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Green Marketing and its Impact on Consumer Buying Behavior in Kathmandu Valley

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Abstract

Purpose: Promoting goods and services that are socially and environmentally responsible is the primary goal of green marketing. Consumers are increasingly looking for environmentally friendly and sustainable products as they become more conscious of the effects of their shopping decisions on the planet. Hence, utilising a survey in the Kathmandu Valley, this study concentrates on green marketing and its impact on consumer buying behaviour regarding green products.

Method(s): The explanatory research design was adopted as the central research paradigm to discover reality. Non-probability sampling technique to select sample population. It used a convenient sampling technique: 403 respondents were interviewed with a structural questionnaire, where data was collected using the KOBO Toolbox. The data was evaluated by using both descriptive and inferential statistics. Structural Equation Modeling was used to analyse the relationships from 403 responses to see the impact of consumer buying behaviour using SmartPLS software.

Finding(s): The study's findings show that Eco-labeling, Green Packaging and Branding, Green Products, Premium and Pricing and Environmental Concerns and Beliefs have shown a direct positive significant influence on Consumer Beliefs towards the environment. Lack of education and awareness are two critical challenges of green marketing. The managerial challenges and solutions are that promotion and awareness are crucial in advancing green marketing. Companies should successfully promote their eco-friendly products to consumers and educate them on the advantages of green products.

Conclusion: This study shows that the youth of Kathmandu Valley are highly aware of this. Hence, there is a considerable possibility of Green Marketing that is still untapped, according to the research.

Originality: This research is original and is not published in other publications.

Keywords: Green Marketing, Consumer Buying Behavior, Theory of Planned Behavior, Eco-labeling, Environmental Concerns and Beliefs, Kathmandu Valley.

JEL Classification: M30, F64, D91, C12, Q50

Introduction

Green marketing has evolved as a globally significant strategy, closely tied to environmental protection, and is considered a practical approach for promoting environmentally safe products and services (Banerjee, 2017; Shrestha et al., 2023). Scholars' interest in this field has grown since the 1980s, with its importance becoming more pronounced since the early 1990s (Kotabe & Helsen, 2022). Recent studies emphasize the favorable impact of green marketing on brand loyalty and purchase intentions in countries like India and Vietnam (Groening et al., 2018; Nguyen and Mogaji, 2022). Green marketing encompasses a range of activities, including modifying products, production processes, and advertising, aiming to establish a connection between businesses and environmentally conscious consumers (Dangelico et al., 2017).

Unlike traditional outbound marketing, green marketing adopts an inbound approach, focusing on pull strategies (Nieminen, 2017). This holistic strategy involves various options such as green products, packaging, prices, and communication (Dangelico et al., 2017). The global market for green products was estimated at over $200 billion in 2006, and the overall market for green marketing was projected to reach $3.5 trillion by 2017 (Cai et al., 2017). In Nepal, the demand for organic products has increased, particularly in cities like Kathmandu, Chitwan, and Pokhara, where consumers are willing to pay a premium price for such products (Chowdhary, 2017). Despite an increasing global debate on environmental issues, the complete impact of green marketing is yet to be realised in Nepal, with the cost of green products identified as a significant constraint for consumers (Dangelico et al., 2017; Dabija et al., 2019).

While consumer concern for the environment is rising globally, green marketing faces challenges such as greenwashing, where businesses falsely claim eco-friendliness (Szabo & Webster, 2021). The cost associated with eco-friendly production, potential consumer scepticism, and the specific target of markets are hurdles, limiting the potential audience for green marketing campaigns (Albert, 2019). Clear regulations and certifications are necessary to substantiate environmental claims and build consumer trust (Lewandowska et al., 2017). Despite these challenges, green marketing remains a crucial tool for ecological sustainability, requiring effective collaboration between businesses, consumers, and governments (Han et al., 2019; Volz, 2017).

Nepal, a country rich in natural resources, faces rapid urbanisation and industrialisation challenges, leading to increased pollution and environmental damage (Sarker et al., 2021). The government has implemented a Green Growth Policy, focusing on sustainable growth through green business, eco-tourism, and sustainable agriculture. The private sector in Nepal, exemplified by companies like Dabur Nepal, has demonstrated a growing interest in green marketing, incorporating eco-friendly practices into daily operations (Nepal et al., 2021). However, the complete impact of these initiatives on brand image and customer preference remains uncertain (Tandukar et al., 2020).

