 3.6 provided a good fit to the data.

Model 3.6 that was used to test the hypothesis was stated as:

$$CL = \varphi_0 + \varphi_1 GM + \varphi_2 RF + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad 3.6$$

The regression estimates for Model 3.6 are presented in **Table 4.40**.

Table 4.40: Parameter Estimates for Model 3.6

	Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Customer loyalty = 3.00	3.828	1.873	4.177	1	.041	.157	7.500
Customer loyalty = 4.00	8.020	1.941	17.069	1	.000	4.215	11.824
Green marketing strategies	.384	.321	1.426	1	.232	-.246	1.014
Regulatory Frameworks	1.652	.437	14.274	1	.000	.795	2.509

Results from **Table 4.40** were used to estimate equation 3.6 which was summarized as shown.

$$CL = \begin{matrix} 3.00 \\ 4.00 \end{matrix} + 0.384GM + 1.652RF \quad \ldots\ldots\ldots\ldots\ldots\ldots \; 3.6.$$

Results in **Table 4.40** indicate that while Green Marketing strategies had a positive but statistically insignificant effect on Customer Loyalty *($\beta = 0.384$, $p = 0.232$)*, Regulatory Frameworks exhibited a strong and statistically significant positive influence *($\beta = 1.652$, $p = 0.000$)*. This suggests that although Green Marketing strategies alone may not significantly predict loyalty within this model, Regulatory Frameworks independently play a crucial role in shaping customer loyalty.

In the second step, an interaction term between Green Marketing Strategies and Regulatory Frameworks (GM × RF) was introduced in Model 3.7 to test for moderation. Before interpreting the results, multicollinearity was examined using the Variance Inflation Factor (VIF). The results are presented in **Table 4.41**.

Table 4.41: Multicollinearity Test for Model 3.7

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Green Marketing strategies	.892	1.121
	Regulatory Frameworks	.891	1.123
	Moderating Variable	.998	1.002
a. Dependent Variable: Customer Loyalty			

The results in **Table 4.41** show that the VIF values for all predictors were well below the threshold of 10, indicating the absence of multicollinearity.

The adequacy of Model 3.7 was evaluated using Pearson and Deviance Chi-Square statistics. The results are summarized in **Table 4.42**.

Table 4.42: Test for Goodness of Fit for Model 3.7

	Chi-Square	df	Sig.
Pearson	73.640	23	.000
Deviance	47.285	23	.002

Both Pearson and Deviance statistics were statistically significant *($p < 0.05$)* as shown in **Table 4.42**, confirming that Model 3.7 fitted the data well.

Model 3.7 was stated as follows:

$$CL = \varphi_0 + \varphi_1 GM + \varphi_2 RF + \varphi_3 GM * RF + \varepsilon \quad \ldots\ldots 3.7$$

The estimated results of the model were summarized in **Table 4.43** as follows:

Table 4.43: Parameter Estimates for Model 3.7

	Estimate	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Customer loyalty = 3.00	3.744	1.829	4.188	1	.041	.158	7.329
Customer loyalty = 4.00	8.044	1.922	17.511	1	.000	4.277	11.812
Green marketing strategies	.378	.322	1.372	1	.241	-.254	1.010
Regulatory Frameworks	1.670	.438	14.503	1	.000	.810	2.529
Moderating Variable	-.147	.192	.583	1	.445	-.524	.230

The estimated model 3.7 was summarized from the results in **Table 4.43** and was represented as follows:

$$CL = \begin{matrix} 3.744 \\ 8.044 \end{matrix} + 0.378GM + 1.670RF - 0.147GM * RF \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.7$$

As shown in **Table 4.43**, the interaction term (GM × RF) had a negative coefficient *(β = –0.147)* but was not statistically significant *(p = 0.445)*. This implies that regulatory frameworks do not significantly moderate the relationship between green marketing strategies and customer loyalty. In contrast, Regulatory Frameworks on their own retained a strong and statistically significant positive effect on customer loyalty *(β = 1.670, p = 0.000)*, confirming their independent role as drivers of loyalty. Green marketing strategies alone were not significant *(β = 0.378, p = 0.241)*, consistent with the first step results.

Taken together, the results in the two steps confirm that regulatory frameworks are more appropriately conceptualized as independent drivers of customer loyalty rather than conditional moderators of the Green Marketing strategies–Loyalty link. The findings therefore led to the non-rejection of the null hypothesis (H_6). This implies that while government policies, environmental regulations, and compliance mechanisms

directly enhance loyalty by shaping consumer trust and perceptions of fairness, they do not significantly alter the strength or direction of the effect that firm-level green marketing practices have on loyalty.

The findings resonate with empirical work emphasizing the central role of regulatory frameworks in shaping green consumer behavior. For example, Çavusoglu *et al.* (2020) found that government-driven environmental policies positively influenced customer perceptions of sustainability, which in turn boosted loyalty. Similarly, Watson *et al.* (2023) observed that compliance with regulatory standards in France's fast-food industry enhanced brand loyalty, particularly among younger consumers who were more environmentally conscious. In Kenya, Macharia (2017) highlighted that adherence to environmental regulations by firms in the soft drinks sector strengthened consumer trust and satisfaction, thereby indirectly supporting loyalty.

However, other studies have pointed to limited or conditional effects of regulatory frameworks. For instance, Wong *et al.* (2023) noted that while regulatory pressures increased customer satisfaction, they did not significantly strengthen the link between green marketing practices and loyalty in Hong Kong's bottled water industry, which mirrors the current study's finding of a non-significant moderation effect. Similarly, Handriana *et al.* (2021) observed that in Indonesia, customer trust and commitment were shaped more by firm-level practices than by regulatory enforcement, suggesting that regulations alone may not amplify the impact of green marketing strategies on loyalty.

Overall, the current study contributes to this discourse by establishing that in the Kenyan manufacturing sector, regulatory frameworks exert a direct and substantial

influence on customer loyalty but do not moderate the relationship between green marketing strategies and loyalty. This underscores the importance of firms not only complying with environmental regulations but also proactively designing green marketing initiatives that resonate with customer needs, since regulations on their own may not enhance the effectiveness of such strategies.

4.6.4 The Joint Effect of GM Strategies, Customer Satisfaction and Regulatory Frameworks on Customer Loyalty

To test hypothesis ***(H_7)***, a multiple ordinal regression model (Model 3.8) was estimated using the logit link function.

Before interpreting the model results, multicollinearity was assessed using the Variance Inflation Factor (VIF). The results are shown in **Table 4.44**.

Table 4.44: Multicollinearity Test for Model 3.8

Model		Collinearity Statistics	
		Tolerance	**VIF**
1	(Constant)		
	Green Marketing Strategies	.628	1.593
	Regulatory Frameworks	.878	1.139
	Customer Satisfaction	.645	1.549
a. Dependent Variable: Customer Loyalty			

The *VIF values* from **Table 4.44** for GM Strategies was *1.593*, for Regulatory Frameworks was *1.139* while for Customer Satisfaction was *1.549*. This implies that there was no significant multi-collinearity in the model since the values were less than 10.

The adequacy of Model 3.8 was evaluated using Pearson and Deviance Chi-Square statistics. The results are summarized in **Table 4.45**.

Table 4.45: Goodness of Fit for Equation 3.8

	Chi-Square	Df	Sig.
Pearson	100.359	33	.000
Deviance	55.300	33	.009

The results from **Table 4.45** shows that the *p- value* of Chi square deviance was 0.009. Since the *p-value* is less than 0.05, the model fitted the data well at 5% significance level.

The model was summarized as shown:

$$CL = \varphi_0 + \varphi_1 GM \ + \varphi_2 CS + \varphi_3 RF + \varepsilon \ldots \ldots . \ldots \ldots \ldots \ldots . . \ldots \ldots \ldots . \ldots \ldots \ldots \ldots \ldots \ldots \ldots . . \quad 3.8$$

The regression estimates for Model 3.8 are presented in **Table 4.46**.

Table 4.46: Parameter Estimates for Model 3.8

	Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
[Customer loyalty = 3.00]	7.491	2.132	12.345	1	.000	3.312	11.669
[Customer loyalty = 4.00]	12.395	2.351	27.800	1	.000	7.787	17.002
Green marketing strategies	-1.298	.477	7.400	1	.007	-2.233	-.363
Regulatory Frameworks	1.743	.481	13.147	1	.000	.801	2.685
Customer Satisfaction	2.512	.416	36.375	1	.000	1.696	3.328

The results in **Table 4.46** were used to estimate model 3.8 which was used to test the seventh hypothesis (**H**$_7$). The model was represented as shown in equation 3.8 in Chapter 3.

$$CL = \begin{matrix} 7.491 \\ 12.395 \end{matrix} - 1.298GM + 1.743RF + 2.512CS \ldots\ldots\ldots\ldots\ldots\ldots\ldots.. \quad 3.8$$

The results indicate that all three predictors had statistically significant effects on customer loyalty at the 5% significance level. Specifically, green customer satisfaction had the strongest positive effect ($\beta = 2.512,\ p = 0.000$), followed by regulatory frameworks ($\beta = 1.743,\ p = 0.000$). Interestingly, green marketing strategies had a statistically significant negative coefficient ($\beta = -1.298,\ p = 0.007$) in the presence of the other two variables, suggesting a possible contextual dependency when all three predictors are modeled together.

Overall, the joint model from these findings confirms that green customer satisfaction and regulatory frameworks are robust and consistent predictors of customer loyalty. The unexpected negative coefficient for green marketing strategies implies that while such strategies are essential, they may not guarantee loyalty in isolation. Instead, their effectiveness may depend on how well they translate into genuine customer satisfaction and how they align with credible institutional and regulatory frameworks. The null hypothesis ***(H_7)*** was therefore rejected, confirming that the combined influence of green marketing strategies, regulatory frameworks, and customer satisfaction significantly predicts customer loyalty in the Kenyan manufacturing sector.

The empirical literature provides useful context for interpreting these findings. Prior studies have underscored the difficulty of explaining customer loyalty solely through marketing practices, emphasizing the need for integrative models. For instance, Çavusoglu *et al.* (2020) and Sarko and Sukawati (2022) highlighted the importance of linking customer satisfaction and brand image with loyalty outcomes, while Chrisjatmiko (2018) and Wong *et al.* (2023) demonstrated that satisfaction plays a partial mediating role in strengthening loyalty. Similarly, Creignou and Nuangjamnong

(2022) and Moise *et al.* (2018) noted that green product quality and pricing strategies positively influence satisfaction, which in turn drives loyalty. Importantly, most of these studies were conducted in B2C contexts, leaving uncertainty as to whether similar dynamics hold true in B2B environments.

The current findings therefore extend this body of knowledge by demonstrating that in the Kenyan manufacturing sector, loyalty outcomes cannot be explained by green marketing strategies alone but require an integrated framework that considers both customer satisfaction and regulatory frameworks. This aligns with Yusof *et al.* (2017) who argued that institutional and contextual factors, such as regulatory compliance, can enhance the credibility of firms' green claims and thereby strengthen loyalty. At the same time, the divergence from purely positive associations in prior B2C studies signals the need for a contextualized understanding in B2B markets, where customer decision-making may be influenced more by institutional trust and long-term value alignment than by marketing initiatives alone.

4.7 Content Analysis

The researcher familiarized with responses and noted initial observation. Generation of initial codes was done and meaningful phrases and expressions were extracted and labeled to capture their essence and significance. After coding, themes were generated by clustering related codes into broader thematic categories that aligned with the study's specific objectives. These themes were then reviewed, refined, and interpreted in light of the study's conceptual framework. The findings of the qualitative analysis were presented as per the study's objectives as follows:

4.7.1 Influence of Green Product Quality on Customer Loyalty

The qualitative findings revealed that green product quality plays a central role in shaping customer loyalty among the B2B customers. Respondents consistently emphasized that when green products deliver on performance, durability, and environmental value, they not only meet functional expectations but also align with customers' ethical and sustainability values. These perceptions were particularly strong in sectors such as Textile & Apparel, Pharmaceutical, and Timber & Furniture. For instance, a respondent from the Textile & Apparel sector noted that "*quality guarantees the organizational buyers that the products they produce will be highly valued by customers,*" highlighting the importance of product quality in B2B relationships. Similarly, a participant from the pharmaceutical sector observed that "*green product quality influences loyalty because of the need to live healthy and eat healthy,*" linking product quality to health-conscious purchasing behavior. In the Timber & Furniture sector, one respondent remarked that "*quality means durability… this satisfies customers and leads to loyalty,*" reinforcing the idea that long-lasting, environmentally responsible products contribute to sustained customer relationships.

