

**ANTECEDENTS OF CUSTOMER LOYALTY: A STUDY BASED ON
GREEN ELECTRONIC PRODUCTS IN NEPAL**

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DECLARATION OF AUTHENTICITY

I, Riya Neupane, declare that this GRP is my own original work and that it had fully and specifically acknowledged wherever adapted from other sources. I also understand that if at any time it is shown that I have significantly misinterpreted material presented to SOMTU, any credits awarded to me on the basis of that material may be revoked.

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TABLE OF CONTENTS

RECOMMENDATION	ii
CERTIFICATION.....	iii
DECLARATION OF AUTHENTICITY.....	iv
ACKNOWLEDGEMENTS	v
LIST OF TABLES	ix
LIST OF FIGURES.....	x
ABBREVIATIONS.....	xi
EXECUTIVE SUMMARY	xii
CHAPTER I	1
INTRODUCTION.....	1
1.1 Background of the Study	1
1.2 Statement of Problem	2
1.3 Research Questions.....	3
1.4 Objectives of the Study.....	4
1.5 Research Hypothesis.....	4
1.6 Scope and Significance of the Study	6
1.7 Limitation of the Study	7
1.8 Organization of the study	7
CHAPTER II.....	9
RELATED LITERATURE AND THEORETICAL FRAMEWORK.....	9
2.1 Theoretical Review	9
2.2.1 Hierarchy of Effects Model.....	9
2.2.2 Theory of Consumer Behavior	12
2.2.3 Theory of Sustainability	13
2.2.4 Relationship Marketing	14
2.2.5 Green Marketing	15
2.2.6 Green Products	15
2.2.7 Brand Image	17
2.2.8 Customer Satisfaction	19
2.2.9 Customer Loyalty	19
2.2 Empirical Review	20
2.3 Research Gap.....	25
2.4 Theoretical Framework.....	26
2.5 Operational Definitions	27

CHAPTER III.....	28
RESEARCH METHODS.....	28
3.1 Research Design	28
3.2 Population and Sample	28
3.3 Data Collection	30
3.4 Instrumentation	30
3.4.1 Brand Image	31
3.4.2 Customer Satisfaction	32
3.4.3 Customer Loyalty	32
3.5 Data Analysis Technique	33
3.5.1 Descriptive Analysis	33
3.5.2 Confirmatory Factor Analysis	33
3.5.3 Structural Equation Modeling (SEM)	35
3.6 Pilot Testing.....	36
3.7 Ethical Considerations	37
CHAPTER IV	39
ANALYSIS AND RESULTS	39
4.1 Respondents Profile	39
4.2 Descriptive Analysis.....	40
4.3 Result of the Normality Test	46
4.4 First Order Reflective Measurement Model	47
4.4.1. Construct Reliability and Convergent Validity	47
4.4.2. Discriminant Validity	48
4.4.3. Collinearity Test	50
4.5 Second Order Formative Measurement Model	51
4.5.1. Convergent Validity	51
4.5.2. Collinearity Test	51
4.5.3. Significance and Relevance of Formative Indicators.....	52
4.6 SEM Path Analysis	53
4.7 Hypothesis Summary.....	57
4.8 Major Findings	57
CHAPTER V	59
DISCUSSION, CONCLUSION AND IMPLICATIONS.....	59
5.1 Discussion.....	59
5.2 Conclusion	62

5.3	Implication.....	63
5.3.1.	Theoretical Implication	63
5.3.2.	Managerial Implication	63
5.3.3.	Societal Implication.....	64
5.3.4.	Future Research Implication	64
REFERENCES.....		
APPENDICES.....		

LIST OF TABLES

Table 1 Summary of Review of Literature.....	21
Table 2 Summary of Data Collection.....	29
Table 3 Measurement Sources of Green Marketing.....	31
Table 4 Reliability of The Instrument at Pilot Test.....	37
Table 5 Respondents Profile	40
Table 6 Green Electronic Device Used	41
Table 7 Green Electronics Brand Used	42
Table 8 Purchase Frequency.....	42
Table 9 Factor Considered while Purchasing Green Electronics.....	43
Table 10 Descriptive Statistics of Items.....	44
Table 11 Descriptive Statistics of Dimensions	46
Table 12 Normality Test	46
Table 13 Construct Reliability and Convergent Validity.....	48
Table 14 Fornell-Larcker Criterion	48
Table 15 Cross-Loadings	48
Table 16 Heterotrait-Monotrait Ratio	49
Table 17 Collinearity Statistics of Items	50
Table 18 Collinearity Statistics of Items	51
Table 19 Outer Weights of First Order Brand Image Constructs	52
Table 20 Outer Loadings of First Order Brand Image Constructs.....	52
Table 21 Collinearity Test of Structural Model	53
Table 22 SEM-Path Analysis	53
Table 23 Mediation Analysis	54
Table 24 Coefficient of Determination of Structural Model.....	55
Table 25 Effect Size of Structural Model.....	56
Table 26 Model Fit of Structural Model	56
Table 27 Summary of Hypothesis Test.....	57

LIST OF FIGURES

Figure 1 Theoretical Framework.....	26
Figure 2 First Order Measurement Model.....	47
Figure 4 Redundancy Analysis	51
Figure 5 Path Coefficient Second Order Model.....	53

ABBREVIATIONS

CR	Corporate Reputation
CC	Corporate Credibility
BI	Brand Image
CS	Customer Satisfaction
CL	Customer Loyalty
PLS	Partial Least Square
SEM	Structural Equation Modeling
SPSS	Statistical Package for the Social Science

EXECUTIVE SUMMARY

The purpose of this study is to analyze the relationship between two antecedents of customer loyalty: customer satisfaction and brand image, for green electronics products in Nepal and to propose a hierarchy of effects model to study these variables. Environmental issues currently grab the interest of consumers, academics and professionals worldwide. Since the electronics sector has such a large environmental (carbon and water) footprint, this concern is much stronger. Therefore, it has been suggested by a number of scholars that the concept of loyalty for green products be included as a crucial factor in electronics industry's theory and practice. Using a structured questionnaire, a survey of green electronic customers was carried out in Nepal to test the suggested model empirically. To verify the research hypothesis, a structural equation model was developed.

The findings reveal that satisfaction and loyalty for green products are positively impacted by company's image. They also demonstrate that loyalty for green products is positively impacted by satisfaction. Additionally, satisfaction is positively impacted by company's image. The association between brand image and customer loyalty for green products is also partially mediated by customer satisfaction, validating the existence of the hierarchy of effects model. This study provides an evaluation of how green marketing methods in the electronics industry create loyalty, complementing other studies on consumer loyalty.

From a practical perspective, marketers for green electronic products should develop effective tactics to promote a positive overall brand image and boost consumers' sense of satisfaction and trust. They should specifically promote green campaigns to highlight the significance of environmental issues to customers. The scope of this study's framework is limited to its goals. Therefore, further research into additional mediating variables is still necessary which provides space for upcoming researchers to carry out their research.

Keywords: Sustainability, Customer loyalty, Customer satisfaction, Brand image, Green marketing, Hierarchy of effects model

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Environmental problems throughout the world (including air and water pollution, habitat destruction, global warming, and environmental degradation) have come to the attention of more people, and many are now adopting green lifestyle that benefit the environment (Hsieh, 2012; Jones, Hillier & Comfort, 2014). A result of this mindset is that more organizations are acknowledging their environmental responsibility (Chan, 2013). Additionally, businesses have created fresh corporate methods, like green marketing, that can ensure success with these eco-friendly options (Chen, 2010; Kang & Hur, 2012). Green or environmental marketing refers to practices that provide goods and services that meet consumer wants while causing the environment as little harm as possible (Polonsky, 1994). Green products attempt to conserve resources for the environment, for instance, by the use of recycled materials or recycling during manufacture (Chen & Chai, 2010).

Consumers are looking for greener alternatives of the conventional products. One of the commodities that contribute most to environmental pollution and negative effects is electronic devices. As a result, several product categories, such as electronic products, place a greater emphasis on green marketing (Chen, Lai & Wen, 2006). Consumers would be more inclined to purchase items or services from businesses if they could meet their customers' environmental needs. Businesses must also look for ways to improve the environmental performance of their products in order to boost customer loyalty and brand equity. The concepts and ideas related to the environment should be incorporated into all facets of marketing if businesses want to successfully use green marketing (Ottman, 1992). While some leading businesses are able to fund their green initiatives, not all businesses have the necessary resources to manufacture and distribute their eco-friendly products to customers. So, it is very crucial for businesses to study the factors leading towards customer loyalty for green electronic products in order to understand and to cater them with optimal utilization of the resources.

Due to the increased popularity of environmentalism worldwide, more consumers are willing to pay more for green items (Chen, 2008). Despite all these consumer concerns, surveys indicate that only 4% of consumers actually purchase green items (Arora, Devi &

Gupta, 2021). A similar situation has been noted with environmentally friendly electrical devices that are designed to use less electricity and are made with materials that pose less threat to the environment. According to Ali, Ullah, Akhtar, Akbar and Zahid (2019), green electronic appliances are not as well received by customers as their conventional equivalents. There is a green gap caused by this attitude and behavioral inconsistencies. A deeper knowledge of how consumers choose to use green products is necessary given the significant financial investments made by businesses in them, the depletion of natural resources, and the state of the environment. According to these researches, in order to understand the phenomenon of customers migrating towards loyalty more thoroughly, it is crucial to investigate the causes of green customer loyalty. These previous researches create a base for this study regarding customer loyalty and its antecedents for green electronic products. This study suggests a hierarchy of effects model to explain the relationship between customer loyalty and its two antecedents: brand image and customer satisfaction.

1.2 Statement of Problem

Environmental issues currently draw the interest of academics and professionals worldwide. Currently, customers want green items that conserve energy and are friendly to the environment (Mackay, Spies, Williams, Rensburg & Petzer, 2013). It must be emphasized that previous research on green marketing concerns has concentrated on companies that produce products like cosmetics, toiletries, electronics, and/or hybrid cars (Chen, 2010; Hur, Kim & Park, 2013; Ng, Butt, Khong & Ong, 2014).

Following a green perspective in the auto sector, Hur et al. (2013) investigated how consumer value connects to loyalty and price consciousness through customer satisfaction for hybrid cars. According to the research, consumers' perceptions of the functional, hedonic, and social values associated with using hybrid cars have a large, positive impact on customer satisfaction, which in turn affects customer loyalty and reduces price sensitivity towards the product. Kang and Hur (2012) researched at the South Korean electronics industry's green brand equity's causal factors. The five innovative constructs that this study presented are green satisfaction, green affect, green trust, green brand loyalty, and green brand equity. The findings demonstrated that green trust, affect, and loyalty are positively impacted by green brand satisfaction. It also showed that the three variables of green brand, trust, and affect had a considerably positive impact on the green

loyalty of consumers to green electronic brands. However, the researchers in the electronics sector have not looked as deeply into consumer loyalty in terms of green marketing that can be generalized.

The concept of green marketing is new in the context of Nepal. Studies on green marketing have investigated at how Nepalese consumers perceive, feel about, and plan to buy eco-friendly products. Thapa (2019) investigated the awareness and attitudes of Nepalese consumers toward green products. The study suggests that consumers are becoming more and more knowledgeable about the benefits of green products, and the majority of them believe that green products are healthy and secure. Ghimire (2020) conducted a research to identify factors affecting Nepalese consumers' intention in purchasing ecofriendly products. The impact of factors such as environmental protection and knowledge & awareness of eco-friendly products with intervening variables (eco labels, educational level and the experience) on purchase intention (GPI) was studied. A study by Dhakal (2022) found that consumers' intention to buy green products in Nepal is significantly influenced by cost effectiveness, knowledge, benefits, and promotional strategies.

In reference to international and national researches, relatively few studies have examined how the brand/company image and its effects (such as consumer satisfaction) can influence consumer loyalty for green electronic products. Additionally, to fill this gap, this study investigates these understudied areas of green electronics in the context of Nepal based on hierarchy of effects model.

1.3 Research Questions

Martínez (2015) investigated how green marketing practices in the hospitality sector enhance customer loyalty. Additionally, using the three stages of the hierarchy of effects model, the relationship between green image, green satisfaction, and green loyalty was investigated. Such a study hasn't been done in the context of green marketing, as far as the researcher's awareness. The paper's key contribution was its investigation of the relationship between green trust, green satisfaction, and green overall image on green loyalty in a hospitality context using the hierarchy of effects model as a framework. The similar approach is used in this study to investigate the causes of consumer loyalty in the green electronic sector. Thus, this study is conducted to find answers to the following research questions:

- a. Do customers approach through a multi-stage process from cognitive-affective-conative stages on gaining customer loyalty in response to green marketing?
- b. Has brand image significant positive impact on customer loyalty for green electronic products?
- c. Does brand image positively influence customer satisfaction for green electronic products?
- d. Does customer satisfaction positively influence customer loyalty for green electronic products?
- e. Does satisfaction mediate the relationship between brand image and loyalty for green electronic products?

1.4 Objectives of the Study

Main Objective

The primary objective of this study is to examine the relationship between customer loyalty and its two antecedents: customer satisfaction and company's image of green electronic products and to propose a hierarchy of effects model.

Specific Objectives

The specific objectives of the study are as follows:

- a. To analyze the influence of brand image on customer loyalty for green electronics consumers.
- b. To analyze the influence of brand image on green satisfaction for green electronics products.
- c. To analyze the influence of customer satisfaction on customer loyalty for green electronics products.
- d. To evaluate whether customer satisfaction mediates the relationship between company image and customer loyalty of Nepalese consumers regarding green electronic products.

1.5 Research Hypothesis

The following hypothesis is put forth in relation to the concept of green marketing and brand image, customer satisfaction, and customer loyalty:

H₁: Brand image has a positive and direct influence on customer loyalty.

Previous research confirms the impact of brand image on consumer behavior (Lee, Han & Hsu, 2009; Lin, Morais, & Kerstetter, 2007; Ryu, Han & Kim, 2008; Ryu, Lee & Kim, 2012). For instance, Lin et al. (2007) showed that tourists are quite inclined to select a destination that has a good image. Lee et al. (2009) support the association between overall image and green behavioral intentions in the hospitality context in terms of word-of-mouth, visit intention, and willingness to pay a higher price. Based on these concepts, it can be hypothesized that brand image positively influences customer loyalty.