The research aims to investigate green marketing awareness in Kathmandu Valley, seeking answers to questions about the impact of consumer buying behaviour on green marketing, factors influencing consumer attitudes, challenges, and possible managerial solutions. It provides insights into integrating factors affecting consumer attitudes and challenges for effective green marketing, particularly within Nepal's distinctive environmental and economic landscape. The study underscores the necessity for businesses to adopt eco-friendly and sustainable practices in the face of increasing environmental challenges (Naim, 2021). It seeks to bridge the gap in understanding how green marketing influences consumer behaviour, offering valuable insights for marketers, legislators, and academics. Green marketing strategies must align with consumer values, and the research explores various approaches' impact on Kathmandu consumer behaviours.

In summary, the study sheds light on the complicated interplay between green marketing strategies and consumer behaviour in Nepal amidst a global trend towards eco-consciousness. Regardless of this

trend, local challenges such as affordability, consumer education, and scepticism towards green claims persist. The research highlights robust regulations, credible certifications, and effective communication in advancing green marketing efforts. In Nepal's unique economic and environmental landscape, green marketing is vital for fostering sustainable progress, which is supported by governmental initiatives and growing private sector interest. This study provides valuable insights into the dynamics of green marketing in Kathmandu and offers actionable recommendations to promote environmentally responsible consumer behaviour.

Research Methodology

Theoretical Framework and Hypothesis Formulation

The study has reviewed several theories, such as the Theory of Planned Behavior (Ajzen, 1991), the Theory of Consumption Values (Sheth et al., 1991), Consumer Choice Theory and Rational Choice Theory (Friedman and Hechter, 1990), Hierarchy of Needs Theory (Hagerty, 1999) and Alphabet Theory (Grosswiler, 2004). The Theory of Consumption Values underscores the influence of social, emotional, and functional values on consumers' green purchasing decisions, with social worth playing a crucial role in determining a product's value. Consumer Choice Theory and Rational Choice Theory posit that consumers make rational decisions based on perceived benefits and costs, emphasising the significance of weighing environmental benefits against potential expenses. The Alphabet Theory integrates various theoretical elements to propose that consumers seek information, shaping their values, attitudes, and habits, influencing their purchasing decisions. Lastly, the HoN Theory, rooted in Maslow's Hierarchy of Needs, suggests that consumers prioritise green purchases based on their needs, with environmental concerns related to safety and health taking precedence. Together, these theories provide a comprehensive understanding of the factors influencing consumers in green marketing.

Among all these theories, the most suitable theory is The Theory of Planned Behavior (TPB), an extension of the Theory of Reasoned Action, which has been praised as the best model for anticipating intents (Maichum et al., 2016). (TRA). Both models are predicated on the idea that people choose to engage in activities after using logic and reasoning. TPB is a theoretical framework for predicting a person's behavioural intentions and conducts based on three core beliefs—behavioral belief, normative belief, and control belief. In predicting and explaining arthritis self-management, a TPB model based on attitudes, social support, self-efficacy, and intention was only marginally successful in RA.

Additionally, many studies have studied the relationship between green marketing and consumers using the theory of planned behaviour. The study by Smith et al. (2019) found that consumers' attitudes, subjective norms, and perceived behavioural control significantly influenced their intentions to purchase green products, aligning with the planned behaviour theory. Another similar study by Chen and Tung (2014) investigated how the theory of planned behaviour can predict consumers' intentions to participate in green activities, highlighting the importance of perceived behavioural control. TPB is useful for understanding how consumers' attitudes toward behaviour, arbitrary norms, and perceived behavioural control affect their knowledge of and intention to buy green marketing products. The TPB suggests that consumers' intentions to purchase eco-friendly products are influenced by their attitudes, subjective norms, and perceived behavioural control. The attitudes are shaped by consumers' beliefs about the benefits and risks of green products, while social pressures and normative beliefs determine subjective norms. Perceived behavioural control refers to the degree of control consumers feel over their ability to purchase eco-friendly products (Ajzen, 1991).

The green marketing factors included eco-labelling (EL), green packaging and branding (GPB), green products, premiums, and pricing (GPPP). The fourth factor was environmental concerns and beliefs (ECB).