These insights support the quantitative findings of this study, which showed a significant positive relationship between green product quality and customer loyalty. They also align with the work of Gelderman *et al.* (2021) who found that product quality significantly influenced customer loyalty in a B2B context. However, the qualitative data also reflect the complexity noted in previous studies. For example, while Tarabieh (2018) and Dewi *et al.* (2023) found a strong positive relationship

between green product quality and loyalty, other studies such as Wong *et al.* (2023) and Handriana *et al.* (2021) reported weaker or indirect effects, often mediated by satisfaction or trust. **Table 4.46** shows a summary of the identified theme and their descriptions.

Table 4.46: Emerging Themes on Green Product Quality and Customer Loyalty

Theme	Description
Performance-based Loyalty	Customer remain loyal when green products deliver on performance, durability and value
Health-conscious Loyalty	Especially in health-related sectors, green product quality is tied to well-being
Environmental Alignment	Customers are more likely to stay loyal to brand that reflect their environmental values

The study's qualitative findings contribute to this ongoing debate by suggesting that in the Kenyan manufacturing sector, green product quality is not only a functional requirement but also a symbolic indicator of environmental commitment. These two roles appear to enhance customer loyalty, particularly when quality is consistently delivered and aligned with broader sustainability values.

4.7.2 Influence of Green Price on Customer Loyalty

Although green price was not directly probed in the open-ended questions, the theme emerged strongly in responses related to customers' willingness to pay a premium for environmentally friendly products. Most respondents expressed a readiness to accept higher prices for green products, provided that the products demonstrated clear environmental value and met quality expectations. This suggests that green price influences customer loyalty in a value-contingent manner in that customers are more

likely to remain loyal and pay a premium price when they perceive that the product contributes meaningfully to environmental sustainability or personal well-being.

For instance, a respondent from the Plastic & Rubber sector acknowledged that "*green products cost higher to produce, hence their high price,*" while another from the Textile & Apparel sector emphasized that "*a higher price will enable the company to manufacture products at a profit since green products are produced at a higher cost.*" Similarly, a participant from the pharmaceutical sector expressed a personal motivation, stating, "*I want to live healthy through using green products despite them being of higher prices.*" **Table 4.47** presents the identified themes for this objective.

Table 4.47: Emerging Themes on Green Price and Customer Loyalty

Theme	Description
Price Justification	Customers accept higher prices when linked to environmental health or benefits
Value-for-impact	Willingness to pay is tied to perceived contribution to sustainability
Strategic Acceptance	Organizational buyers view premium pricing as viable if it supports green goals

These qualitative insights are consistent with the quantitative findings of the current study, which showed that green price has a significant, though less dominant, influence on customer loyalty. They also align with the findings of Gelderman *et al* (2021) who reported that while green product price was a significant predictor of loyalty among professional buyers in a B2B setting, it was not the most dominant factor. Similarly, Wilson (2022) found that price fairness and price confidence positively influenced customer loyalty through satisfaction, although his study was conducted in a B2C context. Other studies offer mixed results. For example, Mohammadi *et al.* (2023)

found a significant positive effect of green price on brand loyalty among employees and managers in food-exporting firms, while Yulisetiarini *et al.* (2024) reported a insignificant effect of green price on customer loyalty in the context of Starbucks consumers in Indonesia. These inconsistencies underscore the importance of contextualizing green price within specific sectors, market dynamics, socio-economic and geographical contexts.

In the Kenyan context, relevant literature is limited and scant. Studies by Macharia *et al* (2017) and Onditi (2016) explored the relationship between green marketing practices and customer satisfaction in the B2C settings but did not isolate green price as a distinct variable or examine its effect on loyalty. The current study offers new insights on green price as an independent variable in a B2B manufacturing context, where pricing decisions are often more strategic and value-driven. Overall, the qualitative findings suggest that while green price may not be the primary driver of loyalty, it becomes influential when customers perceive that the premium they pay is justified by environmental impact, product quality, and organizational transparency.

4.7.3 Influence of Green Promotion on Customer Loyalty

The qualitative findings revealed that green promotion plays a meaningful role in shaping customer loyalty, particularly through education, sensitization, and awareness-building efforts. Respondents emphasized that both internal and external communication strategies are essential in reinforcing the credibility of green marketing initiatives and in cultivating long-term relationships with environmentally conscious customers. For example, a respondent from the Motor Vehicle Assemblies sector noted that "*the adoption has sensitized customers on the importance of buying environment-*

friendly products," highlighting how promotional efforts can influence customer awareness and behavior. In the Pharmaceutical sector, one participant shared that "*the company partners with hospitals to educate customers on proper disposal,*" illustrating how collaborative outreach initiatives can enhance a company's environmental credibility. Similarly, a respondent from the Food & Beverage sector mentioned that their organization conducts "*regular sensitization programs about the environment to employees,*" underscoring the importance of internal communication in building a consistent green brand image. These highlights from the respondents were based on identified themes which are presented in **Table 4.48** as follows:

Table 4.48: Emerging Themes on Green Promotion and Customer Loyalty

Theme	Description
Environmental Education	Promotion through awareness campaigns builds trust and loyalty
Internal sensitization	Employee training reinforces brand credibility and customer experience
Collaborative Messaging	Partnerships with organizations to enhance credibility and outreach

These insights suggest that green promotion, when rooted in authentic, value-driven messaging, can strengthen customer trust and foster loyalty. This finding is consistent with the quantitative results of the current study, which showed that green promotion has a significant positive influence on customer loyalty. It also aligns with the work of Jabeen and Kavitha (2020) who found that green promotion, as part of a broader green marketing strategy, positively influenced customer loyalty. Similarly, Subiantoro and Budidharmanto (2021) reported that green promotion had a partial but significant effect on consumer loyalty in the context of Starbucks coffee. However, the literature also

revealed that most existing studies have been conducted in B2C settings, often focusing on green advertising or repurchase behavior rather than loyalty in a B2B context. For instance, Mahmoud *et al.* (2024) found that green promotion positively influenced repurchase intention in Ghana, while Vinoth (2023) reported that environmental advertising increased green loyalty through green trust.

The qualitative data from this study therefore demonstrates that in a B2B manufacturing context, green promotion, particularly through education and stakeholder engagement, can play a pivotal role in reinforcing customer loyalty. This is especially true when promotional efforts are perceived as credible, consistent, and aligned with broader environmental values.

4.7.4 Influence of Green Corporate Image on Customer Loyalty

According to the qualitative findings, Green corporate image was found to play a significant role in shaping customer loyalty, particularly when it is perceived as authentic, consistent, and embedded in the firm's operations and stakeholder relationships. Respondents described green image not merely as a marketing gimmick but as a reflection of the company's long-term environmental commitment and ethical orientation. For instance, a respondent from the Metal & Allied sector noted that "*the company's reputation has improved because of its green initiatives,*" while another from the Leather & Footwear sector emphasized that "*our customers associate us with environmental responsibility, and that keeps them coming back.*" These sentiments were echoed in the Service & Consultancy sector, where one participant observed that "*green adoption enhances the company's image and reputation from the environmental perspective,*" suggesting that a strong green image reinforces customer trust and loyalty.

These qualitative insights mirror the quantitative findings of the current study, which indicated that green corporate image had a significant positive influence on customer loyalty. They also align with the findings of Martinez (2015) and Chrisjatmiko (2018) who reported that green image positively influences green loyalty, particularly when customers perceive the firm's environmental values as genuine. Similarly, Çavusoglu *et al.* (2020) and Sarko and Sukawati (2022) found that green brand image had a direct and significant effect on customer loyalty, although their studies were limited to specific case contexts. However, findings by Handriana *et al*. (2021) are inconsistent with the current study's findings because they found that despite brand image influencing consumer trust and commitment, it does not directly affect green consumer loyalty. The themes and descriptions that were identified from this content were summarized and presented in **Table 4.49.**

Table 4.49: Emerging Themes on Green Corporate Image and Customer Loyalty

Theme	Description
Reputational Trust	A strong green image enhances customer confidence and brand loyalty
Symbolic Alignment	Customers identify with firms that reflect their environmental values
Strategic Differentiation	Green image is used to distinguish the firm in competitive B2B markets

In addition, Dewi *et al.* (2023) indicted that green corporate image was less dominant in predicting loyalty compared to other variables such as product quality. These mixed findings underscore the need for further research, particularly in the B2B contexts like the Kenyan manufacturing sector, where brand image may be shaped by different drivers than in B2C markets. The current study contributes to this discourse by demonstrating that in a B2B manufacturing environment, green corporate image is not

only a reputational asset but also a strategic pillar for building long-term customer relationships. When firms consistently communicate and embody their environmental value through operations, partnerships and stakeholder engagement, they are more likely to cultivate loyalty among organizational buyers who prioritize sustainability.

4.7.5 The Extent to Which Green Customer Satisfaction Intervenes in the Relationship between Green Marketing Strategies and Customer Loyalty

The findings indicated that green customer satisfaction plays a pivotal intervening role in the relationship between green marketing strategies (particularly green product quality and green price) and customer loyalty. According to the respondents, satisfaction is not only a result of product performance and environmental value but also a critical link that transforms positive perceptions into long-term loyalty. A respondent from the Timber, Wood & Furniture sector noted that "*continuous and increased satisfaction leads customers to continue buying a company's products because the customers believe that the company is promoting a healthy living environment.*" In the Textile & Apparel sector, another participant observed that "*satisfying customers' needs consistently gives a customer a reason to buy products from a given supplier on a repeat basis.*" These insights suggest that satisfaction acts as a bridge between green marketing strategies and customer loyalty, particularly when customers perceive that their environmental values are being respected and fulfilled.

These findings are consistent with the quantitative results of the current study which confirmed that green customer satisfaction significantly mediates the relationship between green marketing strategies and customer loyalty. They also align with the findings of Sarko and Sukawati, 2022) who reported that green product quality, green

brand image, and green customer satisfaction all had a positive and significant effect on customer loyalty. Similarly, Çavusoglu *et al.*, (2020) found that green customer satisfaction positively influenced loyalty in the context of green hotels in Turkey. **Table 4.50** presents the emerging themes on Green Customer Satisfaction and Customer Loyalty.

Table 4.50: Emerging Themes on Green Customer Satisfaction and Loyalty

Theme	Description
Satisfaction-to-Loyalty Pathway	Consistent satisfaction leads to repeat purchases and advocacy
Value Alignment	Satisfaction is reinforced when customers' environmental values are met
Emotional Connection	Green satisfaction fosters emotional loyalty and long-term relationships

Extant the literature also presented contrary and inconsistent findings. For instance, Wong *et al.* (2023) found that while green product quality, green corporate image, and green trust were significantly correlated with green customer satisfaction, they did not significantly affect customer loyalty. This contrasts with the findings of Creignou and Nuangjamnong (2022) who established that both green product quality and green price had a significant influence on both satisfaction and loyalty in the fashion industry. These divergent findings stress the importance of context, particularly the distinction between B2C and B2B contexts. The current study contributes to this dialogue by demonstrating that in the Kenyan manufacturing sector, green customer satisfaction serves as a crucial mechanism through which green marketing strategies translate into customer loyalty. When customers are satisfied not only with the functional attributes of green products but also with the firm's commitment to sustainability, they are more likely to remain loyal and advocate for the brand.

4.7.6 The Moderating Effect of Regulatory Frameworks on the Relationship between Green Marketing Strategies and Customer Loyalty

The qualitative findings revealed that regulatory frameworks play a critical role in reinforcing and legitimizing green marketing strategies within organizations. Respondents described regulatory compliance not merely as a legal obligation but as a structural and cultural mechanism that supports the successful implementation of green product quality and green pricing strategies. Many firms reported embedding environmental compliance into their organizational architecture through Environmental Management Systems (EMS), departmental blueprints and continuous employee sensitization. For instance, a respondent from the Metal & Allied sector noted that "*our operations structure was changed to incorporate the environmental aspect of the regulation,*" indicating that compliance had been institutionalized at the strategic level. Similarly, a participant from the Textile & Apparel sector explained that "*every department has a blueprint to be followed in the day-to-day activities to ensure compliance,*" highlighting the operational integration of regulatory expectations. In the Pharmaceutical sector, one respondent shared that "*the company has implemented an EMS and conducts regular internal audits,*" demonstrating a systematic approach to environmental governance.