H₂: Brand image has a positive and direct influence on customer satisfaction.

According to Nguyen & Leblanc (2002), a positive image is an effective tool for increasing levels of customer satisfaction with the organization. For businesses, having a green brand image is more vital, particularly in light of the growing environmental consciousness of consumers and the severe international environmental protection legislation. Additionally, businesses that put a lot of work into enhancing their brand image can increase consumer satisfaction with regard to environmental needs, sustainable expectations, and green requirements while also avoiding the hassle of environmental protests or penalty. There is a positive association between brand image and customer satisfaction, according to earlier studies, because brand image is a crucial factor in determining consumer satisfaction (Martenson, 2007). The aforementioned concept states that the more environmentally conscious a brand is seen to be, the greater the level of pleasant consumption-related satisfaction is to meet the demands and expectations of green consumers. Theoretically, green consumer satisfaction is positively influenced by green image.

H₃: Customer satisfaction has a positive and direct influence on customer loyalty.

According to earlier research customer satisfaction can influence consumers' purchasing intentions as well as their propensity to make repeat purchases (Mai & Ness, 1999; Martenson, 2007). In contrast to consumers who are less satisfied with it, consumers who are very satisfied with a brand are more likely to remember its name. Many scholars have pointed to the idea of customer satisfaction as a requirement for creating consumer loyalty (Oliver, 1996). It is well acknowledged that when consumers are satisfied with a company's performance, they tend to become more loyal to that firm (e.g., repurchasing

and endorsing its products and services) (Martinez & Rodriguez del Bosque, 2013). In a similar manner, prior research has demonstrated that customer satisfaction has a significant impact not only on customer retention but also on their purchase intention (Ranaweera & Prabhu, 2003). Customer satisfaction has been empirically demonstrated to have a beneficial impact on customer loyalty in the academic literature relevant to the hotel industry (Bowen & Chen, 2001; Caruana, 2002). Perceived satisfaction is the cause of consumer loyalty (Kordshouli, Ebrahimi & Bouzanjani, 2015). However, this relationship for green environmental issues in the electronics industry has not before been examined in studies. In order to investigate the relationship between satisfaction and loyalty in the context of ecofriendly electronic items, the study proposes the above hypothesis.

H₄: Customer satisfaction mediates the relationship between brand image and customer loyalty among green electronics consumers.

Gelderman, Lambrechts and Vijgen (2021) indicated that green product price, green product quality, and green corporate image lead to green customer satisfaction, and green satisfaction leads to green loyalty. Martínez (2015) has justified that green satisfaction and green trust operate as mediators in the relationship between green image and green loyalty, which is in line with past studies on customer loyalty (Lee et al., 2009). Based on these studies, the above hypothesis is set as customer satisfaction mediates the relationship between brand image and customer loyalty among green electronics consumers.

1.6 Scope and Significance of the Study

Although past research has given serious consideration to exploring the relevant concerns of brand image, customer satisfaction & customer loyalty, none has done so with environmental or green context. The study bridges the knowledge gap and suggests three constructs: brand image, customer satisfaction, and customer loyalty. It also explores the implications of these constructs for the field of green marketing for the electronics sector.

By motivating business to produce more ecologically friendly products than non-environmentally friendly ones, the study's findings may help bring about social change. By providing more justification for the growth of products with low environmental hazard, this increase may result in a decrease in electronic-waste around the world.

1.7 Limitation of the Study

Following are some of the limitations of this study:

- a. The convenience and non-random sampling technique have been used for this research. Hence, the result might not be representative to a larger population and hence may not be generalized.
- b. The accuracy of this study might be influenced by biasness and level of honesty of respondents.
- c. The present study is concentrated only in the Nepalese electronic industry context so the industry focus can be a limitation of the study.

1.8 Organization of the study

This report is divided into three major sections: preliminary part, body of the report and the supplementary section. The various chapters of this report are discussed below:

Chapter I Introduction

The introduction section of this report mainly consists of background of the study i.e. green marketing, green electronics, brand image, customer satisfaction and customer loyalty. The research questions, research objectives, statement of problem, hypothesis of the study, limitations of the study and scope of the study are discussed in this chapter.

Chapter II Review of Literature

This chapter presents literatures relating to brand image, customer satisfaction and customer loyalty. The relevant theoretical framework and the research gap have been presented in this section. The various dependent variables and independent variables used in this study have been explained in this chapter.

Chapter III Research Methods

The third chapter deals with various research methods applied for the purpose of this study. This section includes the research design, sampling procedure, nature and sources of data, software and tools used in the study, instrumentation of data, data collection procedure and so on.

Chapter IV Analysis and Results

The findings of the data collection are presented in the fourth chapter of this study. This chapter includes information on the respondents' demographics, descriptive statistics, measurement reliability, factor analysis, correlation coefficients between constructs, discriminate validity, convergent validity, and the outcomes of structural equation modeling (SEM). It also represents the main conclusions drawn from this study.

Chapter V Discussion, Conclusion and Implication

The fifth and last chapter presents the overall discussion, conclusion and implications for future research obtained from this study. The results are compared and contrasted with previous studies and are concluded. The study suggests possible directions for future research in this chapter.

CHAPTER II

RELATED LITERATURE AND THEORETICAL FRAMEWORK

The concepts and theories relevant to the current study are covered in this section. The theoretical review of the various theories that serves as the foundation for the study's framework is presented in the first section of this chapter. The second section is the empirical review that summarizes previous investigations and aids in detecting the independent and mediating variables that have a substantial impact on the dependent variable. In this study, we are focusing on the brand image, customer satisfaction, and customer loyalty. Several researchers have studied the brand image, customer satisfaction, and customer loyalty in various contexts. The hierarchy of effects model linked to consumer behavior is one of the theories used to evaluate the sequential relationship between the customer loyalty and its antecedents, the brand image and customer satisfaction. Below is a survey of some of the extensive literature on this topic:

2.1 Theoretical Review

Theoretical review gives an insight into the subject matter and purpose of the study, as well as gives an idea of expected outcome that can be further compared with real events.

2.2.1 Hierarchy of Effects Model

The hierarchy of effects model was first proposed by St. Elmo Lewis in 1898 after he noticed that acquiring a customer required moving through a number of phases in addition to simply setting up a deal. Later, Printer's Ink in 1910 featured the concept in the newspaper and made it widely available.

Lavidge and Steiner (1961) published a groundbreaking article in the Journal of Marketing that clarified how consumers utilize cognitive and affective processes to decide which products to buy. Since this model's first publication, other modification theories have been introduced. This model takes into an account the fact that consumers usually do not instantly change from being disinterested individuals to committed buyers (Lavidge & Steiner, 1961). Instead, before completing a purchase, consumers go through a multi-step process. According to Lavidge and Steiner (1961), the stages of consumer behavior can be separated into the three categories stated below:

- a. the cognitive (or rational) dimension, which refers to customer thoughts and beliefs;
- b. the affective (or emotional) dimension, which refers to the domain of feelings; and
- c. the conative (or motivational) dimension, which refers to consumer behavioral intentions and behaviors.

Companies generally use "image advertising," as defined by Lavidge and Steiner (1961), to promote their green initiatives. This type of advertising focuses on influencing attitudes and sentiments rather than directly influencing conative behavior (loyalty). According to the hierarchy of effects theory, the evocation of feelings based on perceptions of the company initiates the affective stage of consumer behavior (Lavidge & Steiner, 1961). In line with this strategy, corporate image is determined by a cognitive belief system called "brand image." Consequentially, these cognitive beliefs lead to the cognitive (mental) efforts that define affective responses from customers (such as customer satisfaction) in response to the cost of purchasing from them. Finally, this affective response affects consumer judgments or behaviors, such as repurchase behaviors and recommendations (customer loyalty).

Other modifications of the hierarchy of effects theory are:

Innovation Adoption Model

Rogers (1995) developed the innovation-adoption model and presented a number of stages that a targeted consumer or buyer travels through, from ignorance to awareness to interest to trial to purchase or adoption for a new or innovative product. The "Cognitive" stage focuses on awareness, the "Affective" stage on evaluation and interest, and the "Conative" stage, or behavioral stage, on experimentation and adoption. The progression through the stages may or may not be logical, depending on the product or service being offered, the stage in the product life cycle, and the buyers' needs, socioeconomic situation, current product ownership, personality, perceptions of risk (see perceived risk), media habits, and other factors.

This theory's relationship to the study is that green initiative is an innovative concept in Nepal, particularly in the electronics sector where there are numerous traditional options available for the buyers. Customers may go through various stages in response to a company's green activities, from being aware to forming perceptions to changing their

behavior. Similar to the hierarchy of effects model, they may first be unaware of the positive effects that green activities in the electronics sector can have in their surrounding environment. However, if they are made aware, a favorable attitude of the product can result (green satisfaction). Subsequently, when consumers are satisfied with a product's good environmental impact, they may feel inclined to buy it repeatedly. Similarly, the buyers' needs, socioeconomic standing, product life cycle for green electronic products also can affect the consumer buying behavior and loyalty towards the product.

AIDA Model

A notable hierarchical model is the AIDA model, which outlines four stages that advertising pushes the customer through: awareness, interest, desire, and finally action. The involvement of the consumer is a key component of the hierarchy models. The level of engagement reflects how much time, effort, and resources people use while making a purchase of a good or service. Different levels of psychological customer involvement in the purchase of a product can be divided into two main categories: low and high. The low engagement suggests that the consumer buys out of habit, without giving their decision much thought. The content and the intensity of the message do not affect the success of the advertising message for low participation products, but rather on the frequency of exposure. High engagement suggests that the buyer uses both emotional and rational thought when making a purchase. In this instance, the customer is looking for details about the product. The business must use creative advertising that provides more information in order to effectively communicate with this type of consumer. Combining advertising goals with entertainment and informative factors has proven to be an effective way to capture consumers' attention, increase interest, create desire, and encourage an action (Ghirvu, 2013).

By using hierarchy of effects models, a business may track how far along a customer is in the buying process and how many of them actually make a purchase. When a customer gets stuck in one of the stages, the advertisers may identify where the tools are lacking, strengthen them, and figure out how to better guide the customer through the buying process and their future purchases. Additionally, this suggests changing the strategy for the green advertising campaign and necessitates strengthening the communication process.

2.2.2 Theory of Consumer Behavior

Resource based view

The resource-based view (RBV) of Wernerfelt argues that, competitiveness for a product may be achieved by innovatively delivering customers with superior value that they consider desirable. The RBV emphasizes the firm's distinctive set of resources, but the theory argues that not all of these resources have the potential to give the firm a long-term competitive advantage. All resources held by a firm that enable it to create and carry out plans that are effective and efficient are included among these important resources (Barney, 1991). This includes all assets, capacities, organizational processes, firm's attributes, knowledge, and expertise. According to Hart (1995), the research-based theory (RBT) of Barney may be applied to the firm's environmental targets and strategies, and it can also serve as the foundation for a theory of competitive advantage that takes into account how the firm interacts with its surroundings.

Theory of planned behavior

The Theory of Planned Behavior (TPB), which was put forth by Ajzen and Fishbien in 1991, is based on the idea that social interaction is what most significantly affects behavior. This theory provides a well-defined framework for investigating how attitudes, individual and societal characteristics, and outcome expectations affect customers' intentions to buy environmentally friendly products. A person will be more driven to engage in a specific activity (motivation) if important people encourage them to do so (subjective norm) and the individuals themselves see the encouragement favorably (attitude). The TPB can be relevant to this research as it gives a well-defined structure that enables transition in consumer behavior from customers who are more concerned with consumption to consumers who are concerned about the environment also. This can be because the surroundings around the consumers may motivate them to involve in purchases that cause less harm to the environment. Additionally, it is the responsibility of the marketer (who can have an influential role) to motivate consumer needs in the direction of consumption that is least damaging to the environment.

Expectancy theory

The concept of expectation theory proposed by Victor Vroom is that "positive incentives" influence customer decisions (Solomon, White & Dahl, 2014). A buyer gains greater

benefits by selecting one product over another, possibly gaining social prestige through environmental protection. If customers believe they will receive something valuable in return, they are more likely to engage in the purchase. This desire is closely related to the theory's hypothesis, which argues that people behave a certain way because they are driven by a specific result.

2.2.3 Theory of Sustainability

Stakeholder Theory

Freeman (1984) introduced the theory in his book and made the argument that in order for companies to manage their organizations more successfully, they needed to understand their relationships with non-traditional groups like the government, special interest groups, and environmentalists.

The fundamental idea behind the stakeholder approach is that firms are players in the social environment and should thus respond to pressures and demands from their stakeholder to achieve their strategic objectives. The strategy suggests that a firm's primary responsibility is to secure long-term sustainability while taking into an account the needs of various stakeholders. So, in order for companies to gain customer loyalty, they must take in consideration the needs of various traditional and non-traditional stakeholders.

Corporate Sustainability

Following the publication of the Brundtland Report, the idea of sustainable development is being used more and more in the context of business sustainability (Steurer, Langer, Konrad, & Martinuzzi, 2005). The Triple Bottom Line (TBL) is a concept devised by the World Economic Forum to operationalize corporate sustainability (Elkington, 2000). Three aspects of TBL are social, environmental, and financial factors. While in traditional accounting, financial profit is referred to as the bottom line, the TBL considers companies social, environmental, and financial factors for corporate success and sustainability. With a management strategy that incorporates TBL, an organization can facilitate its path toward sustainable development (Jamali, 2006). Green customer loyalty can also be achieved sustainably by balancing social, environmental, and financial factors. Marketers have also begun to understand that green marketing can no longer be disregarded because it may be a profitable strategy for economic sustainability (Ahmed & Qureshi, 2021).