Figure 1: Conceptual Framework

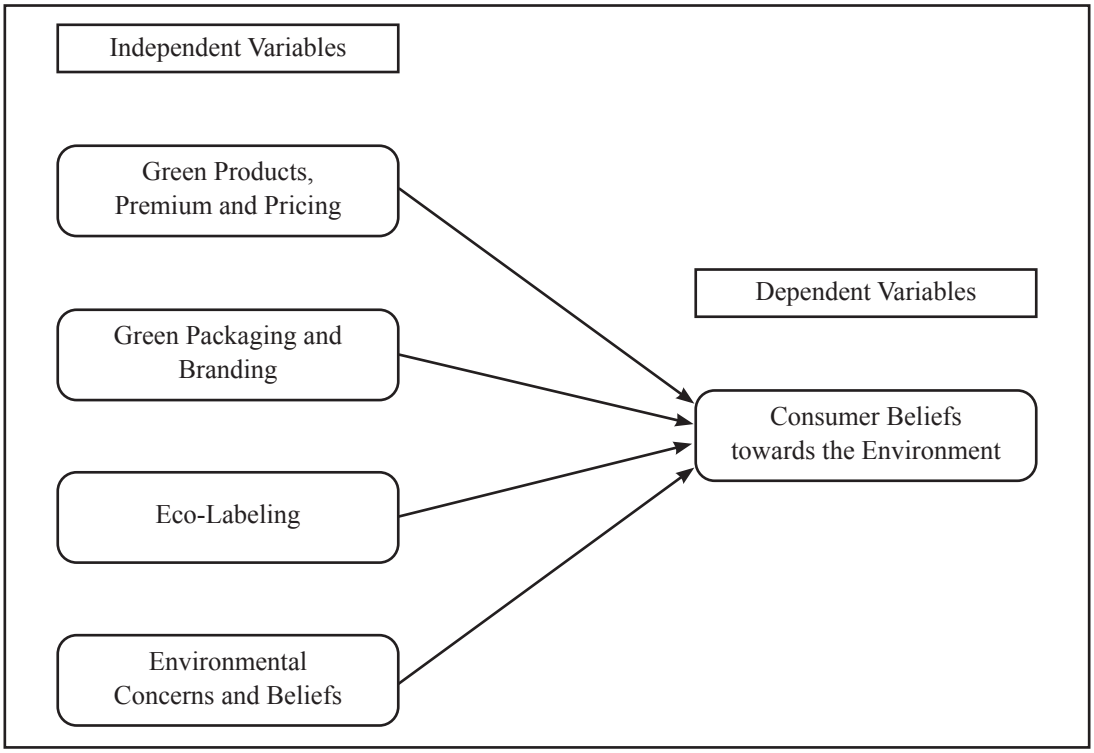


Figure 1 tries to explain the impact of consumer buying behaviour towards the environment based on eco-labelling, green packaging and branding, green products, premium and pricing environmental concerns, and beliefs.

Hypothesis Formulation

Eco-Labeling (EL) and Consumer Beliefs towards the Environment

Eco-labelling significantly shapes consumer behaviour by providing information on environmental concerns and product characteristics, catering to business users and consumers (Yang et al., 2022). It influences the creation of ecological legislation and promotes adopting ecologically friendly goods and services, aligning with related frameworks and multi-stakeholder policy considerations (Yang et al., 2022). Despite its positive impact, consumers may face challenges in accurately assessing the environmental quality of products based on eco-labelling impressions (Dekhili & Achabou, 2015).

Eco-labels, however, assist consumers in identifying products with the lowest overall environmental impact throughout their life cycle, encompassing raw material extraction, production, and disposal (Yokessa & Marette, 2019). Research on eco-labelling has delved into various business policies, plans, and competitiveness among labelled items, contributing to a comprehensive understanding of its implications ((Yokessa & Marette, 2019; Okutani & Wu, 2014). Additionally, eco-labelling is explored in the context of green technology investment, with studies focusing on investment, environmental behaviour, and price competitiveness, ultimately serving as a critical tool in reducing investment in low-quality products and enhancing the efficiency of such firms (Shabbir et al., 2020). Policymakers leverage eco-labelling as a crucial technique to promote adopting more sustainable and environmentally friendly products (François-Lecompte et al., 2017).