These insights suggest that regulatory frameworks serve as both enablers and moderators of green marketing strategies. When firms align their operations with environmental regulations, such as those set by the National Environment Management Authority (NEMA), they enhance the credibility and effectiveness of their green initiatives. This, in turn, strengthens customer trust and loyalty, particularly when customers perceive that green product quality and pricing are backed by formal

compliance mechanisms. The findings in regression analysis (**Table 4.38**) revealed a negative but statistically insignificant moderating effect of regulatory frameworks on the relationship between green marketing strategies and customer loyalty ($\beta = -0.147$, $p = 0.445$). This suggests that, quantitatively, there is insufficient evidence to support a moderating role.

However, the content analysis provided qualitative insights that regulatory frameworks may influence this relationship in practice. **Table 4.51** indicates the identified themes and their descriptions.

Table 4.51: Emerging Themes on Role of Regulatory Frameworks and Loyalty

Theme	Description
Structural Integration	Compliance is embedded into organizational structures, such as EMS and blueprints
Employee sensitization	Staff are trained and empowered to uphold environmental standards in daily operations
Supplier Alignment	Firms ensure that their suppliers also comply with NEMA and other environmental guidelines

The current study contributes to a relatively underexplored area in the literature. As noted by Zhang *et al.* (2023), most studies on customer loyalty have focused on moderators such as green knowledge, green consciousness, gender, and intergenerational differences. Regulatory frameworks have rarely been tested as a moderating variable in this context. While Nzomo *et al.* (2023b) found that regulatory frameworks negatively moderated the relationship between green innovation strategy and sustainability performance in ISO 14001-certified firms in Kenya, their study focused on different constructs and outcomes. Therefore, their findings cannot be directly generalized to the current study, which specifically examines the moderating

role of regulatory frameworks in the relationship between green marketing strategies and customer loyalty. The qualitative evidence from this study thus fills a critical gap by demonstrating that in the Kenyan manufacturing sector, regulatory frameworks serve as both enablers and reinforcers of green marketing strategies. When compliance is embedded into organizational structures and supported by employee training and supplier alignment, it amplifies the impact of green initiatives on customer loyalty.

4.7.7 The Joint Effect of Green Marketing Strategies, Green Customer Satisfaction, and Regulatory Frameworks on Customer Loyalty

The findings of the content analysis indicated that customer loyalty is most effectively cultivated when green marketing strategies, customer satisfaction, and regulatory frameworks work together. Respondents described how the three elements reinforce one another to create a coherent and credible green value proposition that resonates with B2B customers. Green marketing strategies were seen as foundational, but their impact on loyalty was significantly enhanced when customers were satisfied and when the firm's environmental practices were perceived as compliant with regulatory standards. For instance, a respondent from the Timber, Wood & Furniture sector noted that "*continuous and increased satisfaction leads customers to continue buying a company's products because the customers believe that the company is promoting a healthy living environment.*"

In the Service & Consultancy sector, another participant explained that "*a premium price generates enough revenue for the company to run projects that conserve the environment,*" suggesting that customers are more willing to support green pricing when they see tangible environmental outcomes. These insights were further reinforced

by comments from the Textile & Apparel and Pharmaceutical sectors, where respondents emphasized "*the role of Environmental Management Systems (EMS), departmental compliance blueprints, and employee training*" in legitimizing green marketing efforts. **Table 4.52** presents a summary of identified themes with regards to the joint effect of the three variables on customer loyalty.

Table 4.52: Emerging Themes on the Joint Effect of GM Strategies, Customer Satisfaction and Regulatory Frameworks

Theme	Description
Strategic Synergy	Green marketing strategies are most effective when aligned with satisfaction and compliance
Satisfaction as a loyalty catalyst	Customer satisfaction acts as a bridge between green marketing efforts and sustained loyalty
Regulatory reinforcement	Compliance structures enhance the credibility and consistency of green marketing strategies
Integrated value proposition	Loyalty is strengthened when customers perceive a unified commitment to sustainability across all dimensions

These findings are consistent with the quantitative results of the current study, which demonstrated that the joint effect of green marketing strategies, green customer satisfaction, and regulatory frameworks significantly predicts customer loyalty. They also align with the broader literature, including studies by Çavusoglu *et al.* (2020), Chrisjatmiko (2018), Creignou and Nuangjamnong (2022) and Wong *et al.* (2023), which have explored partial relationships among these variables. However, most of these studies were conducted in B2C contexts, often in developed economies, and typically focused on isolated constructs rather than an integrated framework. The current study addresses these gaps by examining the joint effect of all three variables

in a B2B setting across all the manufacturing subsectors in Nairobi City County. This approach is particularly important given the contextual differences in economic, social, and regulatory environments between developed and developing countries.

While Gelderman *et al.* (2021) examined the influence of green marketing practices and customer satisfaction on loyalty among professional buyers in the Netherlands, their study did not include a moderating variable such as regulatory frameworks. The present study therefore extends the literature by introducing a more comprehensive model that reflects the complex interplay of strategic, perceptual, and institutional factors influencing customer loyalty. In summary, the qualitative evidence affirms that customer loyalty is not driven by isolated initiatives but by the strategic integration of green marketing strategies, customer satisfaction, and regulatory compliance. Firms that align these elements effectively are more likely to build enduring relationships with environmentally conscious B2B customers.

4.8 Chapter Summary

This chapter has presented the study's findings based on both quantitative and qualitative analyses, based on the seven specific objectives. The study findings were derived from descriptive statistics, chi-square tests, and regression models and revealed that green product quality emerged as the only statistically significant factor affecting customer loyalty. The other three variables namely green price, green promotion, and green corporate image did not attain statistical significance at the 5% level. Therefore, the hypotheses H_2, H_3, and H_4 were not rejected. While these predictors did not demonstrate standalone significance in the model, they could exert influence in the interactive and the joint-effect models addressed in later sections of this chapter.

Green customer satisfaction was found to significantly mediate the relationship between green marketing strategies and loyalty. However, regulatory frameworks did not exhibit a statistically significant moderating effect in the quantitative analysis. In contrast, the qualitative findings, drawn from thematic content analysis across 14 manufacturing subsectors in Nairobi City County, highlighted that regulatory frameworks play a critical reinforcing role by legitimizing green practices and enhancing customer trust. Thematic insights also supported the quantitative results, emphasizing that organizational buyers value durability, ethical alignment, and environmental performance. Overall, the integration of both data types provided a clear understanding of how green marketing strategies, customer satisfaction and regulatory frameworks interact to shape customer loyalty in Kenya's manufacturing sector.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study findings based on the specific study objectives. The conclusions and recommendations emanating from the study are also presented. In the last section of the chapter, various suggestions for further research are provided.

5.2 Summary of the Key Findings

This study set out to examine the influence of green marketing strategies, customer satisfaction, and regulatory frameworks on customer loyalty among manufacturing firms in Nairobi City County, Kenya. The research was guided by seven specific objectives and employed a descriptive cross-sectional survey design, integrating both quantitative and qualitative data collection methods. A total of 258 manufacturing firms were sampled using stratified and systematic sampling techniques, and data were collected through semi-structured questionnaires and interview guides. The findings are summarized below according to the study's objectives:

5.2.1 Influence of Green Product Quality on Customer Loyalty

The study found that green product quality had a statistically significant influence on customer loyalty in manufacturing firms in Nairobi City County. This means that customers were more likely to express higher levels of loyalty when they perceived the firm's products to be of high environmental and functional quality. Quantitative results from the ordinal logistic regression model showed that green product quality had a positive and significant coefficient ($\beta = 0.804,\ p = 0.007$). This indicates that an

increase in green product quality was associated with increased odds of customers reporting higher loyalty levels. Qualitative data supported this finding, with respondents noting that customers value durability, environmental performance, and health-conscious design in products. One participant remarked that "*quality means durability… this satisfies customers and leads to loyalty*." These findings suggest that green product quality is a key driver of customer loyalty, and firms that consistently deliver high-quality green products are more likely to retain loyal customers.

These findings support the importance of green product quality as a basis of customer loyalty and are consistent with the findings of Gelderman *et al.* (2021), who highlight that sustainable product features enhance both emotional attachment and repurchase behavior. Customers appear to link quality with attributes such as environmental integrity, durability, and personal well-being since they foster a deeper sense of trust and satisfaction. Liu *et al.* (2025) similarly observed that high-performing green products drive loyalty through perceived value and eco-efficiency. The strong congruence between the quantitative and qualitative findings further suggests that customers in the manufacturing sector in Nairobi City County view product quality not just as a functional measure but as a symbol of the firm's commitment to sustainability. These findings emphasize that green product quality is not only statistically significant but strategically essential for firms seeking long-term customer retention.

5.2.2 Influence of Green Price on Customer Loyalty

The findings of the study indicated that green price did not have a statistically significant influence on customer loyalty. This suggests that price, on its own, may not be a decisive factor in determining customer loyalty within the green marketing context.

The results showed a negative but non-significant coefficient for green price ($\beta = -0.337$, $p = 0.403$), indicating that variations in green pricing were not strongly associated with changes in customer loyalty levels. However, qualitative responses revealed that while customers recognize that green products may cost more to produce, they are only willing to pay a premium price when the price is perceived as fair and justified. One respondent noted, "*a higher price will enable the company to manufacture products at a profit,*" but this did not necessarily translate into loyalty unless accompanied by perceived value. These findings imply that green pricing strategies must be carefully aligned with customer expectations and perceived value to influence loyalty meaningfully.

These findings diverge from studies that have reported a significant relationship between green pricing and customer loyalty. For instance, Mohammadi *et al.* (2023) found that green pricing positively influenced brand loyalty in food-exporting firms suggesting that customers in certain sectors are willing to pay a premium price for environmentally responsible products. Danko and Nifatova (2022) examined the influence of green branding on the loyalty of consumers of regular brand versus green brands in Ukraine and established that consumer loyalty to the eco-brand exceeded the rate of consumer loyalty to the regular brand by 3%. Additionally, the price premium of a green brand was found to be influenced by consumer loyalty. However, Yulisetiarini *et al.* (2024)'s study on the effect of green prices and service quality on customer loyalty using the Starbucks Coffee consumer satisfaction in Jember Regency found green price to have an insignificant effect on customer loyalty. The divergent and convergent findings reinforce the view that green pricing must be strategically

positioned to reflect both environmental benefits and economic justification, especially in markets where cost sensitivity and value perception are critical.

5.2.3 Influence of Green Promotion on Customer Loyalty

Green promotion did not have a statistically significant influence on customer loyalty according to the study findings. This is an indication that promotional efforts alone may not be sufficient to drive loyalty unless integrated with other strategic elements. There was a positive but non-significant coefficient for green promotion ($\beta = 0.373$, $p = 0.197$), suggesting that while promotion may have some influence, it was not strong enough to be statistically confirmed in this model. Qualitative data revealed that firms engage in various promotional activities such as customer sensitization, environmental awareness campaigns and partnerships with institutions. One respondent shared, "*the adoption has sensitized customers on the importance of buying environment-friendly products.*" These findings suggest that while green promotion may raise awareness, it may not independently lead to loyalty unless supported by product quality and customer satisfaction.

While green promotion did not show a statistically significant influence in your study, prior research has highlighted its potential when integrated with other marketing elements. For example, Liu *et al.* (2025) emphasized that green promotion enhances customer awareness and trust when coupled with product quality and corporate image. Mohammadi *et al.* (2023) also found that promotional efforts significantly influenced brand loyalty in sectors where environmental messaging was perceived as authentic and consistent. These divergent findings may stem from various factors such as consumer skepticism, limited exposure to green campaigns or insufficient integration of

promotion with product performance. This implies that green promotion, though valuable for building awareness, may require reinforcement through tangible product benefits and satisfaction to translate into loyalty.

5.2.4 Influence of Green Corporate Image on Customer Loyalty

According to the study results, green corporate image did not have a statistically significant influence on customer loyalty. This means that a firm's environmental reputation alone may not be enough to secure customer loyalty. Quantitative results showed a near-zero and non-significant coefficient for green corporate image ($\beta = -0.034$, $p = 0.428$), indicating that changes in corporate image were not significantly associated with changes in loyalty levels. Qualitative responses suggested that while customers appreciate a firm's green image, it must be backed by tangible actions and consistent product experiences. One participant noted that "*our customers associate us with environmental responsibility*," but this perception alone did not guarantee loyalty. These findings imply that green corporate image must be reinforced by credible practices and customer satisfaction to have a meaningful impact on loyalty.

Although this study found no direct statistical link between green corporate image and customer loyalty, the existing literature suggests that its influence may be mediated through other constructs. For instance, Liu *et al.*, (2025) and Gelderman *et al.* (2021) reported that green corporate image positively affects loyalty when it enhances customer satisfaction and trust. In the B2B settings, firms often rely on a supplier's corporate image to judge its products reliability especially when it is difficult to assess the product directly. The insignificance in this study's findings may reflect a disconnect between perceived image and actual customer experience. This emphasizes the need

for manufacturing firms to align their environmental reputations with consistent product and service deliver. This supports the argument that corporate image alone is inadequate and must be demonstrated by credible actions and customer-oriented outcomes.