Green Economics

The concept of "green growth" was initially introduced at the fifth Ministerial Conference on Environment and Development in Asia and the Pacific in 2005. Since then, the importance of a green economy and green growth has gained increasing attention from the general public. Green growth is the consequence of investments made in transforming the entire production system to resource- and environment-friendly procedures and goods (Janicke, 2012). Since sustainability can only be attained by changing the way investment decisions are made, the green economy is a path to sustainability. As numerous policy tools might be developed to divert investment from activities using ecologically destructive means to greener industries and businesses, green policy could significantly alter the business climate for organizations. The green economy will support economic growth through a number of factors, such as increased labor productivity due to greater health and increased energy efficiency. It will also promote democracy and may inspire new social movements.

2.2.4 Relationship Marketing

Since product quality has become the standard across many industries and is no longer a key source of competitive advantage, many businesses are trying to escape the "commodity mentality" that has evolved into the market's most fundamental commodities. Some companies are adopting relationship marketing (RM) to differentiate themselves from the competitors. Marketers turn data into knowledge by using the expertise, perception, and comprehension they have built up over time and putting it to use in their interactions with customers. Relationship marketing has a number of advantages that could be advantageous to both the marketer and the customer, as more people are starting to realize.

Relationship marketing offers the marketer many advantages, including increased profitability, brand loyalty, differentiated products, and competitive advantage. The three main advantages for the consumer are: the marketer's personalized attention, their efforts to anticipate the needs of the consumer, and meaningful interactions with the marketer. Relationship marketing therefore reflected a switch from transactional exchanges to relational ones, and also from attracting the customers to sustaining and satisfying them (Dwyer, Schurr, & Oh, 1987; Morgan & Hunt, 1994; Berry, 1995; Bitner, 1995). The development of the service industry, which focuses on customer-firm interactions, long-

term customer relationships, and consumer involvement in service outcomes, was closely related to the rise of relationship marketing.

2.2.5 Green Marketing

The term "green marketing" refers to a wide range of activities that are deemed to be safe for the environment, including product development, modification, production process modifications, sustainable packaging, and altered advertising. Green marketing strategies includes eco-friendly product development, eco-friendly manufacturing techniques, eco-friendly labeling, eco-friendly branding, eco-friendly advertising, and eco-friendly core competencies (Chen, 2008; Rahbar & Wahid, 2011).

At a conference on "Ecological marketing" held by the American Marketing Association in 1975, "Green marketing" was initially defined as all initiatives to generate and facilitate any exchanges meant to meet human needs or desires while having as little negative impact as possible on the environment (Ahmed & Qureshi, 2021). Karl E. Henion and Kinner produced one of the first books on green marketing in 1976 under the title "Ecological Marketing" as a result of the seminar.

According to Ottman (1993), there are two main objectives of green marketing, which are as follows:

- a. Due to the inclusion of all environmental aspects, its outcome is of high quality both in regards to product characteristics and the manufacturer's strong reputation by abiding to the rules and regulations.
- b. Typically, it designs the products while taking into an account the usability as well as reasonable cost and performance. Green products also showed themselves to be recession-proof during the financial crisis of 2008 and 2009.

Organizations are adopting green marketing practices as a result of consumers' growing environmental concern and stricter environmental protection legislation (Chen, 2010). Additionally, by using green marketing techniques, businesses might avoid ecological fines and protests.

2.2.6 Green Products

Green products, also known as ecological and environmentally friendly products, are items made with recycled materials and recycling processes (Tan & Lau, 2010). Products that

pose little or no risk to the environment are considered to be "green." In order to be considered "green," electronics must be free of harmful and toxic chemicals, consume fewer natural resources, and leave less of an environmental footprint (such as a carbon or water footprint) than conventional electronics. It is a sustainable product made to cut down on waste, recycle things at the end of its life cycle, and reduce environmental hazard.

Electrical devices used on a daily basis include laptops, TVs, phones, music players, photostat copy machines, and fax machines. The U.S. Environmental Protection Agency (USEPA, 2008) estimates that several hundred million electronic devices—including computers, televisions, stereos, cell phones, toys, appliances, and appliances—become obsolete each year nationwide. Up to four pounds of lead can be found in old desktop computers with Cathode Ray Tube (CRT) monitors (Ravi, Shankar & Tiwari, 2005). When these electronic devices are dumped in landfills, hazardous substances like lead, cadmium, and mercury damage the ecosystem. Contrarily, green products generally employ fewer harmful chemicals, such as polybrominated diphenyl ethers, lead, cadmium, and mercury (PBDE).

The following criteria can be used to define green products:

- a. Energy-efficient appliances
- b. Water-saving products
- c. Low emitting (low on hazardous emissions)
- d. Products that are secure or healthy
- e. Products that are recyclable or contain recycled material
- f. Long-lasting goods
- g. Biodegradable goods
- h. Renewable goods
- i. Reusable or recycled goods
- j. Items with third-party certification
- k. Locally manufactured products

Some of the green electronic products can be known as:

- a. Energy saving TVs
- b. LED lights
- c. Solar water heaters

- d. Solar panel charging cases
- e. Eco-friendly verification phone apps
- f. Green GPS units
- g. Solar speakers
- h. Green power outlets
- i. Eco-friendly paper shredder
- j. Dryer balls

2.2.7 Brand Image

Brand image, which is referred to as the rational or emotional associations customers have with particular brands, is the first consumer brand perception to be established in marketing literature (Gardner & Levy, 1955; Dobni & Zinkhan, 1990). According to Padgett & Allen (1997) brand image refers to the customer's mental image of the offering and incorporates symbolic connotations that customers link with particular characteristics of the good or service. It is a set of perceptions a consumer has of a brand as shown through brand associations (Keller, 1993). When it is difficult to differentiate between products or services based on observable quality attributes, brand image may be expected to have a substantial impact on business marketplaces (Mudambi, Doyle & Wong, 1997). People have various opinions about a specific brand, and these opinions influence the brand image (Keller, 1993; Mayer, Ryley & Gillingwater, 2012; Taylor, Hunter & Lindberg, 2007).

Although brand image has been investigated with numerous in several areas, the current study will only pay attention to the green component of the brand image. It is due to the fact that it is a new field and is crucial in today's business environment. Environmental concern is one of the many variables that influence people's opinions about a certain brand (Mayer et al., 2012). The phrase "Brand image of green products" refers to how consumers perceive and relate to a particular brand's use of green elements (Mourad & Ahmad, 2012). Environmental commitments and environmental concerns of the brand, according to Chen (2010), help to build a positive perception of the brand among consumers. According to the aforementioned justifications, a consumer's opinion of a green brand is predicated on a multitude of impressions, ideas, beliefs, and perceptions of the eco-friendliness of the company. The perceptions of a company's customers, employees, and

community members that are linked to environmental commitments and concerns are referred to as having a green corporate image.

Several dimensions can be used to access the company's brand image. A company's reputation, identity, and credibility make up its image, according to various earlier studies (Rehman & Afsar, 2012). A company's capacity to develop credibility, trust, integrity, and perceived knowledge has an impact on how they are perceived by their customers (Weiwei, 2007). Despite the fact that the concept of corporate image is multifaceted, some scholars claim that its two main components are reputation and credibility (Martinez & Pina, 2005). In previous studies, the aspects of reputation and credibility were used to evaluate corporate image (Lapierre, 1998). Based on these studies this study defines the idea of brand image with the use of two dimensions, corporate credibility and corporate reputation.

Corporate Credibility

Corporate credibility is operationally measured by trustworthiness, knowledge, and integrity (Parasuraman, Zeithaml & Berry, 1985). The organization's credibility is a crucial dimension to measure brand image because of its intangible nature and trust attributes. According to Hoeffler and Keller (2003), brand credibility may be measured on a three-dimensional scale that includes "expertise" (i.e., competence, innovativeness, and market leadership), "trustworthiness" (dependability and reliability), and "likability" (being fun, interesting and worth spending time with). Through stakeholder involvement, an organization can be encouraged to improve its brand credibility. Various academics have used variables including trust, believability (plausibility), integrity, expertise, and reliability to construct credibility (Newell & Goldsmith, 2001; Newell & Goldsmith, 1997; Kouzes & Posner, 2011; Narkevicius, 2017).

Corporate Reputation

Reputation is a component of brand equity (Delgado & Munuera, 2002) that, over time, indicates a global judgment of the organization (Gotsi & Wilson, 2001). Social responsibility, sustainability, and environmental reporting are used to gauge a firm's environmental reputation (Maak, 2008). According to Weiss, Anderson and MacInnis (1999), the terms "regarded," "professional," "successful," "well established," and "stable" were used in studies to quantify "green reputation."

2.2.8 Customer Satisfaction

The degree of pleasant consumption that satisfies customers' wants, objectives, ambitions, or other needs is known as satisfaction (Oliver, 1994; Olsen, 2002). A satisfying level of post-consumption evaluations or a joyful level of achievement associated to consumption is satisfaction (Oliver, 1996; Paulssen & Birk, 2007; Ruyter & Bloemer, 1999). Customer satisfaction is described by Mai and Ness (1999) as "a general sensation of pleasure or enjoyment experienced by a consumer deriving from a product's or service's ability to satisfy the customer's expectations, desires, and needs." "Green satisfaction" is a concept used by Martnez (2014) defines satisfaction as a pleasure degree of consumption-related fulfillment to satisfy customers' environmental wants, sustainable expectations, and green needs. While in this study, a construct termed "customer satisfaction" is proposed. It is based on the concepts outlined above. Sivesan, Achchuthan, and Umanakenan (2013) found a strong correlation between green marketing techniques and consumer satisfaction.

2.2.9 Customer Loyalty

Customer loyalty from green products, which focuses on a company's position on the environment and its dedication to promoting sustainability, measures a consumer's level of repurchasing intentions. Two distinct circumstances relating to loyalty might arise (Kordshouli, Ebrahimi & Bouzanjani, 2015). The first assumes that customers are only loyal to a brand because they have no other options. And since the merchant is not the consumer's first choice, loyalty is in this circumstance forced upon the customer. The second is built on the assumption that perceived satisfaction leads the consumer towards loyalty (Kordshouli et al., 2015). In this instance, customers favor the brand's products over those of any of its rivals, regardless of their number. This provides businesses with even more reason to diversify their product portfolio to include green products and create new products that adhere to environmental protection standards (Katait, 2014).

According to Amoako, Doe and Dzogbenuku (2020), there is a strong and positive connection between corporate social responsibility, green marketing, and customer loyalty. CSR and green marketing act as mediators between brand loyalty and perceived business ethics. In their study, Jabeen and Kavitha (2020) shown a favorable relationship between green marketing techniques and consumer loyalty.

2.2 Empirical Review

An empirical review can be defined as the analysis of various components of an empirical study that are applicable to the current study in some way.

Suki (2016) carried out a study to evaluate the effects of pricing, retail image, corporate image, and product quality on customer satisfaction and loyalty towards the use of green products in Malaysia. The study employed 200 college students as a sample who practiced living sustainably by using recyclable products, buying only retail goods that are green, and buying ozone-free and other green products. The results of the empirical analysis revealed that customer satisfaction was influenced by product quality, followed by corporate image, retail image, and product pricing. According to the study, the price of the product, the store's image, and the company's image all had an impact on customer satisfaction with using green items. Consumers are highly depended on corporate image, retail image, and product price when it comes to repeat purchases and loyalty. The study arrived at the conclusion that consumer satisfaction with using green products has a significant impact on customer loyalty.

The study by Gelderman, Lambrechts and Vijgen (2021) focuses on how green marketing practices affect the loyalty and satisfaction of business-to-business buyers. 148 Dutch professional buyers in the cleaning sector participated in the survey. The outcomes highlight the influence and significance of product quality, price, and corporate image. The findings indicated that among Dutch professional buyers in the cleaning business, green product price, green product quality, and green corporate image lead to green customer satisfaction, and green satisfaction leads to green loyalty.

According to Martínez (2015), green loyalty, trust, and satisfaction are all positively impacted by green overall image. The research involved 382 customers in Cantabria (Spain). The results also show that green loyalty is positively impacted by both green satisfaction and green trust. Additionally, green satisfaction is positively impacted by green trust. The results show that addressing green concerns is a vital strategic strategy for increasing consumer trust, satisfaction and loyalty. Additionally, this study offers justification that green satisfaction and green trust operate as mediators in the relationship between green image and green loyalty, which is in line with past studies on customer loyalty (Lee et al., 2009).

Lee et al. (2009) examined the associations between attitude toward green behaviors (ATGB), overall image (OI), visit intention (VI), word-of-mouth intention (WOMI), and readiness to pay more in the context of a green hotel (WPM). 371 general hotel guests in the United States who were at least 18 years old made up the study's sample. The findings revealed that OI has a positive relationship with ATGB and has a significant impact on VI, WOMI, and WPM. The results also showed that OI entirely mediates the effect of ATGB on behavioral intention components. Tests conducted afterwards showed that females and older age groups generally had stronger impact between the research variables.

Other studies have also established the relationship between green image and green loyalty. Company's overall image significantly influences customers' behavior and purchase decisions in the hotel industry (Chen & Tsai, 2007; Ryu, Lee & Kim, 2012). Tourists are significantly more inclined to select a holiday destination with a positive reputation (Lin, Morais & Kerstetter, 2007). In the area of hospitality, Han et al. (2009) have confirmed the link between overall image and green behavioral intentions in terms of word-of-mouth, visit intention, and readiness to pay extra.