H1: There is a significant relationship between eco-labelling (EL) and consumer behaviour towards the environment.

Green Packaging and Branding (GPB) and Consumer Beliefs towards the Environment

Research has not focused on green packaging and branding for the past ten years. Green marketers have not yet investigated green branding in the current economy. However, as consumer knowledge of green packaging and branding has increased in response to growing environmental concerns, consumers' attitudes toward the environment have improved (Shabbir et al., 2020). Brands have the power to alter consumer perceptions of green products since an effective green posture necessitates brand uniqueness. Additionally, it has been claimed that items that do not exhibit green features have less commercial success (Hartmann et al., 2005).

Additionally, scholars have stated that green positioning is a crucial component for the success of green branding efforts (Meyer, 2001). The relevance, behaviour, and characteristics of environmental products have all been the subject of numerous research (Wüstenhagen & Bilharz, 2006). Consumers have shown favourable sentiments toward goods with eco-brands from the standpoint of European nations (Meyer, 2001).

H2: There is a significant relationship between green packaging and branding (GPB) and consumer behaviour towards the environment.

Green Product, Premium and Pricing (GPPP) and Branding and Consumer Beliefs towards the Environment

According to research findings, most consumers are willing to pay more for green items (Swezey & Bird, 2001). Green pricing offers clients more opportunities to participate in renewable energy sources. Customers respond well to premium pricing tactics in various states. Additionally, it has been discovered that products with premium green prices are of outstanding quality. A proper and well-designed environmental regulation pricing plan encourages eco-friendly actions for increased market competitiveness. A firm can be promoted by implementing the appropriate price strategy while considering ecological considerations. Product production and pricing strategies directly impact a company's profitability (Chen, 2009). The pricing of green products depends on several criteria. Consumer engagement rates are significantly influenced by green pricing and related programs (Bae, 2023).

H3: A significant relationship exists between green products, premiums, and pricing (GPPP) and consumer behaviour towards the environment.

Environmental Concerns and Beliefs (ECB) and Branding and Consumer Beliefs towards the Environment

Environmental issues and concerns affect all businesses and citizens worldwide (Papadopoulos et al., 2010). Consumers have been discovered to be highly concerned about the environment and have gradually adjusted their behaviour to favour its conservation (Kim & Choi, 1997). A new market for green products has formed because of this growing problem, and engaged consumers have increased its significance. The rationale is that customers' active participation is seen to advance environmental protection (Cleveland et al., 2012). Among other actions, it is crucial to provide value for the environment. However, it has also been stated that more environmentally conscious consumers do not always act environmentally responsible (Zahid et al., 2018). Evidence has shown that only a tiny percentage of consumers desire to recycle things, worry about environmental damage, and pay more for environmentally friendly products (Borin et al., 2013). The following hypotheses were created to meet the study's objectives and to examine the relationship between green marketing strategies and customer behaviour toward the environment. H4: There is a significant relationship between environmental concerns and beliefs (ECB) and consumer beliefs towards the Environment (CBTE).

Variables and their Definition

The variables used in the analysis and their explanations are shown in Table 1.

Table 1: Variable and its Definition

Construct	Variable Notation	Observed Variables	Explanation
Eco-Labeling (Shabbir et al. 2020).	EL1	Green products	Eco-labels are noticeable on green products.
	EL2	Information	Satisfactory information is provided on eco-labels.
	EL3	Readable	Eco-labels are readable.
	EL4	Engaging and relevant	Green products are marketed in a way which is engaging and relevant to my lifestyle.
	EL5	Accurate information	Information on eco-labels is specific to green products.
	EL6	Product identification	It is easy to recognise green products in Kathmandu.
Green Packaging and Branding (Shabbir, et al. 2020).	GPB1	Information on packaging	The information on packaging is an important criterion.
	GPB2	Reuse or recycle	It is essential to reuse or recycle packaging after use.
	GPB3	Biodegradable packaging	Biodegradable packaging should be considered essential for green customers.
	GPB4	Less damaging products	Purchasing goods which are less damaging to the environment is good.
	GPB5	Trust	Well-known green-branded products are trusted and authentic in Kathmandu.
	GPB6	Change in attitude	Brands can change consumers' perspectives towards green products.
Green Product, Premium and Pricing (Shabbir, et al. 2020).	GPPP1	Portion of the price	A particular portion of the price for green products goes to a worthy environmental cause.
	GPPP2	Importance	Green products are crucial in Kathmandu.
	GPPP3	Pay a higher price	It is acceptable to pay a higher price for ecologically produced products.
	GPPP4	Quality and Price	The quality of standard products with green premium pricing is higher.
	GPPP5	Profitability	The production of goods and pricing policies directly affect a company's profitability.
	GPPP6	Influence	Consumer engagement rates are significantly impacted by green pricing and related programs.