5.2.5 Intervening role of Green Customer Satisfaction on the Relationship between Green Marketing Strategies and Customer Loyalty

Green customer satisfaction was found to significantly intervene in the relationship between green marketing strategies and customer loyalty in manufacturing firms in Nairobi City County. This means that customer satisfaction plays a mediating role, enhancing the effect of green marketing strategies on customer loyalty. Green marketing strategies had a significant positive effect on both customer satisfaction ($\beta = 3.184$, $p = 0.000$) and customer loyalty ($\beta = 0.722$, $p = 0.018$). Customer satisfaction also had a strong and statistically significant influence on customer loyalty ($\beta = 2.041$, $p = 0.000$). When both green marketing strategies and customer satisfaction were included in the same model, both remained significant predictors of loyalty (β for satisfaction = 2.488, $p = 0.000$; β for green marketing strategies = 0.887, $p = 0.041$), with a slight reduction in the coefficient for green marketing strategies. This confirmed the presence of partial mediation. Qualitative findings from content analysis reinforced these results in the respondents emphasized that satisfaction is not only a result of product performance and environmental value but also a critical link that transforms positive perceptions into long-term loyalty.

These findings are both supported and challenged by existing literature, highlighting the contextual complexity of green customer satisfaction as a mediating variable. Wong

et al. (2023) found a significant satisfaction–loyalty link among Hong Kong consumers although green product quality, corporate image, and trust did not significantly influence loyalty yet they were positively correlated with satisfaction. In contrast, Creignou and Nuangjamnong (2022) reported that both green product quality and price significantly affected satisfaction and loyalty in Thailand's fashion industry. This suggests that sectoral and regional dynamics may shape consumer responses to green marketing strategies. Sarko and Sukawati (2022) further affirmed the direct influence of green product quality, brand image, and satisfaction on loyalty among fast-food consumers in Indonesia. The divergent findings across geographical and sectoral contexts stresses the need for localized research such as the present study to clarify the mediating role of green customer satisfaction and its implications for loyalty in B2B environments.

5.2.6 Moderating Role of Regulatory Frameworks on the Relationship between Green Marketing Strategies and Customer Loyalty

The study findings indicated that regulatory frameworks do not have a statistically significant moderating effect on the relationship between green marketing strategies and customer loyalty in manufacturing firms in Nairobi City County. This means that, based on quantitative evidence, regulatory frameworks do not significantly alter the strength or direction of the relationship between green marketing strategies and customer loyalty. Statistically, the interaction term between green marketing strategies and regulatory frameworks had a negative but statistically non-significant coefficient ($\beta = -0.147, p = 0.445$). While regulatory frameworks independently had a strong and significant positive effect on customer loyalty ($\beta = 1.652, p = 0.000$), their role as a moderator in the relationship between green marketing strategies and loyalty was not

supported by the data. However, qualitative findings from content analysis revealed a more detailed understanding. Respondents described regulatory compliance not merely as a legal requirement but as a structural and cultural enabler of green marketing strategies.

While green marketing strategies have been widely examined in relation to customer loyalty, the role of regulatory frameworks as a moderating variable remains underexplored. Zhang *et al.* 2023) identified commonly tested moderators such as green knowledge, green consciousness, gender and inter-generational differences but regulatory frameworks were notably absent. Their findings highlighted that these moderators influenced the relationship between constructs like green practice, green image, corporate social responsibility, and green innovation with customer loyalty. In contrast, Nzomo et al. (2023) study revealed a significant negative moderation effect. However, their study focused on performance sustainability rather than customer loyalty, and involved different constructs from those examined in the current research. This brought out a critical gap in the literature and reinforced the relevance of the present study, which uniquely investigated the moderating role of regulatory frameworks in the relationship between green marketing strategies and customer loyalty within the Manufacturing sector in Kenya.

5.2.7 Joint Effect of Green Marketing Strategies, Customer Satisfaction, and Regulatory Frameworks on Customer Loyalty

The study found that there is a statistically significant joint effect of green marketing strategies, customer satisfaction, and regulatory frameworks on customer loyalty in manufacturing firms in Nairobi City County. This means that when considered

together, these three factors significantly influence the likelihood of customers remaining loyal to green brands. Results from the multiple ordinal regression model showed that all three predictors had statistically significant effects on customer loyalty. Green customer satisfaction had the strongest positive influence ($\beta = 2.512, p = 0.000$), followed by regulatory frameworks ($\beta = 1.743, p = 0.000$). Interestingly, green marketing strategies had a statistically significant negative coefficient in the joint model ($\beta = -1.298, p = 0.007$). This suggests that when customer satisfaction and regulatory frameworks are accounted for, the direct effect of green marketing strategies on loyalty may diminish or reverse, possibly due to overlapping variance or customer skepticism when green claims are not supported by satisfaction or compliance.

Many existing studies have explored aspects of green marketing, customer satisfaction, and regulatory frameworks, but few have examined all three variables together, especially within manufacturing firms in developing countries. Past research has mostly focused on consumer markets in developed economies and often investigated the variables separately, making it difficult to draw conclusive insights for the manufacturing firms in Kenya. This study filled that gap by developing and testing an integrated framework that considers these elements jointly. By including various manufacturing subsectors, it provided a broader and more relevant findings that address Kenya's specific socio-economic and policy environment. The study found a statistically significant joint effect of green marketing strategies, customer satisfaction, and regulatory frameworks on customer loyalty. When looked at together, these factors strongly influence whether customers stay loyal to green brands or not. It is worth noting that GM strategies had a negative coefficient when included with the other factors. This suggests that marketing alone may not enhance loyalty unless it is

supported by genuine customer satisfaction and solid regulatory compliance. Hence, firms need to go beyond promotional messages and focus on delivering satisfying green experiences supported by clear policies and environmental accountability to build lasting customer relationships.

5.3 Conclusions

This section presents the conclusions drawn from the study's specific objectives, based on both quantitative and qualitative findings. The section provides a synthesis of how GM strategies, customer satisfaction and regulatory frameworks influenced customer loyalty among manufacturing firms in Nairobi City County.

5.3.1 Influence of Green Product Quality on Customer Loyalty

The study concluded that green product quality significantly enhances customer loyalty among manufacturing firms in Nairobi City County. Quantitative results revealed a positive and statistically significant effect ($\beta = 0.804,\ p = 0.007$), confirming that customers prefer firms offering durable, safe, and environmentally sound products. This suggests that product quality is a statement of ethical responsibility that resonates with buyers who prioritize sustainability. A high-quality green product communicates reliability and performance, which builds confidence and encourages loyalty in the long run.

In qualitative responses, respondents emphasized that customer loyalty strengthens when products meet both functional and environmental expectations. Respondents highlighted how lasting performance, eco-conscious design, and consistency in delivery contribute to long-term relationships with the manufacturing firms. Therefore, the study established that green product quality is a core element in loyalty-building,

functioning both as a value offering and a trust mechanism in business-to-business interactions.

5.3.2 Influence of Green Price on Customer Loyalty

Green price did not show a statistically significant standalone effect on customer loyalty ($\beta = -0.337, p = 0.403$). This indicates that while price is relevant, it is not a key driver of loyalty when evaluated in isolation. Many respondents were unwilling to commit purely on pricing especially if other factors such as quality or environmental impact were absent. This suggests that price-based strategies need reinforcement from visible value additions to appeal to loyalty-focused consumers.

However, qualitative insights revealed a different perspective. Respondents were open to higher prices if they believed the premium price supported environmental goals or translated into quality assurance. For example, if green pricing reflects investment in cleaner processes or product durability, customers are more willing to accept it. Thus, the study concludes that green price influences loyalty indirectly, operating effectively when customers perceive the pricing structure as fair, transparent, and aligned with environmental benefits.

5.3.3 Influence of Green Promotion on Customer Loyalty

The study established that green promotion does not have a statistically significant direct effect on customer loyalty ($\beta = 0.373, p = 0.197$). Promotional activities may raise awareness but they do not independently drive sustained customer commitment. Promotion alone is insufficient unless it is supported by actual performance and visible value creation. Promotional tools such as advertisements and public campaigns must connect with core customer values to influence behavior significantly.

On the other hand, the qualitative data emphasized that green promotion enhances credibility in that Customers value educational campaigns and transparent communication that help them understand the firm's sustainability goals. Some respondents mentioned internal staff training, partnerships with environmental bodies, and awareness drives as helpful measures. In conclusion, green promotion plays a supportive role by improving customer perception and reinforcing loyalty when linked to authentic products and customer satisfaction.

5.3.4 Influence of Green Corporate Image on Customer Loyalty

Green corporate image showed minimal statistical influence on customer loyalty ($\beta = -0.034$, $p = 0.428$) suggesting that branding and image alone do not predict repeat buying behavior. In competitive B2B environments, customers demand and expect tangibility over style. Hence, a green image that lacks support through actual sustainability practices may be viewed as symbolic or insincere, limiting its impact on loyalty outcomes.

Nonetheless, the study's qualitative findings pointed to image as an influential background factor in that respondents highlighted that a strong green image intensifies the effectiveness of other strategies when the image reflects real environmental actions. Companies with visible commitments to sustainability, certifications and track records of eco-responsible conduct were viewed more positively. Therefore, while green corporate image may not lead loyalty on its own, it provides reputational support when backed by transparency and consistent green efforts.

5.3.5 Intervening Role of Green Customer Satisfaction between Green Marketing Strategies and Customer Loyalty

The study findings indicated that green customer satisfaction significantly mediates the relationship between green marketing strategies and customer loyalty. Marketing efforts were strongly linked to satisfaction ($\beta = 3.184, p = 0.000$), and satisfaction had a powerful influence on loyalty ($\beta = 2.041, p = 0.000$). When modeled together, the strength of the direct relationship decreased slightly ($\beta = 0.887, p = 0.041$) confirming a partial mediation. This is an indication that that customers become loyal not just because of the strategies in place, but because those strategies make them genuinely satisfied.

Qualitative data supported this interpretation, with respondents noting that satisfaction arises when green initiatives match customer expectations. Respondents expressed appreciation for firms that demonstrate clear alignment between environmental promises and actual delivery. Satisfaction helps transform one-time purchases into lasting relationships, especially when green quality and pricing meet ethical and environmental standards. Therefore, green satisfaction acts as a core variable that leads to customer loyalty emerging from well executed GM strategies.

5.3.6 Moderating Role of Regulatory Frameworks between Green Marketing Strategies and Customer Loyalty

Although the moderating effect of regulatory frameworks on the relationship between green marketing strategies and customer loyalty was not statistically significant ($\beta = -0.147, p = 0.445$), their individual effect was strong ($\beta = 1.652, p = 0.000$). This suggests that regulatory frameworks contribute meaningfully to customer trust and firm

credibility, even if they do not reshape how strategies affect loyalty directly. Buyers in green markets often view compliance as a minimum requirement and an indicator of organizational integrity.

Qualitative responses revealed that companies enforce these regulations through structured systems such as EMS, sustainability audits, and training programs. These frameworks legitimize green practices and show customers that the firm is committed to environmental standards. Therefore, while regulatory frameworks may not directly moderate strategy effectiveness, they serve as practical pillars of institutional credibility and support customer retention by confirming a firm's environmental commitment.

5.3.7 Joint Effect of Green Marketing Strategies, Green Customer Satisfaction, and Regulatory Frameworks on Customer Loyalty

The study concluded that a significant joint effect exists between green marketing strategies, customer satisfaction, and regulatory frameworks on customer loyalty. In this combined model, customer satisfaction was the strongest driver ($\beta = 2.512, p = 0.000$), followed by regulatory frameworks ($\beta = 1.743, p = 0.000$). However, GM strategies showed a negative coefficient when modeled with the others ($\beta = –1.298, p = 0.007$), suggesting their perceived influence reduces when satisfaction and compliance are strong.

This finding highlights the importance of balance and integration. Qualitative data revealed that firms that align green messages with customer needs and enforce regulatory standards nurture more committed customer relationships. Respondents responded positively when strategies felt authentic and were backed by real action. In conclusion, loyalty does not stem from isolated initiatives but from a system where

satisfaction, regulatory credibility and green strategies reinforce each other significantly.

5.4 Recommendations

This section presents specific recommendations based on the study's objectives and key findings on the influence of green marketing strategies, customer satisfaction, and regulatory frameworks on customer loyalty in manufacturing firms in Nairobi City County. The recommendations are organized by stakeholder groups namely manufacturing firms, regulatory agencies, and green marketing professionals, and are grounded on the conclusions drawn per each of the study objectives.