Table 1
Summary of Review of Literature

SN	Author	Title	Variables	Methodology	Findings
a.	Cees J. Gelderman, Jos Schijns, Wim Lambrechts and Simon Vijgen (2021)	Green marketing as an environment al practice: The impact on green satisfaction and green loyalty in a business-to-business context.	Green customer satisfaction Green product quality Green product price Green corporate image Salesperson's green expertise	Survey data from 148 Dutch professional purchasers in the cleaning industry Professional buyers (cleaning companies, holiday resorts, theme parks, restaurants and	Green customer leads to green customer loyalty Green product quality leads to green customer satisfaction Green product price leads to green customer satisfaction Green corporate

				hotels)	image leads to
				PLS-SEM was	green customer
				used for data	satisfaction
				analysis	
b.	S Sayeeda Jabeen, Dr. M. Kavitha (2020)	Effect of Green green marketing strategies on customer loyalty	of Green marketing strategies Customer loyalty	Sample of 500 hotel users Anova table and frequency analysis	There is a positive association between green marketing strategies and customer loyalty.
c.	Pere Mercade Mele, Jesus Molina Gomez and Lluis Garay (2019)	To Green or Not to Green: The Influence of Green Marketing on Consumer Behaviour in the Hotel Industry	or Green to Marketing The Green Word of Mouth (GWOM) Green Trust (GTR) Green attitudinal loyalty (GLOY).	Sample of 238 hotel users, Convenience sample used Structural Equation Modeling (SEM) was used Hierarchy of Effects Model to build relationship among variables	Green marketing initiatives have a bigger impact on consumers' indirect relationships via word of mouth than on their direct relationships, and loyalty is the factor that has the greatest effect on trust.
d.	Patricia Martínez García de Leaniz (2015)	Customer loyalty: Exploring its antecedents from a green marketing perspective	Green overall image Green customer satisfaction Green customer trust Green loyalty	Structured Questionnaire was used. University students collaborated in collecting and gathering data Interview	Green trust, green satisfaction, and green loyalty are positively impacted by green overall image. Green loyalty is influenced

				averaged 15 minutes	favorably by both green satisfaction and green trust.
				Using convenience sample, 382 samples were used from the hospitality industry.	Green satisfaction is positively impacted by green trust.
				Structure equation model was used.	
e.	Sivanandamoorthy Sivasan, Achchuthan and Ratnam Umanakenan (2013)	Green Marketing Practices and Customer Satisfaction: A Special Reference to Leather Goods	Green practices Customer satisfaction Personal demographic variable.	Judgmental sampling method Close-ended questionnaire 122 customers of leather products in Jaffna, Sri Lanka	Customer satisfaction is favorably associated with green marketing strategies. Additionally, aspects of green marketing strategies include green issues related to the product, price, promotion, and place have a big impact on customer satisfaction.
f.	Norazah	Green Product		200 college	Customer

Mohd Suki (2016)	products usage: Structural relationships on customer satisfaction and loyalty	quality Corporate image Retail image Pricing Customer satisfaction Customer loyalty	students	satisfaction was influenced by product quality, followed by corporate image, retail image, and product pricing. Consumers are highly depended on corporate image, retail image, and product price when it comes to repeat purchases and loyalty. Consumer satisfaction with using green products has a significant impact on customer loyalty.
g. Jinsoo Lee , Heesup Han, and Li-Tzang (Jane) Hsu (2009)	Empirical investigation of the roles of attitudes toward green behaviors, overall image, and gender	Attitude toward green behaviors (ATGB) Overall image (OI) Visit intention (VI) Word-of-	371 hotel guests in the United States	general OI has a positive relationship with ATGB and has a significant impact on VI, WOMI, and WPM. OI entirely mediates the effect of ATGB on

age in hotel	mouth	behavioral
customers	intention	intention
eco-friendly	(WOMI)	components.
decision	Willingness to	Females and older
making-	pay more	age groups
process	(WPM)	generally had
		stronger
		impact between
		the research
		variables.

2.3 Research Gap

Maintaining consumer loyalty has become a strategic goal for businesses (Polo Peña, Jamilena & Rodriguez-Molina, 2013). Numerous studies investigate the causes of loyalty in the context of hospitality. According to Han et al. (2009), attitudes toward green behaviors have a beneficial impact on overall image, which in turn influences particular behavioral intentions like the intention to visit and willingness to pay more. It must be emphasized that current research on green marketing issues has concentrated on companies who produce products like cosmetics, toiletries, electronics, or hybrid autos (Chen, 2010; Hur et al., 2013; Ng et al., 2014). However, very few researches have been done to study how the image of green electronics as a whole and its outcome (such as green satisfaction) can impact green loyalty based on the hierarchy of effects hypothesis.

Although relevant factors of customer trust, satisfaction, overall image, and loyalty have been examined in prior research, this perspective on green marketing has not been taken into consideration. The primary contribution of this article, which adheres to the hierarchy of effects model, is its investigation of the relationship between green loyalty and green trust, satisfaction, and overall image in the green electronics industry.

This study presents an evaluation of how green marketing methods in the electronics industry create customer loyalty by extending earlier studies on customer loyalty in the environmental context and examining the relationships among these variables. In context of Nepal, researches regarding green marketing have explored the perception, attitude and

purchase intention towards the products having green marketing. However, customer loyalty in terms of green marketing has been less explored by the researchers in the electronics industry.

This study fulfills the gap by examining the relationship between three stages of hierarchy of effects model and establishes the sequential relationship between the brand image, customer satisfaction and customer loyalty respectively as the cognitive, affective and conative stages respectively.

2.4 Theoretical Framework

The initial step for any study starts with figuratively presenting the fundamental idea of the variables and the relationships, that the study seeks to understand. It serves as the foundation for every study and serves as a guide for how to link particular variables and hypothesize the relationship between them, allowing for a more flexible research pattern. The theoretical framework for this study has been adapted from studies by (Gelderman et al., 2021) and (Martínez, 2015). According to Martínez (2015), green customer loyalty has three antecedents: green image, green trust, and green satisfaction. The impact of green product quality, green product price, green corporate image, and green salesperson expertise on green customer satisfaction and green loyalty has been examined by Gelderman et al. (2021). In order to meet the research objective, changes have been made in the theoretical framework from these studies. The theoretical framework of this study has been developed by taking reference from various such as:

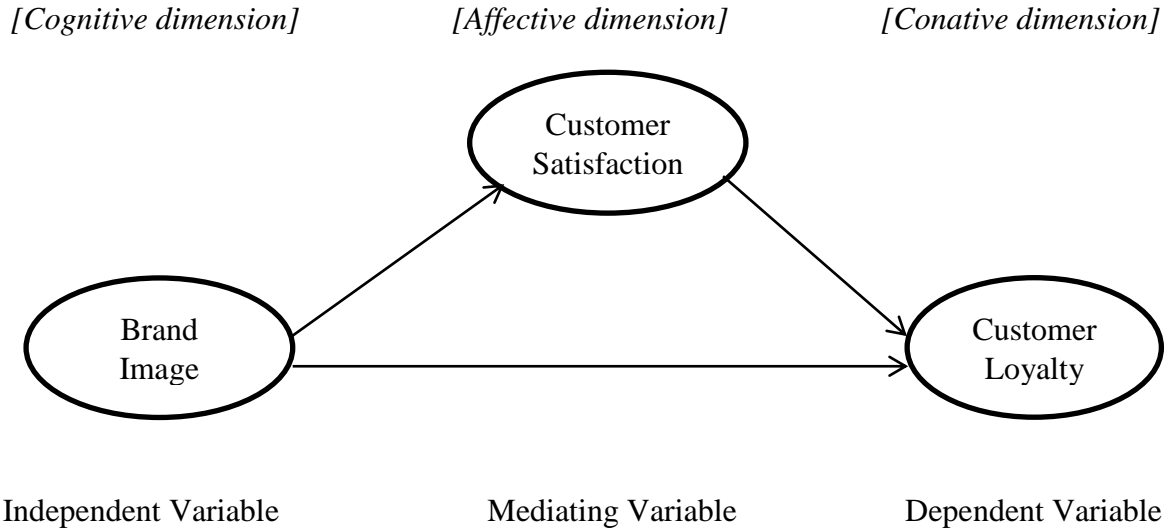


Figure 1 Theoretical Framework

Source: (Gelderman et al., 2021) & (Martínez, 2015)

2.5 Operational Definitions

Green marketing is the activity of promoting and supporting sales in a way that has a minimal adverse impact on the environment as possible while yet addressing the needs and wishes of specific individuals (Polonsky, 2011).

Products that are manufactured using green technology and present little to no risk to the environment are considered to be green products. Green electronics emphasizes removing harmful and toxic chemical components from electronics, consuming fewer resources, and leaving less of an environmental footprint, such as a carbon or water footprint.

Brand image of green products is defined as the perceptions developed from the interaction among the institute, personnel, customers and the community that are linked to environmental commitments and environmental concerns.

Customer satisfaction for green products is a pleasurable level of consumption-related fulfillment to satisfy a customer's environmental desires, sustainable expectations, and green needs.

Customer loyalty for green products which takes into an account a company's position on the environment and its dedication to promoting sustainability, evaluates a consumer's level of repurchasing intentions.

CHAPTER III

RESEARCH METHODS

This chapter covers the research methodology that has been employed in the study. It outlines the measures taken to carry out the study objective. The chapter begins by describing the type of research design used, followed by the selection of the study's population and sample size. This chapter also covers the data collection tools, data analysis tools, and statistical methodologies used for the study.

3.1 Research Design

A research design is the framework of methods and techniques a researcher uses to conduct a study. The research adopts descriptive research design with the casual comparative method. Descriptive research design classifies, describes, compares, and measures data. The measures such as frequency, percentage, mean, standard deviation, minimum and maximum have been used for descriptive analysis of the data. The casual comparative design has been used to test the degree of impact of brand image on customer loyalty while customer satisfaction is tested as the mediating variable. It uses structured questionnaire survey to describe the characteristics of the variables and their proposed relationships. The research design has been used to examine the relationship between image, satisfaction and loyalty. Respondent's opinions were taken on 7-points Likert scale and structural equation modeling has been used to conduct the casual analysis. The study aims to study the relationship of green image, green satisfaction and green loyalty.

3.2 Population and Sample

Population

The population for this study is the consumers who use the green electronic products in Nepal. Since the exact number of the consumers using green electronic products in Nepal is unknown, therefore the population is unknown.

Sampling Framework

Cochran (1977) provided the formula for determining the sample size when the population is infinite. The appropriate sample size for the study, which accurately represents the target population, is 384, with a 95% confidence interval and a 5% margin of error (Sekaran & Bougie, 2016). As stated by Delafrooz (2014),

$$n = \frac{z^2 \cdot p \cdot q}{e^2} = \frac{(1.96)^2 \times (0.5 \times 0.5)}{0.05^2} = 384$$

z= Standardized value corresponding to the confidence interval

p= Estimating observed attribute variable in the community

q= Estimation of different objects that are not observed

e= Allowable error in the measurement range of observation

Therefore, based on this adequate sample size is of 384 participants for unknown population.

Purposive sampling is the method of sampling that has been employed in the study. It is a kind of non-probability sampling, also referred to as judgmental sampling, when researchers use their own judgment to select individuals of the population to take part in their surveys. Purposive sampling is an appropriate sampling technique for this research as access to particular subset of people is possible. The participants of the survey that fit a particular profile (consumer of green electronic products) were selected through purposive sampling.

Sample

The questionnaires were distributed to 420 consumers; however, the data was collected from 402 respondents. Out of 402 responses, 387 were valid and used for the analysis. This shows that the research has sample adequacy through the use of 387 final samples.

Table 2

Summary of Data Collection

	Online/Physical Medium
Total Distributed Questionnaire	420
Submitted questionnaire	402
Correct Questionnaire	387
Final sample for study	387

3.3 Data Collection

The process of gathering information from all pertinent sources is known as data collection. It is done in order to test the hypothesis (for a deductive method) and evaluate the findings and to provide a response to the research question. The two types of data collection techniques are secondary and primary approaches. Secondary approach makes use of existing data to make analysis whereas primary approach uses questionnaires to collect the data. The most popular technique of gathering data is through questionnaires since it allows the researcher to gather a lot of data quickly and inexpensively (Saunders, Lewis & Thornhil, 2019). Data for the study is collected from the primary source to check the customer loyalty and its antecedents. Number of respondents are allowed to respond to relevant questions and compare effects.

The research data was collected using well-structured questionnaire. The questionnaire made use of scales like Likert scale, single choice questions. Data was collected in May, 2022. Questionnaire was formed on Google forms and forwarded to the respondents using social media platform. The questionnaire was also distributed in printed form in various parts of the Kathmandu Valley. The questionnaires distributed physically were both self-administered as well and researcher administered. A total of 402 responses were collected. Out of 402, 387 responses were valid and used for further analysis.

3.4 Instrumentation

The questionnaire used for the study is divided into three sections. The first section focuses on the general information of the respondents, the second section focuses on the specific information and third section focuses on Likert scale questions related to the research objective. The primary data has been collected using a structured questionnaire that is adapted from studies by many researchers.

A total of 24 items based on 7-points Likert scale were used to measure various variables involved in the study and to establish relationship between them. The data for the independent variable (brand image) has been collected through the use of a scale developed by Suki (2017); Chang and Fong (2010). Two dimensions of brand image: corporate reputation and corporate credibility were used to measure brand image. Five validated items from Weiss et al. (1999) were used to measure the variable corporate

reputation and six validated items used for corporate credibility were adapted from the scale developed by Keller and Aaker (1992) and Eke (2021).

Similarly, six items to measure the customer satisfaction has been adapted from Suki (2017); Chang and Fong (2010). Furthermore, the scale developed by Suki (2017); Chang and Fong (2010); Reid and Reid (1993) for customer loyalty with 7 items has been adopted in the study.

Table 3

Measurement Sources of Green Marketing

S. N.	Latent Variable	Code	Source
a.	Brand image	GI	
	• Corporate reputation	GR	Weiss et al. (1999)
	• Corporate credibility	GC	Keller and Aaker (1992); Eke (2021)
b.	Green satisfaction	GS	Suki (2017); Chang and Fong (2010)
c.	Green loyalty	GL	(2017); Chang and Fong (2010); Reid and Reid (1993)

3.4.1 Brand Image

In previous studies, the aspects of reputation and credibility were used to evaluate corporate image (Lapierre, 1998; Martinez & Pina, 2005). Numerous researches have used Martinez and Pina's (2005) suggestion to measure the corporate image in order to assess the brand image for green products.

Corporate Reputation

According to Weiss et al. (1999), the terms "regarded", "professional", "successful" "well established" and "stable" were used in this study to quantify "corporate reputation." The following five criteria adapted from Pina (2005) and Weiss et al. (1999) have used to measure a company's "corporate reputation" for green products: (1) the company is regarded as the best benchmark of environmental management; (2) the company is professional about environmental management; (3) the company is successful about environmental management; (4) the company is well-established about environmental

management; (5) the reputation of the company about environmental management is stable.