Construct	Variable Notation	Observed Variables	Explanation
Environmental Concerns and Beliefs (Shabbir, et al. 2020).	ECB1	Support	We're getting near the earth's natural carrying capacity for the human population.
	ECB2	Balance of nature	The natural balance is quite fragile and is easily disturbed.
	ECB3	Modify	Humans can change the natural environment to meet their requirements.
	ECB4	Disastrous consequences	The effects of human intervention with nature are sometimes devastating.
	ECB5	Usability	Plants and animals exist primarily for humans to use.
	ECB6	Industrial growth	To keep a strong economy, humans must control the growth of the industrial sector.
	ECB7	Harmony	To survive, humans must live in harmony with the natural world.
	ECB8	Adapt	Since humans can alter it to suit their requirements, they must adapt to the natural environment.
	ECB9	Expand	The development of the industrialised society has limits.
	ECB10	Abusing Environment	Mankind is severely abusing the environment.
Consumer Beliefs towards the Environment (Shabbir, et al. 2020).	CBTE1	Biodegradable soaps	Using biodegradable detergents or soaps.
	CBTE2	Aerosol	Steer clear of aerosol goods.
	CBTE3	Examine labels	Examine labels to see whether products are environmentally safe.
	CBTE4	Recyclable materials	Spend on goods made or packaged with recyclable materials.
	CBTE5	Refillable packaging	Purchase products in refillable packaging.
	CBTE6	Environmentally responsible	Avoid purchasing goods from ecologically responsible companies.
	CBTE7	Recycle	Recycle glass, cans, and bottles.
	CBTE8	Bags	Consumers bring their bags to the store.
	CBTE9	Financial donations	Make financial donations to environmental causes.

Study Area, Population and Sampling

The study area used for the study is Kathmandu Valley. Kathmandu Valley includes Kathmandu, Lalitpur, and Bhaktapur districts. Kathmandu Valley is the capital city of Nepal, and most of the country's businesses are based here. And one of the few areas with the highest population density. Therefore,

researching Kathmandu Valley will give the study more exact and reliable data. Nepal was selected as the area of study, which lies between latitudes 27° 32° 13" and 27° 49' 10" north and longitudes 85° 11' 31" and 85° 3l' 38" east, with a mean height of around 1,300 meters (4,265 feet) above sea level (Devkota et al., 2021). Its three districts, Kathmandu, Lalitpur, and Bhaktapur, comprise an area of 899 square kilometres, while the valley covers 665 square kilometres (Haack, 2009).

Given that Kathmandu is the capital of Nepal, there is a good chance that locals will be familiar with the concept of green marketing. The primary reason for choosing this location is that it has the highest level of pollution and environmental degradation compared to other places in Nepal. As a result, it will be easier to gather enough data on green marketing and its impact on consumer buying behaviour. Non-probability sampling is used in this study, under which a purposive sampling technique is used to select 403 respondents. This is because Purposive sampling is used when researchers want to select participants or elements with specific characteristics or qualities relevant to the research question or objectives (Taherdoost, 2020).

Data Analysis and Technique

Each piece of data collected from the field is assessed to make sense of the research and come to specific conclusions and findings. The data were analysed using descriptive and inferential techniques. Microsoft Excel was utilised for data entry and tabulation, whereas KOBO Toolbox, SmartPLS 4.0. Tables and graphs are used to present the results of the statistical data analysis. In addition, four crucial elements are considered when analysing consumer behaviour concerning the environment.

Results

Socio-Demographic Characteristics

A questionnaire survey was conducted among 403 respondents in each of the three districts: Kathmandu, Bhaktapur and Lalitpur. The socio-demographic information generally deals with the personal characteristics of respondents. Various factors such as gender, level of education, profession, and monthly income were analysed concerning socio-demographic characteristics.