5.4.1 Influence of Green Product Quality on Customer Loyalty

Manufacturing firms should prioritize green product quality as a strategic pillar of customer loyalty. This is because study showed that high quality green products significantly influence loyalty, especially when they offer durability, health-conscious design and environmental performance. It is recommended that firms invest in product research, eco-certifications, and consistent quality control mechanisms. This will help build buyer trust and reinforce loyalty in the competitive green markets.

To support these efforts, regulatory agencies such as NEMA and various industry associations should promote certification schemes and set sector wide benchmarks for green product quality. Policy makers and technical agencies should also provide policy guidance and technical assistance to facilitate effective policy implementation and technical knowledge sharing across various subsectors to foster innovation in green product development.

5.4.2 Influence of Green Price on Customer Loyalty

Although green price was not a statistically significant predictor of loyalty, qualitative responses revealed that perceived fairness and environmental justification are critical. Manufacturing firms should adopt transparent, value-based pricing strategies that reflect the environmental benefits included in their products. Premium pricing should be supported by visible quality and sustainability improvements to justify customer commitment.

Policy makers are encouraged to support fair pricing structures by subsidizing sustainable production inputs and offering tax incentives for firms adopting cleaner technologies. Educational outreach and public campaigns can help customers understand the environmental rationale behind pricing, thus improving acceptance and trust.

5.4.3 Influence of Green Promotion on Customer Loyalty

Green promotion should be used as a supportive mechanism to enhance customer awareness and reinforce the firm's sustainability narrative. Firms are advised to integrate storytelling, customer success stories, and transparent reporting into their promotional materials. Promotions should link messaging to tangible outcomes such as emission reductions or community impact rather than relying only on environmental symbolism.

Various marketing teams should collaborate with product and compliance departments to ensure promotional claims are credible and aligned with internal production and environmental sustainability efforts. Regulators can provide advertising and

promotional guidelines to help eliminate greenwashing risks and ensure effective communication integrity across the manufacturing sector.

5.4.4 Influence of Green Corporate Image on Green Customer Loyalty

Green corporate image should be supported by tangible sustainability actions. While image alone did not statistically drive loyalty, it was shown to enhance other strategic elements when built on genuine environmental practices. Manufacturing firms should document and publicly share their sustainability milestones, certifications, and community partnerships to build a trustworthy green identity.

Policy makers and regulators should support accountability and transparency initiatives by establishing green reporting standards and recognition programs. This will encourage the manufacturing firms to move beyond surface branding and build credibility through concrete action which boosts, enhances and promotes customer confidence in the long run.

5.4.5 Mediating Role of Green Customer Satisfaction between Green Marketing Strategies and Customer Loyalty

Customer satisfaction acts as the bridge between green marketing strategies and loyalty. Firms must continuously monitor satisfaction levels and align their sustainability goals with customer expectations. It is recommended that they implement feedback systems, satisfaction surveys, and post-purchase follow-ups specifically focused on green product performance and eco-value delivery. Marketing and customer experience teams should develop loyalty programs informed by customer satisfaction data. Regulators

and industry bodies can assist by creating platforms for customer feedback and facilitating benchmarking across firms to ensure consistent quality and satisfaction outcomes.

5.4.6 Moderating Role of Regulatory Frameworks between GM Strategies and Customer Loyalty

Although regulatory frameworks did not statistically moderate the relationship, they were shown to have a strong independent impact on customer loyalty. Firms should institutionalize environmental compliance by integrating Environmental Management Systems (EMSs), conducting regular audits, and involving all departments in environmental sustainability procedures.

Policy makers and technical operatives should strengthen institutional policy oversight and offer technical assistance to ensure the manufacturing firms understand and meet conformance and compliance requirements. Targeted and specific capacity-building and sensitization programs that are tailored to both SMEs and large firms should focus on simplifying the adoption of existing regulations in ways that are implementable, practical and cost-effective.

5.4.7 Joint Effect of Green Marketing Strategies, Customer Satisfaction, and Regulatory Frameworks on Customer Loyalty

Loyalty is most effectively built when green marketing strategies, customer satisfaction, and regulatory compliance work together. Firms should design integrated strategies that connect marketing efforts with quality service and visible adherence to environmental standards. It is recommended that firms establish cross-functional sustainability committees to ensure the alignment across departments.

Regulators should incentivize coordinated efforts through recognition schemes that assess the manufacturing firms based on marketing credibility, customer experience, and compliance records. This holistic model will strengthen environmental integrity and encourage sustained loyalty among green-conscious customers.

5.5 Suggestions for Further Research

While the findings of this study contribute substantially to existing knowledge and practice, the following suggestions are proposed for future research to expand the conversation and explore emerging research opportunities.

5.5.1 Conduct Similar Studies across Different Sectors and Regions

Researchers are encouraged to carry out similar studies in other different sectors such as transport, health and education sectors. This is because various sectors respond to green marketing strategies differently, depending on the level of regulatory oversight or environmental sensitivity. Expanding the geographical scope and industry focus would help compare and contrast loyalty and satisfaction patterns and provide a deeper understanding of how location and sector-specific dynamics influence customer loyalty.

5.5.2 Investigate Customer Loyalty over Time using Longitudinal Designs

The current study was cross-sectional in nature, capturing customer loyalty insights at a single point in time. A longitudinal approach, where data is collected over an extended period, could help identify how loyalty changes as manufacturing firms adopt new environmental practices or respond to evolving regulatory pressures. This would deepen understanding of the durability of customer loyalty and how satisfaction and trust develop over time.

5.5.3 Explore the Role of Organizational Culture in Supporting Green Strategies

Qualitative findings revealed that firms with strong internal systems such as Environmental Management Systems (EMSs), staff sensitization programs, and strategic compliance blueprints were more likely to build customer loyalty through green initiatives. Further studies could focus on organizational culture, leadership commitment, and employee engagement as potential factors that influence the success of green marketing strategies. This would help identify internal enablers that complement external efforts.

5.5.4 Examine Perceived Authenticity and Customer Trust in Green Marketing

In the joint regression model used in the study, green marketing strategies showed a negative coefficient when modeled alongside satisfaction and compliance, suggesting the possibility of customer skepticism or perceived "greenwashing." Researchers could explore how perceived authenticity, brand transparency, and customer trust mediate and/or moderate the relationship between green marketing strategies and loyalty. This line of inquiry would shed light on why some green initiatives succeed in building loyalty, while others do not.

5.5.5 Study the Influence of Digital Platforms on Green Customer Engagement

With more manufacturing firms adopting digital tools to communicate sustainability practices, there is a growing need to explore how platforms such as websites, social media, and email campaigns influence customer engagement and loyalty. Researchers could investigate which platforms are most effective, how green messages are

perceived and received online, and whether digital storytelling builds stronger connections with customers who value environmental responsibility.

5.5.6 Assess the Impact of Environment-Based Customer Loyalty Programs

An emerging area of interest lies in eco-incentives or green loyalty programs which are initiatives that reward customers for supporting sustainable businesses. Future research could assess whether loyalty schemes based on environmental values, such as discounts for using refillable containers or earning points for eco-conscious purchases, meaningfully influence repeat behavior. This would offer actionable insights for manufacturing entities and firms seeking innovative ways of retaining environmentally minded customers.

5.5.7 Expand the Study to Cross- County, National and Regional Contexts

To broaden the scope and geographical reach of this work, future studies could replicate this study in various Counties and other countries across East Africa and Africa. Comparative studies between Kenya and other countries such as Uganda, Tanzania, Ethiopia, Burundi, or Rwanda could reveal how differing policy and regulatory settings, socio-cultural values, or economic conditions shape customer responses to green marketing. Such work would support the development of regionally sensitive green marketing frameworks and policy benchmarks.

5.6 Chapter Summary

This chapter presented a synthesis of the findings of the study, conclusions, and recommendations regarding the influence of green marketing strategies, customer satisfaction, and regulatory frameworks on customer loyalty among manufacturing firms in Nairobi City County. The study revealed that green product quality

significantly drives customer loyalty, while green price, promotion, and corporate image have limited direct influence unless supported by genuine value and credibility. Customer satisfaction emerged as a key mediating factor, enhancing the effectiveness of green strategies Regulatory frameworks contributed independently to loyalty by reinforcing trust and compliance. Though they did not statistically moderate the strategy–loyalty relationship, their structural importance was evident. The joint model highlighted the interconnectedness of strategies, satisfaction, and regulation, suggesting that customer loyalty is best cultivated through an integrated approach that aligns environmental performance, satisfaction, and institutional credibility.

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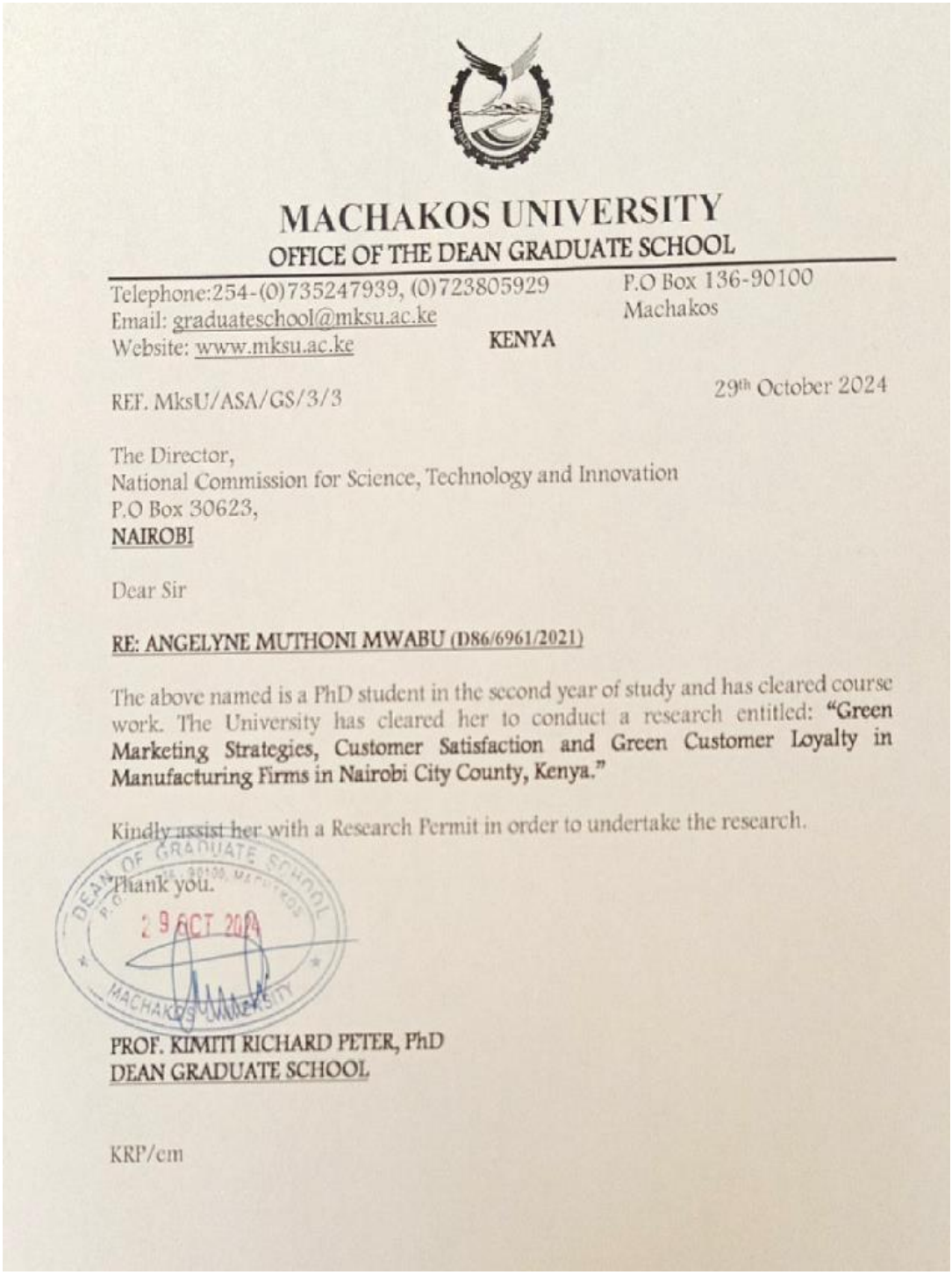
APPENDICES

Appendix I: Letter of Introduction



MACHAKOS UNIVERSITY
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KENYA

REF. MksU/ASA/GS/3/3

29th October 2024

The Director,
National Commission for Science, Technology and Innovation
P.O Box 30623,
NAIROBI

Dear Sir

RE: ANGELYNE MUTHONI MWABU (D86/6961/2021)

The above named is a PhD student in the second year of study and has cleared course work. The University has cleared her to conduct a research entitled: **"Green Marketing Strategies, Customer Satisfaction and Green Customer Loyalty in Manufacturing Firms in Nairobi City County, Kenya."**

Kindly assist her with a Research Permit in order to undertake the research.