Corporate Credibility

Credibility has not been measured on a universal scale. The items recommended by Keller and Aaker (1992), which encompass the criteria "trustworthiness," "dependability," and "concern for consumers," were has employed in the study. Furthermore, "trustworthiness", "expertise" and "integrity" dimensions used by Eke (2021) were adapted for corporate credibility. The total items to measure "corporate credibility" for green products are: 1) the company is trustworthy about environmental management; (2) the company is dependable about environmental management; (3) the company concerns for customers about environmental management, 4) The brand has expertise about eco-friendly electronics, 5) The brand maintains integrity or compliance to its environmental commitment, 6) The brand is credible for its eco-friendly practices.

Therefore, the dimensions of "corporate reputation" and "corporate credibility" were used in this study to measure the brand image for green products.

3.4.2 Customer Satisfaction

Customer satisfaction from green products involves fulfilling or exceeding customers' expectations for sustainable development, environmental protection, and other green needs. Six validated items from prior studies have been used to measure this variable (Chang & Fong, 2010; Chen & Chang, 2013; Suki, 2017). In order to measure customer satisfaction, 6 items were used which have been taken from Suki (2016) and Chen (2010).

3.4.3 Customer Loyalty

Customer loyalty regards to three behavioral intentions: purchase intentions, word-of-mouth intentions and willingness to pay (premium). Customer loyalty for green products has been measured in past using three validated items from Suki (2017), Chang and Fong (2010), and Reid and Reid, which were utilized to reflect these three behavioral intentions (1993). Customer loyalty for green products in this study has been measured by using 7 items from the scale developed by Martínez (2015), Chen (2013) and Suki (2016).

3.5 Data Analysis Technique

Before analyzing the responses, the questionnaire forms are edited to eliminate inconsistencies, clean errors, incompleteness, misclassifications, and information gaps (Kumar, 2011). The purpose is to improve the quality of the instrument i.e. the questionnaire by replacing words with unclear meaning that suits the context of Nepal.

The collected data has been coded with the use of Microsoft Excel and IBM SPSS Statistics and analyzed using the software package, Smart PLS 3.3.3 software. Before the structural model was tested, a confirmatory factor analysis (CFA) was employed to assess the measurement scales' validity and reliability. The theoretical model's variables were then examined using the Structural Equation Modeling (SEM) technique created by Anderson and Gerbing (1988). SEM generates the path analysis to find the structural relationships between the variables under study. The mediation effect model has been used to study the mediation effect of the mediating variable (Customer satisfaction) among the independent (Brand Image) and dependent variable (Customer loyalty). And thus, the hierarchy of effects model has been established based on their relationship.

Following statistical techniques has been used to analyze data.

3.5.1 Descriptive Analysis

Descriptive statistics describe the basic features of the data in a study like spread, center and shape of distribution of a set of data. Descriptive statistics such as frequency and percentage are used in the study is to describe about the respondent's profile. Descriptive statistics such as frequency, percentage, mean, maximum, minimum and standard deviation of the items of various variables are also calculated.

3.5.2 Confirmatory Factor Analysis

Factor analysis is a multivariate statistical technique that is used to investigate the relation between sets of observed and latent variables. It measures the correlations among the variables and identifies core dimensions called factors. These are two types of factor analysis: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). In this study CFA has been conducted.

The application of CFA takes place when the researcher has some understanding of the latent variable structure (either through theory, empirical investigation, or both). Relations

between the observable measures and the underlying factors are hypothesized and tested based on such conceptual knowledge, empirical study, or both. CFA tells how well the specification of the factor structure matches the reality. It provides confirmatory test of the measurement theory. CFA can be done to conduct the reliability and validity test of the collected data.

Significant characteristics of the PLS-SEM analyze a model with numerous constructs of latent variables and their indicators using small and medium size survey samples (Chin, Peterson & Brown, 2008). The PLS path is a unique investigative technique for creating path models, mostly using latent variables and their relationships (Hair, Sarstedt, Pieper, & Ringle, 2012). PLS-SEM is used to explore the empirical study data and test hypotheses.

Composite reliability provides a more appropriate measure of internal consistency reliability. It does not assume that all indicators loadings are equal in the population and is able to accommodate different reliabilities while avoiding the underestimation associated with Cronbach alpha (Cronbach & Meehl, 1955). According to Sarstedt, Ringle, Henseler and Hair (2014), it is good enough to accept value between 0.60 and 0.70 and values between 0.70 and 0.90 are specified as satisfactory. The Cronbach's alpha should be equal to or higher than 0.7 in order to verify the structures' internal reliability (Hair et al., 2012). Prior to hypothesis testing, partial least square has three crucial examinations: convergent validity, discriminant validity, and analyzing the structural model. Each indicator of the latent variables' external loadings must be more than 0.5 in order to demonstrate reliability and validity. Reliability refers to a set of variables or latent variables that depend on what is intended to measure. Identification of multicollinearity can be made by calculating the correlations among variables, tolerance and VIF values. It is suggested that the correlation values at 0.90 or higher is an indication of multicollinearity (Hair et al., 2012).

Convergent validity and discriminant validity of a construct are noted, and support is given for convergent validity when the average variance extracted (AVE) value should be 0.5 or greater than 0.5 and when each item has outer loading over 0.70. (Hair et al., 2012). The degree to which a construct is experimentally different from other constructs is reflected by its discriminant validity. One technique for determining if discriminant validity exists is the Fornell and Larcker (1981) criterion. This methodology aims to

ensure that the construct have the most variance with its indicators of any construct. The AVE of each construct must be greater than the highest squared correlation with any other construct in order to pass this test. The second option requires that the loadings of each indicator on its construct are higher than the cross loadings on other constructs (Henseler, Ringle, & Sinkovics, 2009). The threshold for HTMT has been debated in the existing literature ; Kline (2011), suggested a threshold of 0.85 or less, while Teo, Srivastava and Jiang (2008) recommend a liberal threshold of 0.90 or less.

3.5.3 Structural Equation Modeling (SEM)

SEM is a statistical methodology that uses a confirmatory approach to examine the casual processes that are represented by a number of structural (also known as regression) equations. The structural relations are graphically depicted to enable a clearer conceptualization of the theory under study. SEM is a flexible and powerful extension of the general linear model that calculates the relationship between or among the exogenous, endogenous and moderating variables at the same time. SEM is used to investigate a set of relationships between one or more exogenous and one or more endogenous variables.

Latent variables, factors, or constructs are terms used to describe unobserved variables in SEM. A latent variable is measured using one or more observable indicator variables that represent or compose the factor. A general SEM model often includes two kinds of sub-models: measurement model and structural model. The measurement model (fundamentally the CFA) defines relations between a latent variable and observed indicator variables. In other words, the measurement model depicts the relationship between measured variables and construct representation. CFA is used as a validity procedure in measurement. On the other hand, the structural model (the multi regression model defines relations between the exogeneous variables and endogenous variables.

SEM analysis typically involves five steps: model formulation, data preparation, model estimation, evaluation, and model modifications. SEM enables testing the significance of correlations between the latent variables of interest as well as simultaneous evaluation of the factor loadings and error variance of the measurement. Because of this, SEM has been employed in the study to examine the significance of the relationship between different stages of the hierarchy of effects model while simultaneously estimating the factor loadings and error variances of the measurement model.

The model's overall quality can be evaluated with the use of coefficient of determination (R^2), cross-validated redundancy (Q^2), path coefficient and the effect size (f^2). The R^2 represents the exogenous variable's combined effect on the endogenous variable/s. This impact spans from 0 to 1, representing total predictive accuracy (Hair et al., 2012; Henseler et al., 2009) where the acceptable R^2 from a general rule of thumb is 0.75, 0.50, and 0.25, respectively, defining substantial, moderate, or modest degrees of predictive accuracy.

The predictive relevance of the inner model is evaluated using the cross validated redundancy (Q^2). The predictive accuracy of the model is increased by the cross-validated redundancy when the difference between the original and predicted values is less. A (Q^2) value greater than zero for a specific endogenous construct denotes the predictive relevance of the path model for that specific construct. Noting that comparing the (Q^2) value to zero indicates whether or not an endogenous construct can be predicted (Rigdon, 2014; Sarstedt et al., 2014).

The Cohen's size (f^2) for each path model can be calculated by observing the difference in r^2 when a particular construct is removed from the model. The following formula can be used to calculate the effect size:

$$f^2 = \frac{R_{included}^2 - R_{excluded}^2}{1 - R_{included}^2}$$

The difference between $R_{included}^2$ and $R_{excluded}^2$ will be large if an exogenous construct significantly contributes to explaining an endogenous construct, resulting in a high f^2 value. For a specific endogenous construct, the effect size of the omitted construct can be calculated using the f^2 value, with 0.02 denoting a minor effect, 0.15 a medium effect, and 0.35 a big effect (Jacob, 1988)

3.6 Pilot Testing

Since the tool was adapted from earlier studies that had already used the scale and verified the instrument to be scientifically reliable and valid, no trial survey was conducted before using the questionnaire. However, this study underwent a pilot testing with 50 participants to determine the reliability and validity of the instrument.

At first, the questionnaire was reviewed by the supervisor and the questionnaire was simplified so that the respondents could understand the intention of the questions and respond well. A pilot survey has been conducted to evaluate the reliability of the research instrument. After obtaining samples from 50 respondents, the questionnaire was pre-tested. Cronbach Alpha was used to assess the reliability of the instrument. Values for Cronbach alpha were calculated using SMART PLS 3.3.3.

The Cronbach alpha value between 0.6 and 0.7 is acceptable for the construct reliability (Rousson, Gasser & Saifer, 2002). Values of 0.95 and above indicate an issue since they suggest item redundancy, which lowers construct validity (Diamantopoulos, Sarstedt, Fuchs, Wilczynski & Kaiser, 2012; Drolet & Morrison, 2001). In addition, reliability values of 0.95 and higher raise the probability of unfavorable response patterns (such straight-lining), which would lead to inflated correlations between the error terms of the indicators. Table 4 shows that the Cronbach alpha values of all the variables are found within the range of 0.6 and 0.95, which are acceptable. The higher values could be the result of smaller number of observations. Since majority of the values met the minimum and maximum criteria, the instrument was considered reliable. Thus, the instrument was fit for collecting final data and was used for further analysis.

Table 4
Reliability of the Instrument at Pilot Test

Variable	Cronbach alpha
Corporate Reputation	0.89
Corporate Credibility	0.912
Customer satisfaction	0.921
Customer loyalty	0.89

3.7 Ethical Considerations

Ethics in business research refers to a code of conduct or expected societal norm of behavior during course of conducting research (Sekaran & Bougie, 2016). The ethical conduct applies to the researcher of study, research assistants and respondents that provide relevant data. According to (Saunders, Lewis, & Thornhill, 2009), the researcher is accountable to protect the rights of all individuals who are a part of their research. This

study has ensured that information of respondents is treated confidential, without disclosure of the respondents' personal and other information. The consent of participants to participate is taken in the survey and they informed that they can withdraw from the survey at any given time.

CHAPTER IV

ANALYSIS AND RESULTS

This chapter focuses on the presentation and analysis of primary data obtained from questionnaire surveys. The chapter initiates with the demographics of respondents. Next, the results of confirmatory factor analysis and the results of path analysis are presented in this chapter. The hypothesis is tested and the results of hypothesis testing are presented.

4.1 Respondents Profile

Table 5 summarizes the demographic information of the respondents. Out of 387 respondents, 50.1 percent of them are male and rest 49.9 percent are female. The gender participation seems to be equal in the research. Similarly, majority of the respondents i.e. 88.1 percent belong to the age group 21-30 years. 4.1 percent respondents are from the age group 20 & below and age group 31-40, 2.1 percent respondents are from the age group above 50 and 1.6 percent respondents are from the age group 41-50.

Majority of the respondents, 54.5 percent have qualified the master degree, 33.1 percent have qualified the bachelor degree, 9.8 percent have qualified the undergraduate or intermediate level, 1.8 percent have qualified till the SLC level and 0.8 percent have qualified above master degree.

Most of the respondents, 54.3 percent are students, 27.9 percent are in private or public service, 9.8 percent are self-employed, 6.7 percent have their business, 1 percent of respondents are unemployed and the rest 0.3 percent retired.

Majority of the respondents, 66.9 percent have monthly income NRs. 30,000 & below, 22.5 percent have monthly income in the range of NRs. 30,001- 60,000, 5.7 percent have in the range of NRs. 60,001- 90,000, 2.6 percent have in the range of NRs. 90,001- 120,000 and rest 2.3 percent respondents have income above NRs. 120,000.

Table 5
Respondents Profile

Variable	Indicators	Frequency	Percent
Gender	Female	193	49.9
	Male	194	50.1
Age Group	20 & below	16	4.1
	21-30 years	41	88.1
	31-40 years	16	4.1
	41-50 years	6	1.6
	Above 50 years	8	2.1
Academic Qualification	SLC/SEE or below	7	1.8
	Undergraduate	38	9.8
	Graduate	128	33.1
	Master	211	54.5
	Above Master	3	0.8
Employment Status	Student	210	54.3
	Self-employed	38	9.8
	Service (Private/Public)	108	27.9
	Business	26	6.7
	Unemployed	4	1
	Retired	1	0.3
Monthly Income	NRs. 30,000 & below	259	66.9
	NRs. 30,001-60,000	87	22.5
	NRs. 60,001-90,000	22	5.7
	NRs. 90,001-120,000	10	2.6
	Above 120,000	9	2.3

4.2 Descriptive Analysis

Descriptive analysis is a summary statistic that quantifies and summarizes the characteristics of the data gathered. Its aim is to summarize the sample rather than to learn about the population represented by the sample data. The computation of statistical measures such as mean and standard deviation, as well as maximum and minimum values,

is part of descriptive analysis. This part focuses on the descriptive analysis of the information gathered via the questionnaire.