Table 2: Socio-demographic Table

Title	Category	Number	Percentage
Gender	Male	329	81.63
	Female	73	18.11
	Others	1	0.25
Marital Status	Unmarried	226	55.94
	Married	164	40.59
	Separated	7	1.73
	Widow	1	0.25
	Others	5	1.24
District	Kathmandu	257	63.61
	Lalitpur	69	17.08
	Bhaktapur	77	19.06

Title	Category	Number	Percentage
Education Level	Illiterate	11	2.72
	SEE	8	1.98
	Higher Secondary	61	15.1
	Bachelors	209	51.73
	Master's and above	115	28.22
Profession	Service Provider	76	18.81
	Government Employee	42	10.4
	Industries Worker	37	9.16
	Student	87	21.53
	Self - Employed	104	25.74
	Others	57	14.11
Monthly Income	Below 20k	99	24.5
	21k-40k	53	13.12
	41k-60k	85	21.04
	61-80k	56	13.86
	81-100k	46	11.39
	100k above	64	15.84

Table 2 shows that sthe socio-demographic characteristics of a particular population, focusing on gender, marital status, district of residence, education level, profession, and monthly income. There is a notable gender imbalance, with males making up a significant majority at 81.63% (n = 329), females constituting 18.11% (n = 73), and those identifying as others accounting for a minimal 0.25% (n = 1). This pronounced gender disparity underscores the need for further investigation into its causes and potential implications for gender-focused initiatives. Marital status data reveal that over half of the population (55.94%, n = 226) is unmarried, while 40.59% (n = 164) are married. Separated, widowed, and other marital statuses make up a small fraction of the population. Geographically, the population is predominantly urban, with 63.61% (n = 257) residing in Kathmandu, followed by Lalitpur at 17.08% (n = 69) and Bhaktapur at 19.06% (n = 77). This urban concentration likely reflects migration trends and the clustering of resources in the capital area.

Educational attainment within this population is skewed towards higher education, with 51.73% (n = 209) holding a Bachelor's degree and 28.22% (n = 115) having a Master's degree or higher. Those with higher secondary education account for 15.1% (n = 61), while the illiterate and those with only secondary education (SEE) represent a smaller portion. Professionally, the population is diverse: the largest group is self-employed (25.74%, n = 104), followed by students (21.53%, n = 87). Service providers, government employees, industry workers, and other professionals contribute to the varied occupational landscape. Monthly income data show a broad range of earnings, with the largest group earning below 20k per month (24.5%, n = 99), and substantial portions earning between 41k and 60k (21.04%, n = 85), and above 100k (15.84%, n = 64). This income distribution points to economic stratification within the population. In summary, the socio-demographic profile reveals a predominance of males, a high percentage of unmarried individuals, a strong urban concentration, significant educational attainment, diverse professional engagement, and varied income levels.

These insights provide a foundational understanding for developing targeted social, economic, and educational policies to address this population's specific needs and challenges. Further research is needed to explore these demographic trends' underlying causes and implications.

Customers' Awareness Level of Green Marketing

This study tries to measure the customer awareness level of Green Marketing.

Table 3: Customers' Awareness Level of Green Marketing

Particular	Yes		No	
	Num.	%	Num.	%
Do you prefer green products over conventional products?	373	92.56	30	7.44
Are you willing to pay more for environmentally friendly products?	283	70.22	120	29.78
As a customer, do you think you have a bigger role in protecting the environment?	356	88.34	47	11.66
Do you believe that an individual can do much to promote the environment?	315	78.16	88	21.84
Do you feel the price of green products with labels affects your purchase behaviour?	313	77.67	90	22.33
Does the label sway your decision to buy a product?	273	67.74	130	32.26
Is green labelling understandable?	293	72.7	110	27.3
Is it helpful to have green labels on your product?	340	84.37	63	15.63
Do you think biodegradable, recyclable, reusable and environmentally friendly products are better than non-green products?	354	87.84	49	12.16
Do you look at environmentally friendly brands when purchasing products?	254	63.03	149	36.97
Do you consider green product purchasing a sign of prestige and a higher social status?	259	64.27	144	35.73
Does a brand with environmental benefits influence purchasing decisions?	313	77.67	90	22.33
Do you consider green advertisements to be effective?	296	73.45	107	26.55
Is green advertisement noticeable?	278	68.98	125	31.02
Do green advertisements encourage you to buy green products?	316	78.41	87	21.59
Do you consider the advertisement part while making your purchase decision?	280	69.48	123	30.52
Do you find eco-friendly packaging more appealing than non-eco-friendly packaging?	326	80.89	77	19.11
Are you taking your bags to the supermarket?	224	55.58	179	44.42
Do you find eco-friendly packaging more appealing than non-eco-friendly packaging?	327	81.14	76	18.86
Do you prefer to buy products that use eco-friendly packaging?	355	88.09	48	11.91