Thank you.

DEAN OF GRADUATE SCHOOL
P.O. BOX 136-90100, MACHAKOS
MACHAKOS UNIVERSITY
29 OCT 2024

PROF. KIMITI RICHARD PETER, PhD
DEAN GRADUATE SCHOOL

KRP/cm

Appendix II: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 911928

Date of Issue: 22/November/2024

RESEARCH LICENSE

This is to Certify that Ms.. Angelyne Muthoni Mwabu of Machakos University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in on the topic: Green Marketing Strategies, Customer Satisfaction and Green Customer Loyalty in Manufacturing Firms in Nairobi City County, Kenya for the period ending : 22/November/2025.

License No: NACOSTI/P/24/42287

911928

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
    i. Endanger national security
    ii. Adversely affect the lives of Kenyans
    iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
    iv. Result in exploitation of intellectual property rights of communities in Kenya
    v. Adversely affect the environment
    vi. Adversely affect the rights of communities
    vii. Endanger public safety and national cohesion
    viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and
Innovation(NACOSTI),
Off Waiyaki Way, Upper Kabete,
P. O. Box 30623 - 00100 Nairobi, KENYA
Telephone: 020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix III: Questionnaire

Dear Respondent,

My name is Angelyne Muthoni Mwabu currently pursuing a Doctor of Philosophy Degree (PhD) in Business at Machakos University. I am conducting a study on "The influence of Green Marketing Strategies on Green Customer Loyalty in the Manufacturing Firms in Nairobi City County, Kenya." The aim of this questionnaire is to collect data from manufacturing firms in Nairobi City County. The study is targeting heads of procurement, marketing and production divisions in the manufacturing Firms that are members of Kenya Association of Manufacturers (KAM). Therefore, you have been identified as one of the respondents for this study. The data collected will be used for academic purposes only and will be treated with utmost confidence. I would be grateful if you spared a part of your busy schedule to respond to the questions and/or statements included in the questionnaire.

Thank you.

SECTION 1: BACKGROUND INFORMATION OF YOUR FIRM

Job title of Respondent ……....

Number of years you have worked at the Firm …….

Number of years the Company has been in operation……

Indicate the gender of your Company's CEO/MD (interview guide)

Male ☐ Female ☐

Indicate the status of your Company (Tick √ as appropriate)

Private locally owned ☐ Parastatal ☐

Multinational ☐ Publicly owned ☐

Other (please specify) …….

Is your Company ISO 14000 certified?

Yes ☐ No ☐

If your answer is yes, which year was it ISO 1400 certified?

SECTION 2: GREEN MARKETING STRATEGIES

Please indicate with a tick (√) the extent to which your Firm has adopted the following green marketing strategies using a rating scale of 1 to 5 where 5=to a very

large extent; 4=to a large extent; 3= to a moderate extent; 2= to a small extent and 1=not at all.

Green Marketing Strategies	**5**	**4**	**3**	**2**	**1**
Green Product Quality					
The products supplied by this Company meet or exceed the requirements of existing environmental regulations					
The products supplied by this Company consume minimal resources like as water, electricity, raw materials, human capital, etc					
The products supplied by this Company can easily be recycled, decomposed and reused					
The products supplied by this Company has minimum environmental damage					
The contents, ingredients and raw materials of products supplied by this company are environmentally friendly					
This company uses recycled or re-usable materials in its products					
The packaging materials of this supplier is of a recyclable content					
This supplier develops products and processes that minimize environmental impact					
This supplier uses renewable energy sources					
This supplier has modified its packaging and labelling decisions					
Green Product Price					
The price of the green product supplied by this supplier is acceptable					
This supplier's price of the green product is fair					
The price of the green product of this supplier is reasonable					
This supplier considers environmental aspects within its price policy					
This supplier has built environmental benefits and/or costs into the product price					
This supplier employs pricing to encourage environmental actions					
This supplier charges higher prices for environmentally friendly versions of its products					
Green Promotion					
This supplier employs green arguments in advertising and promotions					

This supplier uses eco-labels on its products					
This supplier sponsors and/or patronages environmental groups/events					
This supplier emphasizes the environmental aspects of its products in advertisements					
This supplier highlights its commitment to environmental preservation in the corporate advertisements					
This supplier uses e-commerce in its marketing activities					
This supplier reduces any negative impact of the marketing promotions on the natural environment					
Green Corporate Image					
The products of this supplier are credible and stable					
This supplier has sufficient ability and capacity to meet the green needs of customers					
This Firm has a good environmental reputation					
This Firm has acceptable performance with respect to environmental management standards and green innovation					

What is your opinion on the adoption of green products by the Company?

How do you think green product quality influences the loyalty of organizational buyers?

SECTION 3: GREEN CUSTOMER SATISFACTION

Please indicate with a tick (√) the extent to which you agree or disagree with the following statements on customer satisfaction using a rating scale of 1 to 5 where: 1 = Strongly Disagree; 2 = Disagree; 3 = Indifferent; 4 = Agree; 5 = Strongly Agree

Green Customer Satisfaction	**5**	**4**	**3**	**2**	**1**
I am satisfied with my decision to purchase the green products from this supplier					
I am glad to purchase the green products from this supplier					
I believe that I do the right thing in purchasing green products from this supplier					
I feel that I contribute to environmental protection and sustainable development by buying from this supplier					
Overall, I am glad to buy green products from this supplier because they are environmentally friendly					
Overall, I am satisfied with green products from this supplier because of their environmental benefit					
This supplier meets customers' green perceived value					
Green customer's expectations are met by this supplier					
This supplier offers its customers perceived green quality					

In which other ways does your Company achieve green satisfaction?

State, in your own opinion, how you think green customer satisfaction influences customer loyalty.

SECTION 4: REGULATORY FRAMEWORKS

Please indicate with a tick (√) the extent to which you agree or disagree with the following statements on regarding Regulatory frameworks using a rating scale of 1 to 5, where:

1 = Strongly Disagree; 2 = Disagree; 3 = Indifferent; 4 = Agree; 5 = Strongly Agree

Regulatory Frameworks	**5**	**4**	**3**	**2**	**1**
The government has instituted environmental regulations to regulate activities, processes and production of this supplier					
The environmental regulations are flexible to the supplier					
Environmental regulations enable this supplier to operate with minimum adverse effects on the environment					
The environmental regulations clearly indicate the action to be taken against this supplier in case of noncompliance to the Regulations					
This supplier adheres to clean technological processes and regulations					
This supplier uses clean technology in the production process					
Clean technological processes and regulations have enabled this supplier to operate efficiently					
NEMA has clear environmental guidelines guiding the supplier's activities and operations					
NEMA has conducted environmental audits for this supplier in the last 3 years					
This supplier has complied with NEMA regulations					
NEMA has once penalized the supplier for non-compliance to its guidelines					

Suggest ways in which you think satisfaction influences green loyalty in your Company.

SECTION 5: CUSTOMER LOYALTY

Please indicate with a tick (√) the extent to which you agree or disagree with the following statements on regarding Regulatory frameworks using a rating scale of 1 to 5, where:

1 = Strongly Disagree; 2 = Disagree; 3 = Indifferent; 4 = Agree; 5 = Strongly Agree

Customer Loyalty	**5**	**4**	**3**	**2**	**1**
I will continue purchasing products from a this supplier because of its commitment to green practices					
I am willing to recommend this supplier to my business partners and industry contacts because of their environmental initiatives					
I can accept a higher price from this supplier for their green products even though the price of non-green products is cheaper					
I can switch to a competing supplier who is environment conscious					
I am eager to repurchase from a supplier because of its to its environmental performance					
I rarely consider switching to other suppliers due to this supplier's effective environmental consciousness					

"Thank you for your cooperation"

Appendix IV: Interview Guide

SECTION 1: GREEN MARKETING STRATEGIES

Green Product Quality

How has your supplier integrated green product quality into their offerings?

……

……

……

How has your supplier's focus on green product quality affected your business operations or product choices?

……

……

……

Green Product Price

What pricing strategies has your supplier employed to reflect the environmental benefits of their products?

……

……

……

How does your supplier balance the cost of green products with customer expectations and market competitiveness?

……

……

……

Green Promotion

In what ways does your supplier communicate their green initiatives and product benefits to you? Please describe their promotional activities.

……

……

……

How effective have you found your supplier's green marketing communications in influencing your purchasing decisions?

……

……

……

Green Corporate Image

What aspects of your supplier's corporate image reflect their commitment to environmental sustainability?

……

……

……

How does your supplier's green corporate image impact your perception of their overall brand and reputation?

……

……

……

SECTION 2: GREEN CUSTOMER SATISFACTION

Can you describe how satisfied you are with your decision to purchase green products from this supplier?

……

……

……

What factors influenced your decision to choose green products from this supplier?

……

……

……

How would you describe your experience of purchasing green products from this supplier?

……

……

……

Do you feel that purchasing green products from this supplier was the right choice for your company? Why or why not?

……

……

……

How does this choice align with your company's environmental values and goals?

……

……

……

SECTION 3: REGULATORY FRAMEWORKS

How has the implementation of environmental regulations by the government affected your operations?

……

……

……

Do you find the current environmental regulations to be flexible or restrictive for your operations? Please explain.

……

……

……

In what ways have environmental regulations helped you minimize adverse effects on the environment?

……

……

……

How does your company ensure compliance with environmental guidelines set by NEMA?

……

……

……

How have clean technological processes and regulations contributed to your operational efficiency?

……

……

……

SECTION 4: CUSTOMER LOYALTY

Describe how the supplier's commitment to green practices influences your decision to continue purchasing from them?

……

……

……

How likely are you to recommend this supplier to your business partners or industry contacts based on their environmental initiatives?

……

……

……

Are you willing to accept a higher price for green products?

……

……

……

How does the supplier's environmental performance impact your eagerness to repurchase from them?

……

……

……

Do you feel that their environmental practices align with your company's values and goals?

……

……

Appendix V: List of Manufacturing Firms in Nairobi City County

Building & Construction

1. Afrikstones Ltd
2. Aristocrats Concrete Limited
3. Bamburi Cement Ltd
4. Bamburi Spacial Products Ltd
5. Blue Stone Ltd
6. Boyana Building Materials
7. EPQO Quarries
8. Eurocond Tiles Products Ltd
9. Gjenge Makers Ltd
10. Greystone Industries Ltd
11. Hydro Water Well (K) Ltd
12. KEDA (K) Ceramics Company Ltd
13. Keda Ceramic International Company Limited
14. Kenbro Industries Ltd
15. Kenya Builders & concrete Ltd
16. Laxmanbhai Construction Ltd
17. Mayleen (K) Ltd
18. Mineral Enterprise Ltd
19. Quest Works Ltd
20. Rexe Roofing Products
21. Saj Ceramics Ltd
22. Silverstone Quarry Ltd
23. Space and Style Ltd
24. Tile & Carpet Center
25. Warren Concrete Ltd
26. Wotech Kenyan Ltd

Chemical & Allied Sector

27. Airos Investment Ltd
28. Aluglass Africa Ltd
29. Balaji Group of Industries Limited
30. Basco Products (K) Ltd
31. BASF East Africa Ltd
32. Batra Company Ltd
33. Bayer East Africa Ltd
34. Beiersdorf East Africa Ltd
35. Beyond Boader International Ltd
36. Biocorn Products (EPZ) Ltd
37. Bitutech Limited
38. Blends of Nature Ltd
39. Blue Ring Products Ltd
40. BOC Kenya Ltd
41. Buyline Industries Ltd