Table 6

Green Electronic Device Used

Green electronic device used	Frequency	Percentage
Energy saving TVs	43	11.11
LED lights	152	39.28
Solar water panel	20	5.17
Solar inverter	18	4.65
Solar speakers	5	1.29
Green power outlets	1	0.26
Eco-friendly laptops	53	13.70
Chargeable batteries	33	8.53
Eco-friendly refrigerators	30	7.75
Eco-friendly washing machines	32	8.27
Total	387	100

Table 6 shows the types of green electronic products that the respondents have used. Out of 387 respondents, 39.28 percent have used LED lights, 13.70 percent have used eco-friendly laptops, 11.11 percent have used energy saving TVs, 8.53 percent have used chargeable batteries, 8.27 percent have used eco-friendly washing machines, 7.75 percent have used eco-friendly refrigerators, 5.17 percent have used solar water panel, 4.65 percent have used solar inverter, 1.29 percent have used solar speakers and 0.26 percent have used green power outlets.

Table 7

Green Electronics Brand Used

Brand	Frequency	Percentage
Samsung	79	20.41
Philips	79	20.41
LG	75	19.38
Sony	31	8.01
Dell	31	8.01
HP	14	3.62
Apple	10	2.58
Others	68	17.57
Total	387	100

Table 7 shows the green electric brand used by the respondents. Majority of the respondents, 20.41 percent, use green electronic products from Samsung and Philips each, followed by LG 19.38 percent, Sony and Dell 8.01 percent each, HP 3.62 percent, Apple 2.58 percent and 17.57 percent of other brands (Panasonic, Local brand, Asus, Wega, Sunrise, Himstar, Whirlpool, Local Nepalese brand, Chinese brand, CG, Divya, Blue Heaven, Greee-power, Osmo, Haier, Skyworth, Surya, Niu, Lotus Energy, Hitech, TCL, Huawei, Saniyo, Duracell and Boat).

Table 8

Purchase Frequency

Purchase Frequency	Frequency	Percentage
1-3 times	349	90.18
4-6 times	25	6.46
More than 6 times	13	3.36
Total	387	100

Table 8 shows the how often in a year the consumers purchase the green electronics. Majority of the respondents, 90.18 percent purchase green electronics 1-3 times in a year, 6.46 percent respondents purchase 4-6 times a year whereas only 3.36 percent make purchase of green products more than 6 times in a year.

Table 9

Factor Considered while Purchasing Green Electronics

Factor considered while purchasing green electronics	Frequency	Percentage
Use of non-toxic chemicals	32	8.27
Energy efficiency	228	58.91
Reduced carbon footprint	20	5.17
Less water print	7	1.81
Reduced plastic footprint	9	2.33
Made with easily biodegradable ingredients	21	5.43
Eco-friendly packaging	19	4.91
Reusable	51	13.18
Total	387	100

Table 9 shows the factors that consumers consider while selecting a green electronic product. Majority of the respondents, 58.91 percent consider energy efficiency of the green electronic while making a purchase. Similarly, 13.18 percent consider reusability of the product, 8.27 percent consider use of non-toxic chemicals, 5.43 percent consider use of biodegradable ingredients, 5,17 percent consider reduced carbon footprint, 4.91 percent consider Eco-friendly packaging, 2.33 percent consider reduced plastic footprint and 1.81 percent consider less water print while purchasing a green electronic product.

Descriptive statistics of variables under study

Descriptive statistical analysis of the individual items of the variables brand image, customer satisfaction and customer loyalty are presented in Table 4.3. These variables were measured on a seven-point Likert Scale where 1 represents “Strongly Disagree”, 2 represents “Disagree”, 3 represents “Slightly Disagree”, 4 represents “Neutral”, 5 represents “Slightly Agree”, 6 represents “Agree” and 7 represents “Strongly Agree”. The sum of all value from 1 to 7 equals to 28 and divided by number of items (7) gives mean value of the item that is 4. The mean value of item greater than 4 indicate that there is inclination towards agreement and value of mean below 4 indicate that there is inclination towards disagreement with the statements. Standard deviation indicates the variation in the value from the mean value.

Table 10 shows that the mean value of GR1 is 4.855 (SD=1.452). The respondents have agreed that brand they have selected is regarded as the best benchmark of eco-friendly electronic products. The mean value of GR2 is also 4.956 (SD=1.407) which means that the brand is professional about manufacturing eco-friendly electronics. The mean value of GR3 is also 4.894 (SD=1.391) which means that the selected brand is successful in manufacturing eco-friendly electronics. The mean value of GR4 is 4.829 (SD=1.449) which means that the selected brand is well-established in eco-friendly electronic industry. The mean value of GR5 is 4.806 (SD=1.374) which means that the reputation of the selected brand about environmental management is stable. Similarly, the mean value of GC1 is 4.894 (SD=1.479), GC2 is 4.796 (SD= 1.382), GC3 is 4.801 (SD= 1.457), GC4 is 4.729 (SD= 1.463), GC5 is 4.755 (SD= 1.397) , GC6 is 4.858 (SD= 1.419), GS1 is 5.367 (SD= 1.461), GS2 is 5.372 (SD= 1.361) , GS3 is 5.413 (SD= 1.318), GS4 is 5.336 (SD= 1.383), GS5 is 5.173 (SD= 1.426), GS6 is 5.24 (SD= 1.391), GL1 is 4.63 (SD= 1.655), GL2 is 4.718 (SD= 1.477), GL3 is 4.801 (SD= 1.425), GL4 is 4.832 (SD= 1.398), GL5 is 4.674 (SD= 1.505), GL6 is 5.083 (SD= 1.361) and GL7 is 4.703 (SD= 1.637). Mean values of all the items are greater than 4 which indicates that the respondents are in an agreement with the statements mentioned below.

Table 10
Descriptive Statistics of Items

Items	Mean	Standard Deviation
GR1 The brand is regarded as the best benchmark of eco-friendly electronic products.	4.855	1.452
GR2 The brand is professional about manufacturing eco-friendly electronics.	4.956	1.407
GR3 The brand is successful in manufacturing eco-friendly electronics.	4.894	1.391
GR4 The brand is well-established in eco-friendly electronic industry.	4.829	1.449
GR5 The reputation of the brand about environmental management is stable.	4.806	1.374
GC1 The brand manufactures trustworthy eco-friendly	4.894	1.479

electronics.		
GC2 The brand is dependable about eco-friendly electronics.	4.796	1.382
GC3 The brand shows concerns for customers regarding environmental issues.	4.801	1.457
GC4 The brand has expertise about eco-friendly electronics.	4.729	1.463
GC5 The brand maintains integrity or compliance to its environmental commitment.	4.755	1.397
GC6 The brand is credible for its eco-friendly practices.	4.858	1.419
GS1 I am satisfied with my decision to purchase the green products of this company.	5.367	1.461
GS2 I am glad to purchase the green products of this company.	5.372	1.361
GS3 I believe that I do the right thing in purchasing these green products.	5.413	1.318
GS4 I feel that I contribute to the environmental protection and sustainable development by using this product.	5.336	1.383
GS5 I am happy about the decision to choose this brand because of its environmental commitments.	5.173	1.426
GS6 I am pleased to buy this brand because it is environmentally friendly.	5.24	1.391
GL1 I generally choose this brand as my first option.	4.63	1.655
GL2 I will choose this brand as my first option in the future.	4.718	1.477
GL3 I shall continue getting the brand since it's environmentally friendly.	4.801	1.425
GL4 I like shopping from the brand to alternative brands because of its environmental functionality.	4.832	1.398
GL5 I seldom think about switch to alternative brands because of the brand's environmental features.	4.674	1.505
GL6 I am willing to recommend my family and friends to do shopping with this company.	5.083	1.361
GL7 I can accept the higher price of green products, even though the price of other general products (not green products) is cheaper than that of green products.	4.703	1.637

Table 11 shows the descriptive statistics of the observed and unobserved variables. The mean value of GR is 4.868(SD=1.180), mean value of GC is 4.805(SD=1.194), mean value of GS is 5.317(SD=1.179) and mean value of GL is 4.777(SD=1.157). The mean value of all the variables are greater than 4 which indicates that there is inclination towards agreement for these variables.

Table 11

Descriptive Statistics of Variables

	N	Minimum	Maximum	Mean	Std. Deviation
GR	387	1	7	4.868	1.180
GC	387	1.17	7	4.805	1.194
GS	387	1.17	7	5.317	1.179
GL	387	1.29	7	4.777	1.157

4.3 Result of the Normality Test

Table 12

Normality Test

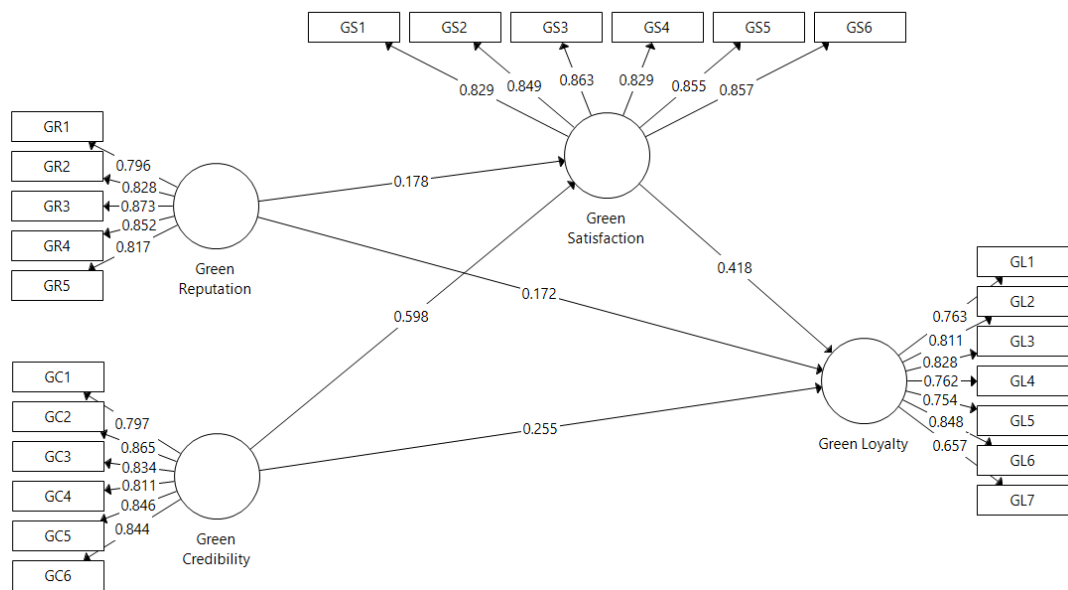
	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Corporate Reputation	0.113	387	0	0.924	387	0
Corporate Credibility	0.098	387	0	0.959	387	0
Customer Satisfaction	0.126	387	0	0.905	387	0
Customer Loyalty	0.079	387	0	0.969	387	0

Table 12 shows that Kolmogorov-Smirnov and Shapiro-Wilk test for checking the significance of the non-normal assumption. The null hypothesis of such tests is the normal distribution of the data. The p-value of all the constructs are 0.000, therefore, null hypothesis of the data normality is rejected. At 99.9% evidence we can state that the constructs like Corporate reputation, Corporate credibility, Customer satisfaction and Customer loyalty are non-normal distributions. We can also state that the data are normally distributed is not supported in the 0.01 level of significance.

Consequently, parametric tests like linear regression is not possible to comprehend the causality between the constructs, thus validating the choice of PLS, a non-parametric test for testing our hypothesis.

4.4 First Order Reflective Measurement Model

Measurement model presents the relationship between reflective indicators and its construct in order to determine whether or not the indicators are able to accurately reflect the formed construct.



Green Reputation= Corporate Reputation, Green Credibility= Corporate Credibility, Green Satisfaction= Customer Satisfaction and Green Loyalty= Corporate Loyalty

Figure 2 First Order Measurement Model

4.4.1. Construct Reliability and Convergent Validity

Table 13 demonstrates the construct reliability through the Cronbach's alpha and Composite Reliability, whereas rho_A and AVE values measure the convergent validity of the constructs. Based on Henseler, Ringle and Sarstedt (2015) threshold value of 0.7, all the constructs fall above the threshold value for Composite Reliability. Dijkstra and Henseler (2015) have recommended the threshold of 0.7 for rho_A, the constructs pass the reliability for the measurement of Customer loyalty, Customer Satisfaction, Brand image and its dimensions based on the threshold value. Furthermore, with passing of cutoff of 0.5 for AVE according to Fornell and Larcker (1981), the constructs have been valid and its indicators account for at least 50% of variance of the individual constructs. Values of

0.95 and above indicate an issue since they suggest item redundancy, which lowers the construct validity (Drolet and Morrison, 2001; Diamantopoulos et al., 2012). Table 13 shows that the values of Cronbach alpha for the variables are acceptable and within the range of 0.6 and 0.95.