42. Chemraw EA Ltd
43. Chrysal Africa Ltd
44. Chryso Eastern Africa Ltd
45. Colgate Palmolive (EA) Ltd
46. Consol Grass Kenya Ltd
47. Crowns Paints Kenya PLC
48. Di Lorenzo Ltd
49. Diversey Eastern & Central Africa
50. Dow Chemicals East Africa Ltd
51. Drychem Kenya Solutions Ltd
52. East Africa Ventures Company Ltd
53. Elex Products Ltd
54. Elpha Kenya Limited
55. Elvants Limited
56. Emat for Investment Limited
57. Empire Glass Industries Ltd
58. Fosroc Kenya Limited
59. Galaxy Pints & Coating Ltd
60. Glerian Limited
61. H.B. Fuller Kenya Ltd
62. Haco Industries
63. Hanse Impex Company Limited
64. Hayat Kimya Kenya Hygienic Products
65. Henkel Kenya Ltd
66. Highchem East Africa Ltd
67. Hi-Tech Inks &Coating Ltd
68. Hychem Hygiene and Healthcare Solutions Limited
69. Ideal Manufacturing Ltd
70. Impala Glass Limited
71. Interconsumer Products Ltd
72. Kanku Keny Ltd
73. Kansai Plascon Ltd
74. Kemia International Limited (Clariant)
75. Kenafrica Matches Ltd
76. Kip Melamine Co. Ltd
77. Kipepo Industry Limited
78. L'Oreal East Africa Ltd
79. Maisha Bora Limited
80. Mj-chemie Limited
81. Maroo Polymers Ltd
82. Mosara Ltd
83. Nasib Industrial Products Limited
84. Natures Touch LLP
85. Ndemmi Limited
86. Neuce Kenya paint Industry Ltd
87. Nubia Luxuries
88. Odex Chemicals Ltd
89. Osho Chemicals Industries Ltd

90. Pidlite East Africa Ltd
91. PolyChem East Africa Ltd
92. Polysythetics Eastern Africa Ltd
93. Qasil Beauty Limited
94. Rosakind East Africa Limited
95. Sanergy Ltd
96. SC Johnson and Son Kenya
97. Sheith Natural Ltd
98. Sika Kenya Limited
99. Silentnight Bedding Ltd
100. Silmak Agencies
101. Simba Foam Limited
102. Solipia Kenya Ltd
103. Sunda Industrial Company Ltd
104. Supa Brite Ltd
105. Supersleek Ltd
106. Syngenta East Africa Ltd
107. Synresins Ltd
108. Tri-Clover Industries (K) Ltd
109. Tropical Brand (Africa) Ltd
110. Twiga Chemical Industries Ltd
111. Ujasiri Ltd
112. Uniliver Kenya Ltd
113. Uzuri Industries Ltd
114. Vintage Reliable Service Ltd
115. Vitafoam Products Ltd
116. Yilmz Company Ltd
117. Zene Limited

Energy Electrical and Electronics Center

118. AFAL Manufacturing Ltd
119. Ariya Energy Holdings Limited
120. Azuri Technologies Kenya Ltd
121. BCS Kenya Ltd
122. Biogas International Ltd
123. Cable Connection Limited
124. East Africa Cable Ltd
125. Embilisher Limited
126. Espace Malter Ltd
127. Golden Lion International Ltd
128. Green Hillcable Co Ltd
129. Green Planet Kenya Limited
130. Holman Brothers (E.AQ) Ltd
131. Ibera Africa Power (EA) Ltd
132. ISKY Smart Tech Limited
133. Kenwest Cables Ltd
134. Kenya Electricity Generating Company Ltd (KENGEN)
135. Kenya Power Co.Ltd

136. Koko Network Ltd
137. Lacheka Lubricants Ltd
138. Lake Turkana Wind Power Ltd
139. Lucky Star General Ltd
140. Mafi East Africa Ltd
141. Manufacturing & Suppliers (K) Ltd
142. Masai Cables Limited
143. Metsec Cables Ltd
144. M-kopa Kenya Ltd
145. Mustaqbal Technology Company Ltd
146. Nationwide Electrical Industries Ltd
147. Optimum Lubricants Ltd
148. Pan Africa Transfomers & Switchgears Ltd
149. Patronics Service Ltd
150. Phillips East Africa Ltd
151. Repelectric (K) Ltd
152. Siger Kenya Ltd
153. Schneider Electric Ltd (Former Power Technics East Africa)
154. Solimpexs Africa Limted
155. Sunculture Kenya Ltd
156. Surge Energy Limited
157. Synergy Lubricants Solution Ltd
158. Tronic Kenya Limited
159. Vivo Energy
160. Welrods Ltd
161. Yocean Groups

Food and Beverage

162. Aceee Limited
163. Afribon (K) Limited
164. Afrimac Nut Company
165. Agriscope (Africa) Limited
166. Al –Noor Feisal &Co Ltd
167. Alicia Bakers & Confectioners Ltd
168. Al –mahra Indutries Ltd
169. Almasi Beverage Ltd
170. Alpine Coolers Ltd
171. Amki Kenya Ltd
172. Ankole Grill Ltd
173. Arax Mills Ltd
174. Azaavi Collection
175. Bakemark Ltd
176. Bakers Corner Ltd
177. Barakat Bakers Ltd
178. Bdelo Ltd
179. Belfast Millers Ltd
180. Bio Food Products Ltd
181. Bloc Enterprice Ltd

182. Blueplastics and Water Co. Ltd
183. Britania Food Ltd
184. British American Tobbaco Kenya Plc
185. Burton and Bamber Ltd
186. C Dormans SEZ Ltd
187. C.Czarnikow Sugar (EA) Ltd
188. Candy Kenya Ltd
189. Capel Food Ingridient
190. Confini Ltd
191. Convex Commodity Merchants Ltd
192. Crystal World Agencies Ltd
193. Danone Baby Nutrition Africa and Overseas
194. Devkan Enterprice Ltd
195. Devyani Foods Industries (Kenya) Ltd
196. DPL Festive Ltd
197. East Africa Breweries Ltd
198. East Africa Sea Food Ltd
199. Eastern Product Ltd (KaKUZI)
200. Eco Living Innternational Ltd
201. Edible Oil Products Ltd
202. Elekea Ltd
203. Europack Indutries Ltd
204. Excel Chemical Ltd
205. Famers Choice Ltd
206. Frigoken Ltd
207. Giloil Company Ltd
208. Glacier Productsa Ltd
209. Global Mark Food Ltd
210. Gonas Best Ltd
211. Grainuts Craft Ltd
212. Green Forest Foods Ltd
213. Healthy U Two Thousanda Ltd
214. Hephzibah International Ltd
215. Heritage Foods Ltd
216. Hope Tasty Cake Baker Ltd Mihango
217. Isinya Feeds Ltd (Former Sigma Supplies Ltd)
218. Kalabash Investment Ltd
219. Kamili Packers Ltd
220. Kenafrica Industries Ltd
221. Kenchic Ltd
222. Kentaste Products Ltd
223. Kemya Sweets Ltd
224. Kenya Tea DevelopmentAgencies
225. Kenya Wine Agencies Ltd
226. Kijani Agroproducts Ltd
227. Kirinyag Flour Mills
228. Koba Wters Ltd
229. Kwale International Sugar Company Ltd

230. Lactacare Kenya Ltd
231. Mamaz Spices Limited
232. Manji Food Industries Ltd
233. Marakiqana Ltd
234. Massatech Kenya Ltd
235. Melvin Marsh International Ltd
236. MHS Bakers Ltd
237. Midrow Kenya Ltd
238. Mini Bakeries (Nbi) Ltd
239. Mwakawa Investment Ltd
240. Nagaad Company Ltd
241. Naiorbi Bottlers Ltd
242. Nairobi Flour Mills Ltd
243. Nairobi Jave House Ltd
244. Nestle Kenya Ltd
245. Norda Industries Lrd
246. Patco Industries Ltd
247. Patiala Distillers K Ltd
248. Pembe Flour Mills Ltd
249. Pradiq Enterprice (E.A) Ltd
250. Premier FDood Industries Ltd
251. Propack Kenya Ltd
252. Rafiki Millers Ltd
253. RAZCO Ltd
254. Re-Suns Spices Ltd
255. Royal Swiss Bakery Ltd
256. Salim Wazarani Kenya Company
257. Sasin PLC
258. SBC Kenya Ltd
259. Scrumption Eats Ltd
260. Sigma Feeds Ltd
261. Simply Foods Ltd
262. Spice World Ltd
263. Suguna Foods Kenya Ltd
264. Sunny Processors Ltd
265. Suntory Beverage & Food Kenya Ltd
266. Supa Snacks Ltd
267. The Choclate Bar Ltd
268. The Harvester Eco Farm Ltd
269. Trisquire Products Ltd
270. Tropical Heat Ltd
271. Tropical Lush Ltd
272. Trufoods Ltd
273. Unga Group Ltd
274. Unipack Investment Limited
275. Upfield Kenya Ltd
276. Victory Farms Ltd
277. Wanji Food Industries Ltd Former Johnson Wax

278. Weetabix East Africa
279. Zeelandia Eat Africa Ltd
280. Zheng Homg (K) Ltd

Fresh Products Center

281. Bidco Land O' Lakes ltd
282. CFAO Agri Ltd
283. Chiromo Fertilizer Ltd
284. Farmyard International Investment Ltd
285. Kenya Horticultural Exporters (1977)
286. Miyonga Fresh Greens Enterprise Ltd

Leather and Footwear

287. Addison Industries Ltd
288. Adix Shoes Ltd
289. All Time Ltd
290. Budget Shoe Ltd
291. C &P Shoes Industries Ltd
292. Columbus Footware
293. Great Yadud Industry Limited
294. Jelio Leather Collections Limited
295. Patina Enterprises Limited
296. Reflex Footwear Limited
297. The Continental Superior Limited
298. Walker Industries Kenya Limited
299. Waziwazi Company Limited
300. Zingo Investments Limited

Metal & Allied

301. Accurate Steel Mills Limited
302. Afriken International Ltd
303. Ashut Engineers
304. ASL Ltd
305. ASP Company Ltd
306. Athi River Steel Plant Ltd
307. Bhuraj Metal Industries Limited
308. BLUE Nile Rolling Mills
309. Canon Aluminium Fabricators
310. Canton Alloys Ltd
311. Chui Wire Products Lt
312. City Engineering Works Ltd
313. Crystal Industries Ltd
314. Davis& Shirtlift Ltd
315. East Africa Cans & Closures Ltd
316. East Africa Spctre Ltd
317. Easy Clean Africa Ltd
318. Elite Tools Ltd

319. Fit Tight Fastener Ltd
320. Gual Closures East Africa Ltd
321. GZI Kenya Ltd
322. Heavy Engineering Ltd
323. Hebatullah Brothers Ltd
324. Hi Tech Gravures Ltd
325. Hind Aluminimum Industries Kenya Ltd
326. Hydro Aluminium Ltd
327. Indigo Industries Ltd
328. Insteel Ltd
329. Keepings Trading Limited
330. Kens Metal Industries Ltd
331. Khetshi General Industries Ltd
332. Maji water storage Limited
333. Masai Rolling Mills
334. Mecol Ltd
335. Mepani and Sons Investment Ltd
336. Metal Cans & Closures Kenya Limited
337. Metal Crowns Ltd
338. Mitsubishi Cooperation Nairobi Liaison Office
339. Modulec Engineering Systems Ltd
340. Nails & Steel Products Ltd
341. Napro Industries Ltd
342. Nelleon Development Company Limited
343. Neoeng Limited
344. Nirmal Fabricators Ltd
345. Nyagah Mechanical Engineering Ltd
346. Patken Ltd
347. Rhodium Steel
348. Royal Mabati Factory Ltd
349. Sheffield Steel Systems
350. Simba Metal Products Limited
351. St. Theresa Industrial Kenya Ltd
352. Steel Structures Ltd
353. Steelmakers Ltd
354. Tin Can Manufactures Ltd
355. Tononoka Rolling Mills Ltd
356. Tononoka Steel Ltd
357. Vectus Kenya Limited
358. Velka Engineering Ltd
359. Vivek Investment Ltd
360. Welding Alloys Ltd
361. Wire Products Ltd
362. Zenith Steel Fabricators Ltd

Motor Vehicle Assemblies & Accessories

363. ARC Ride Kenya Limited
364. Associated Battery Manufacturers

365. Auto Ancilliaries Ltd
366. Auto Industries Ltd
367. Bhachu Industries Ltd
368. BMG Holding Ltd
369. Captain Motorcycle Manufacturing Co. Ltd
370. Car and General Trading
371. CFAO Kenya
372. Chui Auto Spring Industries Ltd
373. CMC Motors Group Limited
374. Farm Engineering Industries Limited
375. Fine Thread & Allied Industries Ltd
376. Honda Motorcycle Kenya Ltd
377. ISM Africa Ltd
378. Isuszu East Africa Ltd
379. Kenyon Ltd
380. Kibo Africa Ltd (formerly Koneksie Ltd)
381. King Finn Kenya Ltd
382. Megh Cushion Industries Ltd
383. Mobikey Truck & Bus Ltd
384. Mobius Motors Kenya Ltd
385. Mutsimoto Motor Company
386. Opibus Ltd
387. Pantech Kenya Ltd
388. Pinnacle Systems Ltd
389. Pipe Manufacturers Ltd
390. Plateau Motors Ltd
391. Romageco Motors Ltd
392. Sagoo Holdings Ltd
393. Simba Caetano Formula Ltd
394. Simba Corporation Ltd
395. Sohansons Ltd
396. Sunlink (Kenya) Co. Ltd
397. Specialised Fibreglass Ltd
398. Toyota Kenya Ltd
399. Varsani Brakelinings Ltd