Table 13

Construct Reliability and Convergent Validity

	Cronbach alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
GC	0.912	0.913	0.931	0.694
GL	0.89	0.9	0.914	0.604
GR	0.89	0.892	0.919	0.695
GS	0.921	0.922	0.938	0.718

4.4.2. Discriminant Validity

Table 14

Fornell-Larcker Criterion

	GC	GL	GR	GS
GC	0.833			
GL	0.682	0.777		
GR	0.721	0.61	0.834	
GS	0.726	0.707	0.609	0.847

Table 15

Cross-Loadings

	GC	GL	GR	GS
GC1	0.797	0.522	0.611	0.58
GC2	0.865	0.619	0.676	0.619
GC3	0.834	0.551	0.585	0.584
GC4	0.811	0.575	0.532	0.615
GC5	0.846	0.581	0.591	0.621

GC6	0.844	0.557	0.604	0.61
GL1	0.478	0.764	0.459	0.512
GL2	0.511	0.812	0.475	0.513
GL3	0.587	0.829	0.539	0.582
GL4	0.547	0.762	0.472	0.56
GL5	0.514	0.752	0.403	0.549
GL6	0.651	0.848	0.569	0.674
GL7	0.368	0.656	0.362	0.412
GR1	0.534	0.459	0.796	0.462
GR2	0.556	0.509	0.828	0.49
GR3	0.646	0.53	0.873	0.524
GR4	0.619	0.541	0.852	0.539
GR5	0.641	0.498	0.817	0.52
GS1	0.639	0.56	0.552	0.831
GS2	0.657	0.614	0.555	0.85
GS3	0.586	0.6	0.537	0.864
GS4	0.585	0.594	0.509	0.829
GS5	0.614	0.596	0.445	0.853
GS6	0.607	0.63	0.494	0.856

Table 16

Heterotrait-Monotrait Ratio

	Original Sample (O)	Sample Mean (M)	5.00%	95.00%
Customer Loyalty -> Corporate Credibility	0.747	0.746	0.675	0.804
Customer Reputation -> Corporate Credibility	0.798	0.798	0.729	0.852
Corporate Reputation -> Customer Loyalty	0.678	0.677	0.589	0.751
Customer Satisfaction -> Corporate Credibility	0.792	0.791	0.733	0.838
Customer Satisfaction -> Customer Loyalty	0.773	0.773	0.705	0.825
Customer Satisfaction -> Corporate Reputation	0.671	0.67	0.581	0.744

4.4.3. Collinearity Test

Table 17

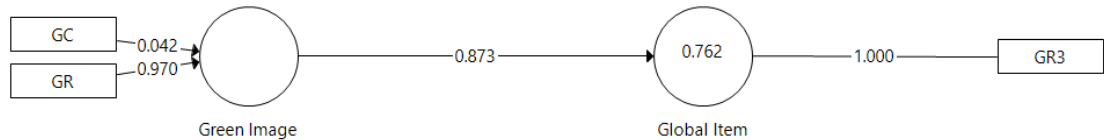
Collinearity Statistics of Items

Items	VIF
GC1	2.241
GC2	2.89
GC3	2.354
GC4	2.106
GC5	2.576
GC6	2.623
GL1	2.555
GL2	3.05
GL3	2.457
GL4	1.959
GL5	2.053
GL6	2.454
GL7	1.643
GR1	2.076
GR2	2.313
GR3	2.67
GR4	2.455
GR5	2.114
GS1	2.534
GS2	2.658
GS3	2.844
GS4	2.444
GS5	2.805
GS6	2.767

In the above table, all the values of Variance Inflation Factor (VIF) for items are below 3.3, no items have the issue of multicollinearity according to Diamantopoulos and Sigauw (2006), and thus passing the collinearity test.

4.5 Second Order Formative Measurement Model

4.5.1. Convergent Validity



Green Image= Brand Image

Figure 3 Redundancy Analysis

Checking all the factor loadings for the first order constructs of brand image showed GR3 with highest factor loading for GR, so the correlation between brand image and GR3 produced the correlation of 0.873 which is pass the limit of .8 needed for ensuring the redundancy of the reflective items of brand image dimensions to reflect the second order formative construct of brand image. This established the convergent validity of the second order brand image construct as there seemed convergence between the constructs representing its 2 dimensions.

4.5.2. Collinearity Test

Table 18

Collinearity Statistics of Dimensions

	VIF
GC	2.08
GR	2.08

All the VIF values of two dimensions do not cross the threshold value of 3.3 and this sets the two constructs for passing the multi-collinearity test for presence of any collinearity issues between the constructs (Diamantopoulos & Siguaw, 2006). Since, the two constructs are not correlated beyond the threshold, the two constructs are indeed different and reflect the formative model.

4.5.3. Significance and Relevance of Formative Indicators

Table 19

Outer Weights of First Order Brand Image Constructs

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P- Values	5%	95%
GC -> Brand Image	0.768	0.765	0.069	11.119	0.00	0.65	0.876
GR -> Brand Image	0.293	0.295	0.077	3.809	0.00	0.166	0.419

As shown in the Table 19, all the outer weights of the first order constructs lie within the confidence interval at 5% significance level as per Van Riel, Henseler, Kamen, & Sasovova (2017), so, this establishes the relative importance of two constructs –GR and GC on explaining the second order formative construct of Brand image.

Similarly, Table 20 shows the outer loading. It shows that all the outer loadings of the construct lie within the 5% significance level, thus maintaining the absolute importance of constructs. Through these analysis, the relative and absolute importance of all the constructs has been established. So, this research has enough evidence to retain two constructs to explain brand image with further evidence from Henseler (2017) for the retainment.

Table 20

Outer Loadings of First Order Brand Image Constructs

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	5%	95%
GC -> Brand Image	0.979	0.978	0.011	89.813	0.000	0.958	0.993
GR -> Brand Image	0.846	0.844	0.04	20.985	0.000	0.773	0.905

4.6 SEM Path Analysis

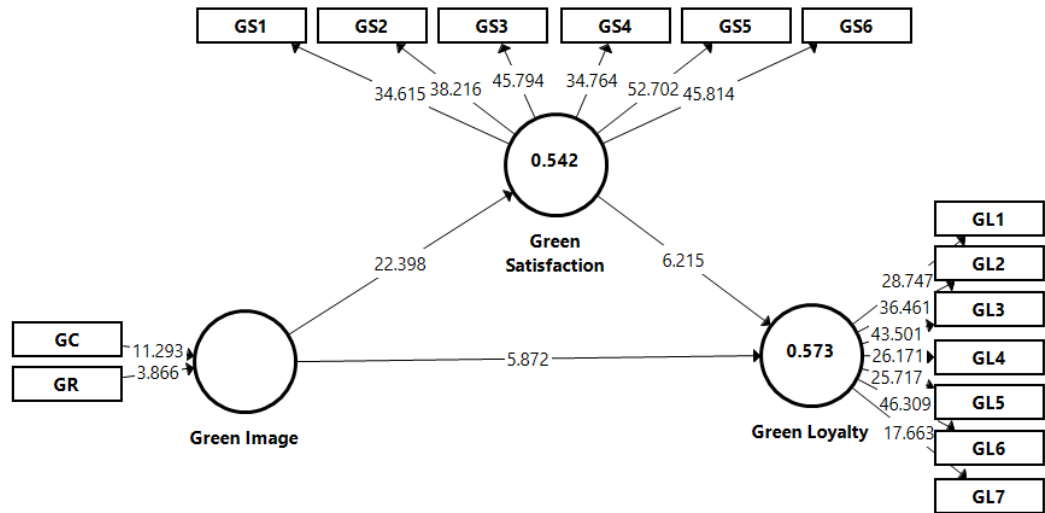


Figure 4 Path Coefficient Second Order Model

Table 21

Collinearity Test of Structural Model

	Customer Loyalty	Customer Satisfaction
Customer Satisfaction	2.183	
Brand Image	2.183	1

All the VIF values show the acceptance of non-existence of collinearity issues between the variables as it remains within the acceptable threshold of 3.3 by Diamantopoulos and Siguaw, 2006).

Figure 4 depicts the structural model of the project as per the theoretical framework designed from the literature study. It shows different paths between independent variable, Brand image to dependent variable, Customer loyalty, either directly or indirectly through the mediation by a variable, Customer satisfaction. Similarly, those paths show the path coefficient which is β of relationship between the variables in the path.

Table 22

SEM-Path Analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	5%	95%
Brand Image -> Customer Loyalty	0.397	0.399	0.068	5.872	0.000	0.287	0.509
Brand Image -> Customer Satisfaction	0.736	0.736	0.033	22.398	0.000	0.68	0.787
Customer Satisfaction -> Customer Loyalty	0.415	0.414	0.067	6.215	0.000	0.303	0.524

Furthermore, Table 22 demonstrates the path coefficients, standard deviation, t-stat, p-values and the confidence interval for checking the significance of relationship of the path. According to the p-value = 0.000 and the position of the path coefficients between their respective confidence ranges of 5% and 95%, it is evident that brand image has a significant positive association with both customer satisfaction and customer loyalty. Whereas from Table 19, confidence interval for path, customer satisfaction to customer loyalty also contains the path coefficient value at 5% interval. So, the project concluded the significance of the relationship at 5% significance. This proves the existence of positive direct effect among the paths between all the variables.

Table 23

Mediation Analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	5%	95%
Brand Image -> Customer Satisfaction -> Customer Loyalty	0.306	0.305	0.051	5.96	0.000	0.222	0.389
Brand Image -> Customer Loyalty	0.703	0.704	0.035	19.907	0.000	0.643	0.758

Table 23 shows the significance of the indirect path of the mediation between the brand image and customer loyalty is supported at 5% level of significance. Customer satisfaction

positively impacts the relationship between brand image and customer loyalty at 5% significance level as shown by $p=0.000$. This shows that indirect causal relationship also persists between brand image and customer loyalty. It is found evident that customer satisfaction mediates the relationship between brand image and customer loyalty. The total effect which adds the indirect effect and the direct effect of brand image on customer loyalty is found significant at 5% confidence interval. This suggests that, in addition to having a considerable positive impact on customer satisfaction, the brand image also has a favorable positive impact on customer loyalty for green electronic products. Since there is existence of both direct and indirect causal relationship between the brand image and customer loyalty, there exists partial mediation between these variables. However, the direct effect of brand image on customer loyalty is stronger than the impact through the mediator (customer satisfaction) for green electronic products.

Table 24

Coefficient of Determination of structural Model

	R Square	Adjusted R Square
Customer Loyalty	0.573	0.571
Customer Satisfaction	0.542	0.541

R- Square measures the predictive capability of model through the squared correlation of actual and predicted values of all data that are included in the model estimation. This gives the predictive power of the sample in determining the customer loyalty and customer satisfaction out of Nepali electronic consumers (Rigdon, 2012; Sarstedt et al., 2014).

The R-square values above 0.2 are considered satisfactory and acceptable in the management research, although researchers expect its value to have at the higher ranges of 0.5 so that strong predictive power can be established in the model (Hair, Ringle, & Sarstedt, 2012). As per this project, this model can predict 57.3% of all the variance of Customer loyalty of the Nepali consumers. That is to say, of all the factors, Brand image and Customer satisfaction explain and predict 57.3% of the customer loyalty of Nepali consumers towards green electronic products. Additionally, Brand image explains the prevalence of customer satisfaction by accuracy of 54.2% on average. These values of R-square match up as the acceptable value, establishing the good predictive power of the model.

Table 25

Effect Size of Structural Model

	Customer Loyalty	Customer Satisfaction
Customer Loyalty		
Customer Satisfaction	0.185	
Brand Image	0.169	1.183

Apart from the Coefficient of Determination, f^2 is another metric that represents the effect size of the specific exogenous construct on the endogenous constructs. Here, the omission of Brand image has the moderate effect of 0.169 on customer loyalty and has higher effect of 1.1183 on customer satisfaction. Similarly, omission of customer satisfaction has the moderate effect of 0.185 on the customer loyalty. The effect size of the omitted construct can be calculated using the f^2 value, with 0.02 denoting a minor effect, 0.15 a medium effect, and 0.35 a big effect (Cohen, 1988). So, omission of brand image will have high effect on the prediction of the customer satisfaction and moderate effect on the prediction of customer loyalty of the consumers.

Table 26

Model Fit of Structural Model

	Saturated Model	Estimated Model
SRMR	0.059	0.059

The contemporary research on PLS-SEM use SRMR as the global model fit index so as to see the goodness of fit of the established model. SRMR measures the difference between observed correlation and the correlation matrix of the model; this highlights any discrepancies between the expected and observed correlations (Hair, Howard, & Nitzl, 2020). According to Henseler, Hubona, and Ray (2016), the threshold for the SRMR is 0.085 and this research has the value of 0.059 which is less than 0.085 that indicates good fit. So, the research established the conclusion that the model has good explanatory power for the customer loyalty of green electronics consumers.

4.7 Hypothesis Summary

Table 27

Summary of Hypothesis Test

	p-value	Result
(H ₁): Brand image has a positive and direct influence on customer loyalty.	0.000	Supported
(H ₂): Brand image has a positive and direct influence on customer satisfaction.	0.000	Supported
(H ₃): Customer satisfaction has a positive and direct influence on customer loyalty.	0.000	Supported
(H ₄): Customer satisfaction mediates the relationship between Brand image and Customer loyalty among green electronics consumers.	0.000	Supported

4.8 Major Findings

The major findings of the research are as follows:

- There is equal participation of male and female in the consumption of green electronic products.
- The age group with highest participation on the study is the age group of 21-33 years.
- Majority of the respondents use green LED lights. The most used green electronics brands are Samsung and Philips. Consumers mostly consider energy efficiency while choosing a green electronic product.
- Majority of the respondents have completed their Masters degree and are students. Monthly income of majority of respondents is between the range of NRs. 30,000 or below.
- The mean scale of corporate reputation is 4.86 with a standard deviation of 1.18, which suggest that the average respondents are high on the degree of corporate reputation, which means that the respondents regard the green electronics product they have chosen is a reputed brand.

- The mean scale of corporate credibility justifies credibility is 4.80 with a standard deviation of 1.19, which suggests that the average respondents are higher on the degree of corporate credibility, which means that respondents regard the green electronics product they have chosen is a credible brand.
- The mean scale of customer satisfaction is 5.32 with a standard deviation of 1.18, which suggest that the average respondents are high on the degree of customer satisfaction for green electronic products, which means that respondents satisfied with the green impact of the green electronic product they have selected in the study.
- The mean scale of customer loyalty is 4.78 with a standard deviation of 1.16, which suggests that the average respondents are high on the degree of customer loyalty for green electronic products, which means that respondents are willing to make future purchase from the brand or are willing to pay higher prices for the green electronic products.
- There is a significant impact of brand image, customer satisfaction on consumer customer loyalty at 0.05 level of significance and brand image has significant impact on customer satisfaction at 0.05 level of significance.
- Customer satisfaction partially mediates the relationship between brand image and customer loyalty for green electronic products. However, the direct effect of brand image on customer loyalty is stronger than the impact through the mediator (customer satisfaction).

CHAPTER V

DISCUSSION, CONCLUSION AND IMPLICATIONS

This chapter concludes the study, discusses about the findings and future implications of the study. The evidences of previous studies are presented and the findings are compared and contrasted with previous studies. Finally, the conclusion of the study is presented. Also, the implications of the study and the area for future research are pointed out.

5.1 Discussion

This study has been performed to study the relationship between customer loyalty for green electronics and its two antecedents (brand image and customer satisfaction) and finally to establish a hierarchy of effects model based on their relation. The study has also examined the mediation role of customer satisfaction on brand image and customer loyalty.

In the context of green electronics, this study offers insights into the structural relationships between brand image, consumer satisfaction and customer loyalty. This study contributes to the existing body of knowledge regarding the consumer loyalty and its antecedents. First, this research has shown that brand image has a significant positive impact on customer loyalty (H1 supported). This outcome is consistent with prior research that discovered important connections between brand image and customer loyalty (Lee et al., 2009; Lin et al., 2007).

Numerous studies have demonstrated a positive relationship between corporate image and consumer satisfaction (Martenson, 2007; Chang & Fong, 2010). The findings of this research confirm the positive and direct impact of brand image on customer satisfaction (H2 supported). Corporate image should be aligned with the green context (with respect to environmental issues, social responsibility, ethics, regulations, innovation and sustainable development) to obtain higher levels of satisfaction.

Further investigation into the study found that customer loyalty on using green products was influenced by customer satisfaction, implying the acceptance of H3. This outcome is consistent with past research that discovered strong connections between customer satisfaction and customer loyalty (Butcher, Sparks, & O'Callaghan, 2002; Hellier, Geursen, Carr, & Rickard, 2003; Fornell, Mithas, Morgeson, & Krishnan, 2006; Zboja & Voorhees, 2006; Gountas & Gountas 2007; Chang & Fong 2010; Suki, 2017).

Customer satisfaction is a critical first step in the development of loyalty (Oliver, 1999). Due to their willingness to pay greater costs for green products, this contributes to the growth in customer loyalty (GL7). Consumers feel that by choosing green items, they are acting morally (GS3). According to the study's findings, customer satisfaction is a significant mediating factor in the relationship between green image and green loyalty in the context of green electronics (H4 supported).

In light of these findings, electronic companies should adopt initiatives to improve image and satisfaction for their green products to build enduring relationships with companies. The expectancy theory describes that a buyer gains greater benefits by selecting one product over another, possibly gaining social prestige through environmental protection. The businesses could start radical environmental practices like waste management plans, recycling strategies, the use of eco-friendly products, obtaining environmental certifications, and coming up with environmental protection plans that would help customers gain stature by associating with them. The electronics sector should also effectively communicate these aforementioned initiatives to explain the goals of green strategies since customers' views of green overall image and satisfaction may be significantly influenced by corporate communications connected to green issues. The idea aligns with the AIDA model that suggests that the buyer uses both emotional and rational thought when making a purchase. In this instance, the customer is looking for details about the product. The business must use creative advertising that provides more information in order to effectively communicate with this type of consumer. Therefore, companies should promote green initiatives that emphasize the significance of environmental issues in order to enhance their brand's overall image. Using biodegradable packaging, PR Electronics, for instance, actively advertises its "Green electronic product." To demonstrate the advantages of a green electronics, electronic enterprises should build an integrated communication strategy using multiple information channels. For instance, they might inform clients about their green practices using social media, direct mail, public relations, and advertising. Electronic enterprises should also create targeted training programs for staff members and clients to boost customer satisfaction and trust in the environmental movement.

The study shows the impact of brand image is higher on customer loyalty than customer satisfaction for green electronic products. The electronic companies can also focus on building conative behavior through cognitive efforts directly. Electronic companies

should also employ additional strategies to try and influence consumers' perceptions of the brand's overall environmental consciousness, such as the visual symbolism of the organization (such as the corporate brand name, corporate graphic symbols, logo, claim, and color scheme), which links the company's identity to the environment.

Additionally, as experience is required to achieve customer satisfaction, customers will likely to become more satisfied and loyal as a result of consistent positive interactions with the business. Therefore, green electronic enterprises should invest money in educating their clients about their eco-friendly practices (e.g. communication strategies, loyalty programs). Electronics firms should capitalize on consumer environmental concerns in order to stand out from the competition, capture new green niche markets, and represent themselves as environmentally friendly electronics.

To achieve corporate sustainability, electronic companies should consider the theory of Triple bottom line (TBL) by balancing the three aspects of TBL: social, environmental, and financial factors. Electronic company should not just focus on ripping the financial benefit but should also pay back equally to the society and the environment. Additionally, businesses that adopt environmental policies may see premium pricing and increased sales as a result of improved market credibility and greater societal acceptance (Chen, 2010).

Theory of planned behavior also suggests that the attitudes, individual and cultural factors, and outcome expectations have impact on consumers' intentions to purchase environmentally friendly goods. Hence, the social interaction and its impact (such as positive word-of-mouth) that can affect the consumer behavior cannot be neglected while choosing the communication media. The Resource based view (RBV) also gives us an idea that competitiveness for a product may be achieved by innovatively delivering customers with superior value that they consider desirable. So, interactive two-way communication with the customers can be beneficial to understand and cater their needs for the electronic industry. Although consumers show a lot of interest in environmental and green practices, this interest does not always convert into a willingness to pay more. Instead, it may be observed in a reluctance to buy from a firm that is thought to be environmentally irresponsible (Chan, 2013).

Accordingly, electronics companies should make green marketing a priority. Companies can develop sustainable competitive advantages through the integration of green

marketing practices into their corporate strategies, including higher levels of differentiation, lower operating costs, investor appeal, recruitment of highly motivated staff, and increased levels of customer loyalty (Lee et al., 2009; Tzschentke, Kirk & Lynch, 2004). As a result of these customers' tendency to value environmental aspects of services, green marketing may also lead to a rise in product demand from environmentally conscious consumers (Polonsky and Rosenberger, 2001).

But for many businesses, the main difficulty is to incorporate their environmental commitment into their corporate identities, not just to highlight their green products and services (Martinez & Rodríguez del Bosque, 2013). In conclusion, the current study highlights the importance of green marketing strategies for achieving long-term competitive advantages.

5.2 Conclusion

Gaining and maintaining customer loyalty is the ultimate goal of many businesses, including those in the electronics industry, as loyal consumers are more likely to make bigger purchases, spend a larger percentage of their income, and have a lower price sensitivity. Furthermore, buyers can now easily acquire companies green marketing strategies. Therefore, the idea of customer loyalty must be included in the academic literature on green marketing. This study offers a research methodology to investigate consumers' loyalty by taking into an account the entire perception of a green electronics with the idea that customer satisfaction is a key factor for understanding consumer behavior. The outcomes presented in this study further support the validity of hierarchy of effects theory as a theoretical framework for understanding how overall brand image affects customer satisfaction and loyalty. The findings are consistent with previous research that examined customers' perceptions of green products and services.

The findings demonstrate that green initiatives are a key strategic tool, given its crucial role in fostering not only customer loyalty but also consumer trust and satisfaction. Improved environmental performance can offer competitive advantage over others, which will boost financial performance. This paper adds four new theoretical contributions to the body of research on the electronics sector. First, this research follows a holistic approach by combining two perspectives, relationship marketing and green marketing, to develop a research framework for understanding customer loyalty. Second, no prior study has looked into how a company's overall brand image affects its

ability to retain customers in the electronics industry. This study demonstrates that having a overall brand image has a favorable impact on both customer loyalty and satisfaction. Additionally, this study offers empirical proof that the relationship between brand image and customer loyalty is mediated by customer satisfaction for green electronic products. Fourth, building customer loyalty for green electronics products can be reinforced by improving consumer perceptions of overall brand image regarding green initiatives and customer satisfaction. These findings highlight the necessity for electronics businesses to incorporate environmental issues into their management plans and policies given the relevance of such issues in today's economic environment.

5.3 Implication

5.3.1. Theoretical Implication

This study contributes to the existing literature in the context of green electronic products. The study confirms important factors relating to customer loyalty, customer satisfaction and brand image. Furthermore, the study validates the existence of various consumer behavior theories and sustainability theories in the green electronic industry in Nepal.

5.3.2. Managerial Implication

Although loyalty issues are widely explored in the electronics industry, the concept of green marketing is rarely examined in the literature on customers' loyalty to green electronic products. The electronics industry lacks comprehensive models from scholars to explain the relationships between the image, its affective consequences and behavioral customer reactions for green electronic products. This study integrates the overall perception of green electronics into a model of customer loyalty based on a green marketing strategy and adhering to the hierarchy of effects model's principles, demonstrating its relevance to foster not only green loyalty but also green satisfaction on the part of customers.

This favorable effect in turn controls customer loyalty towards green product. As a result, this study outlines two distinct strategies that electronics companies might use to win over environmentally conscious customers. The first path is composed of ideas and opinions (cognitive components), whereas the second path is composed of sentiments and emotions (affective components).

5.3.3. Societal Implication

This study has identified an important strategy of green marketing which help consumers to increase their satisfaction and loyalty towards environmentally friendly products. This study contributes to society and humanity by creating awareness on green electronic products, environmental pollution and climate issues. Community can get a deeper understanding about the impact of their day-to-day chores on environment aroused through their choice of electronics. The main implication is not of financial nature but is affective i.e. the satisfaction from fulfillment of their green wants and needs.

5.3.4. Future Research Implication

The context of the current study was the electronics industry in Nepal. To generalize the conclusions reported here, future research could focus on many other businesses or nations (e.g., those with a longer history in environmental challenges). Second, the scope of this study's framework is limited to its goals. Without taking into an account any other antecedents or outcomes, this study has focused on the link between the relevant variables. Therefore, there is still a need to investigate additional mediating factors (e.g. trust, commitment regarding environmental issues). Thirdly, the study has not taken into account customers' overall attitudes toward the environment, which may have allowed researchers to compare consumers who had great environmental concerns to those who did not. Therefore, taking into an account subgroup of green electronic consumers in the context of green marketing could be a crucial area of future research.

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APPENDICES

Questionnaire

Dear respondent,

This Study entitled "ANTECEDENTS OF CUSTOMER LOYALTY: A CASE OF ELECTRONICS INDUSTRY IN NEPAL" is a Graduate Research project (GRP) to meet the partial fulfillment of the requirements for the MBA Degree in Tribhuvan University. The research aims to study the relationship between the brand image, customer satisfaction and customer loyalty for green/environmentally friendly electronic products.

You have been chosen as a sample and I humbly request you to spare a few minutes of your valuable time and participate in this study. Please go through all the questions and select the best option for you. Your authentic responses will have an impact on the result of the study. Your information will be kept confidential and will solely be used for the purpose of the study.

In case of any queries or feedback, please feel free to contact the researcher at the address below:

Thank you for your valuable time.

Sincerely,

Riya Neupane

MBA Research Scholar

riya.neupane333@gmail.com

School of Management, Tribhuvan University

Section A: Demographic Information

1. Gender

Male

Female

Others

2. Age

20 & Below

21-30

31-40

41-50

Above 50

3. Academic Qualification

- SLC/SEE or below
- Undergraduate
- Graduate
- Masters
- Above Masters

4. Employment status

- Student
- Self-employed
- Service (Private/ Civil)
- Business
- Others

5. Monthly Income/ Pocket Money (in NRs.)

- 30,000 & Below
- 30,001- 60,000
- 60,001- 90,000
- 90,001- 120,000
- Above 120,000

Section B: Specific questions

6. What kind of eco-friendly electronic devices have you used? (Choose only one option from below) *(Note: Your further responses for this research should be based on the device you select from the following options)*

- Energy Saving TVs
- LED Lights
- Solar Water Panel
- Solar Inverter
- Solar Speakers
- Green Power Outlets
- Eco-friendly Laptops
- Chargeable Batteries
- Eco-friendly Refrigerators
- Eco-friendly Washing Machines
- Others

7. The above selected eco-friendly product is from which of the following companies? (Choose only one option from below)

- Samsung
- Sony
- Dell
- Lenovo
- Acer
- HP
- Apple
- Asus
- Panasonic
- Philips
- LG
- Others

8. How frequent in a year do you purchase eco- friendly electronic products?

- 1-3 times
- 4-6 times
- More than 6 times

9. What factor do you consider while purchasing eco-friendly electronics? (Choose only one option from below)

- Use of non-toxic chemicals
- Energy efficiency
- Reduced carbon footprint
- Less water print
- Reduced plastic footprint
- Made with easily biodegradable ingredients
- Eco friendly packaging
- Reusable

Section C: Likert type question

*Please tick mark at in the appropriate number for each statement based on the following)
(1= Highly Disagree, 2= Disagree, 3= Slightly Disagree, 4=Neutral, 5= Slightly Agree, 6= Agree, 7= Highly Agree)*

Statement	Highly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Neutral (4)	Slightly Agree (5)	Agree (6)	Highly Agree (7)
Brand Image							
Corporate reputation							
1. The brand is regarded as the best benchmark of eco-friendly electronic products.							
2. The brand is professional about manufacturing eco-friendly electronics.							
3. The brand is successful in manufacturing eco-friendly electronics.							
4. The brand is well-established in eco-friendly electronic industry.							
5. The reputation of the brand about environmental management is stable.							
Corporate credibility							
1. The brand manufactures trustworthy eco-friendly electronics.							
2. The brand is dependable about eco-friendly electronics.							
3. The brand shows concerns for customers regarding environmental issues.							
4. The brand has expertise about eco-friendly electronics.							
5. The brand maintains integrity or compliance to its environmental commitment.							

Statement	Highly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Neutral (4)	Slightly Agree (5)	Agree (6)	Highly Agree (7)
6. The brand is credible for its eco-friendly practices.							
Corporate Satisfaction							
1. I am satisfied with my decision to purchase the green products of this company.							
2. I am glad to purchase the green products of this company.							
3. I believe that I do the right thing in purchasing these green products.							
4. I feel that I contribute to the environmental protection and sustainable development by using this product.							
5. I am happy about the decision to choose this brand because of its environmental commitments.							
6. I am pleased to buy this brand because it is environmentally friendly.							
Corporate Loyalty							
1. I generally choose this brand as my first option.							
2. I will choose this brand as my first option in the future.							
3. I shall continue getting the brand since it's environmentally friendly.							
4. I like shopping from the brand to alternative brands because of its environmental functionality.							
5. I seldom think about switch to alternative brands because of the brand's environmental features.							

Statement	Highly Disagree (1)	Disagree (2)	Slightly Disagree (3)	Neutral (4)	Slightly Agree (5)	Agree (6)	Highly Agree (7)
6. I am willing to recommend my family and friends to do shopping with this company.							
7. I can accept the higher price of green products, even though the price of other general products (not green products) is cheaper than that of green products.							

12%

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