Paper & Board

400. Adpak International Ltd
401. Anke Home Appliance Services Ltd
402. Arc Packaging Ltd
403. Armor East Africa Imaging Supplies Ltd
404. ASL Packaging Ltd
405. Avery Dennison Ltd
406. Bags & Ballers Manufacturers Ltd
407. BIC East Africa Ltd
408. Capitol Printers Ltd
409. Carton Experts Ltd
410. Chandaria Industries Limited

411. Chrome Partners Ltd
412. Colour Labels Limited
413. Dodhia Packaging Kenya Ltd
414. Economic Industries Ltd
415. Elite Offset Ltd
416. Ellams Products
417. English Press Ltd
418. Enova Industries Limited
419. Euro Packaging Ltd
420. Excel Packaging Ltd
421. Flexoworld Limited
422. Fortuna Industries Ltd
423. General Printers Ltd
424. Graphic Lineups Limited
425. Guaca Stationers Ltd
426. Hills Converters (K) Ltd
427. Jubilee Tissue Industries Ltd
428. Kartasi Industries Ltd
429. Kenafric Manufacturing Ltd
430. Kim-Fay East Africa Ltd]
431. Label Converters Ltd
432. Manipal International Printing Press Ltd
433. Modern Lithographic (K) Ltd
434. Paperbags Ltd
435. Paperplast Ltd
436. Pressmaster Africa Ltd
437. Prime Cartons
438. Printing Services Ltd
439. Printpak Multi Packaging Ltd
440. Printwell Industries Ltd
441. Quickpack Limited
442. Ramco Printing Works Ltd
443. Regal Press Kenya Ltd
444. Royal Converters Limited
445. Sintel Security Print Solutions Ltd
446. Sitima Printers & Stationers Ltd
447. Skanem Interlabels Nairobi Ltd
448. Soloh Worldwide Inter-Enterprises Ltd
449. Statpack Industries Ltd
450. Tetra Pak Ltd
451. The Paper House of Kenya Ltd
452. The Print Exchange Ltd
453. The Print Store Limited
454. Twiga Stationers & Printers Ltd
455. Wandi Packaging Ltd
456. Zaam Industries Ltd

Pharmaceutical & Medical Equipment

457. Advanced Molecular Imaging Ltd
458. Aesthetics Limited
459. Alpha Medical Manufacturers Ltd
460. Auto Sterile East Africa Ltd
461. Beta Healthcare International Ltd
462. Biodeal Laboratories Ltd
463. Cooper K-Brands Ltd
464. Cosmos Ltd
465. Crown Solutions Limited
466. Dawa Ltd
467. Dynamic Chemicaals Limited
468. Elys Chemicals Industries Ltd
469. Glaxo Smithkline Kenya Ltd
470. KAM Industries Ltd
471. Kijani Medical Limited
472. Laboratory & Allied Ltd
473. Njimia (K) Ltd
474. Onkod Company Limited
475. Promed Industries Ltd
476. Questa Care Ltd
477. Regal Phamaceuticals Ltd
478. Ultimate Sports Nutrition (USN) Kenya Ltd
479. Ultravetis East Africa Ltd
480. Vetcare Kenya Ltd
481. VIVA Healthcare
482. Zain Phamaceutica & Medical Equipments

Plastic & Rubber

483. A Plus PVC Technology Company Ltd
484. Ace Plastics Company Ltd
485. Adarsh Polymer Ltd
486. Advanced Plastics Ltd
487. Afri Piping Systems Kenya Ltd
488. Allan International Co Limited
489. Apex Piping Systems Ltd
490. Ashut Plastics Limited
491. Autoppak International Limited
492. Betatrad (K) Ltd
493. Bobmill Industries Ltd
494. Brush Manufacturers Ltd
495. Buruk General Trading
496. Comet Plastics Limited
497. Complast Industeies Ltd
498. Conix Industries Ltd
499. Dentex Industries Limited
500. Ecoeri Green Co Limited
501. Eco LAB Co Ltd

502. Elgon Kenya
503. Elite Innovations K Limited
504. Enclave Packaging Limited
505. Eslon Plastics of Kenya Ltd
506. Five Star Manufacturers
507. Flair Kenya
508. Freshlife Initiative Limited
509. G. N & Co Polyethylene Limited
510. General Industries Ltd
511. General Plastics Ltd
512. Huming PVC Co. Ltd
513. Jumbo Chem Industries
514. Kenpoly Manufacturers Ltd
515. Kenstar Plastic Industries Ltd
516. Kentainers Limited
517. King Plastics Industries Ltd
518. Krona Plastic Limited
519. L. G. Harris & Co. Ltd
520. Megapipes Solutions Limited
521. Mo and Mo Company
522. Mr Green Trading Africa (Kenya) Limited
523. Nairobi Plastics
524. Neopack Limited
525. Novamont Kenya Ltd
526. Packaging Industries Ltd
527. Packaging Masters Ltd
528. Paras Industries Ltd
529. Plast Packaging Industries Ltd
530. Plastic Electricons
531. Plastico Industries Ltd
532. Polyblend Ltd
533. Polyflex Industries Ltd
534. Polytanks and containers
535. R & R Plastic Limited
536. Riteppak Ltd
537. Rubber Produucts Ltd
538. Safepak Ltd
539. Silafrica Kenya Ltd
540. Silpack Industries Ltd
541. Stallion Manufacturers Limited
542. Style Industries Ltd (Previously Strategic)
543. Styroplast Limited
544. Super Manufacturers Ltd
545. Techno Plast Limited
546. Techpak Industries Ltd
547. Torrent East Africa Ltd
548. Treadsetters Tyres Ltd
549. United Bags Manufacturers Ltd

550. Vintz Industries Limited
551. Vintz Plastics Ltd
552. Visionone Industries Ltd

Service & Consultancy

553. Infotech (Africa)
554. AAM Resources
555. AAro E. A Ltd
556. ABSA Bank of Kenya PLC
557. Access Alliance Limited
558. Aflfatech Contractors Limited
559. All seasons Communications Ltd
560. Analabs Ltd
561. Ascent Capital Advisory Services LLP
562. B2B Africa Ltd
563. Beyond Borders Ltd
564. Biomerieux Kenya Ltd
565. BlueKey Seidor (K) Limited
566. Bosch Rexroth Kenya Limited
567. Bootosoft Technologies Ltd
568. Bowmans Coulson Harney LLP
569. Brand ID Technologies (EA) Ltd
570. Brandworld Communications Ltd
571. Broadband Communications Networks Ltd
572. Career Readiness Social Initiative
573. CFL Advocates
574. Cloud Hop (K) Limited
575. Commercial Bank of Africa Ltd
576. Compulynx Limited
577. Continental Logistics Network Ltd
578. Cooperative Bank of Kenya
579. Cotecna Kenya Ltd
580. Crop Nutrition Laboratory Services Ltd
581. Delegation German Industry and Commerce
582. Deloitte & Touche Kenya
583. Delta Blade Consultants
584. DST East Africa
585. Duma Sagacity Ltd
586. Dupont de Nemours Kenya Ltd
587. Ecobank Kenya Ltd
588. Engineering Development Ltd
589. Equity Bank Kenya Ltd
590. Ernst & Young
591. Farm Refrigeration and Electrical Systems
592. Fekan Howell & Associate
593. Flexi Personnel
594. Gateway Prosthetics and Orthotics Limited
595. Givaudex East Africa Ltd

596. Greenday Environmental Limited
597. GS1 Kenya
598. Hotpoint Appliances Ltd
599. HWS Link Limited
600. IBIS ESG
601. IBL International Ltd
602. IDB Capital Ltd
603. Industrial Promotion Services
604. Insight Management Consultants Ltd
605. Intertek International Ltd
606. Ipay Ltd
607. J. W. Seagon and Co Insurance Brokers (Kenya)
608. Jade Collections Ltd
609. Kaizen Institute Africa
610. Karanja Kiarie & Company
611. KCCSA East Africa
612. Kenya Flower Council
613. Kieti Advocates LLP
614. KPMG Advisory services Limited
615. Lean Energy Solutions Ltd
616. MAC Mobile International Ltd
617. Magnate Vennture Ltd
618. Mane Kenya
619. Mantoz Enterprises K. Ltd
620. Marubeni Corporation
621. Meghraj Capital Limited
622. M-Gas Limited
623. Mitsui & Co Europe PLC
624. Muri Mwaniki & Wamiti Advocates
625. Muthee-Soni & Associates Advocates
626. Novastar Ventures LLP
627. Oraro & Company Advocates
628. Patrick Law Associates
629. Philpson Builders Ltd
630. PKF Consulting
631. Polish Investment & Trade Agency
632. Procter & Gamble Distribution East Africa
633. Prosel Ltd
634. Protection Logics Ltd
635. Raj Consulting Ltd
636. Ren Company Limited
637. Riiftcot Limited
638. Rova Digital Limited
639. Safaricom Ltd
640. Sagisa Process Engineering (K) Ltd
641. Sendy Ltd
642. SGS Ltd
643. Socialmeds Digital Limited

644. Sols Inclinations Ltd
645. Solutech Limited
646. Summit Recruitmentt & Search Ltd
647. Sunesis Consulting Ltd
648. Sunflower Events Kenya Limited
649. Syymbion Kenya Ltd
650. Syspro Kenya Ltd
651. Takataka Solutions Ltd
652. The Copy Cat Ltd
653. The Toolkit iskills (TTI) Ltd
654. Top Tier Limited
655. Tropical Power Kenya Ltd
656. Union Logistics Limited
657. Usafi Comfort
658. Value Connect Management Consultants Ltd
659. Waugh Mcdonald Wealth Management
660. Zamara Actuaries, Administrators & Consultants Ltd

Textile & Apparel

661. Africa Apparels EPZ Ltd
662. Akinyi Odongo Kenya Limited
663. Alltex EPZ Ltd
664. Brandnest Advertising & Design Ltd
665. Brother Shirts Factory Ltd
666. Crafts With Meaning Ltd
667. Create A Tee Limited
668. Dharamshi & Co. Ltd
669. Eriken Manufacturing Industries Ltd
670. Extra Dimensions Company Limited
671. Jiji Ventures
672. Kiboko Leisure Wear Ltd
673. Life Bridge Ltd
674. Manchester Outfitters Ltd
675. Metamophosis Fashions Limited
676. Midco Textiles (EA) Ltd
677. Omega Apparells Ltd
678. Oriental Mills Ltd
679. Plusify Limited
680. Promo Kings Ltd
681. Radheshyam Suppliers Limited
682. Ritz Enterprises Limited
683. Sai Sportswear Uniform
684. Sarai Afrique Limited
685. Sasa Africa Limited
686. Savannah Suns Ltd
687. Silverscope Limited
688. Spot On Enterprises
689. Sprint Company Limited

690. Straightline Enterprises Ltd
691. Sueng Enterprises Limited
692. Shuman Shakti
693. Sunflag Textile & Knitwear Mills Ltd
694. Supra Textiles Ltd
695. Tarpo Industries
696. Teeny Fashions Ltd
697. Teita Estate Ltd
698. Thika Ccloth Mills Ltd
699. United Aryan (EPZ) Ltd
700. Vaja's Manufacturers Ltd
701. Vicamech Ltd
702. Vivo Active Wear
703. Wild Elegance Africa

Timber, Wood & Furniture

704. 64Door Factory Ltd
705. Aldowoodmakers
706. Better Globe Forestry Ltd
707. Bushtown Kitchen & Interiors
708. Efaid Enterprises
709. Elida Industries
710. Fukidz Ltd
711. Furniture International Ltd
712. Green Creative Company Ltd
713. Little Cribs Limited
714. Love Artisan
715. Newline Ltd
716. Panesar's Kenya Ltd
717. Peerless Interiors
718. PG Bison Ltd
719. Quercia Vestito
720. Renocon
721. Rosewood Furniture Manufacturers
722. Shah Timber Mart Ltd
723. Watervale Investment Ltd
724. Wood Products Limited
725. Woodtex Kenya Ltd

Appendix VI: Plagiarism Report