The awareness index tries to reveal the customer's level of knowledge regarding Green Marketing. To evaluate the level of awareness of Green Marketing and its impact on consumer buying behaviour, 20 questionnaires with "Yes" and "No" questions were asked. Consequently, if a person answers yes or no to more than 75% of the questions, it may be claimed that they are well-informed about green marketing and its practices. In a similar vein, respondents may be thought to be less knowledgeable about green marketing and its practices if they reply with fewer than 50% no.

The following is a common method for assessing how informed consumers are about green marketing:

Y (Awareness): $Y = 2$, If Scale Score $> 75\%$

$Y = 1$, If $50\% <$ Scale Score $< 75\%$

$Y = 0$, If Scale Score $< 50\%$

Based on the above responses:

- **Highly Informed (Y = 2):** Most respondents answered "Yes" to more than 75% of the questions, indicating high awareness about green marketing. Specifically, many of the responses are above 75%, demonstrating that respondents are generally well-informed about green marketing practices and their impact.
- **Moderately Informed (Y = 1):** For questions where "Yes" responses range between 50% and 75%, such as "Willingness to Pay More" (70.22%), "Influence of Labels" (67.74%), and "Environmental Brands Preference" (63.03%), respondents show a moderate level of understanding and consideration towards green marketing.
- **Less Informed (Y = 0):** There are no questions with fewer than 50% "Yes" responses, indicating that none of the respondents are in the less informed category for the given set of questions.

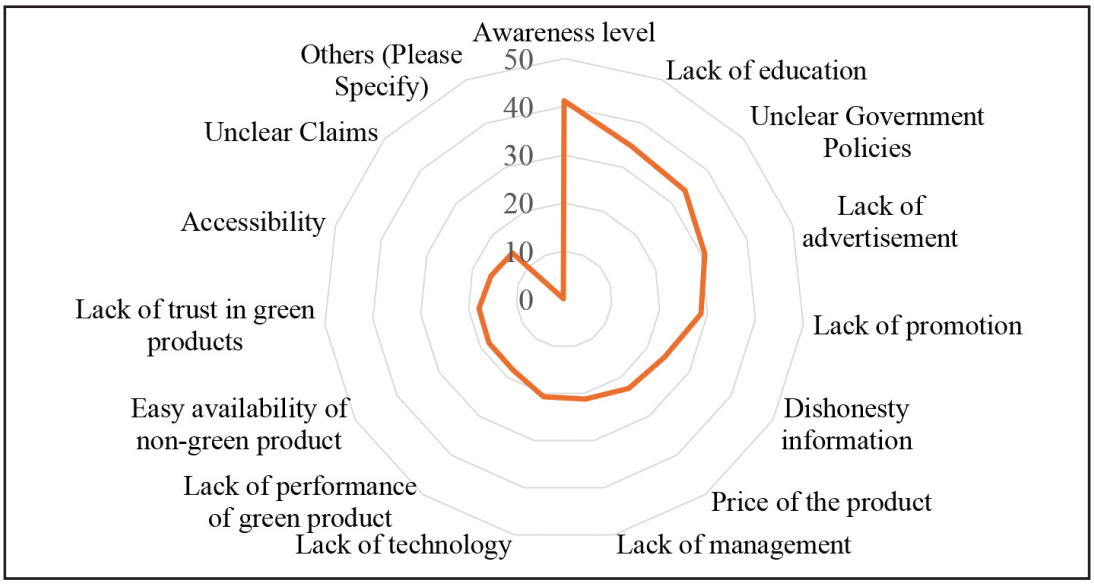
The majority of respondents demonstrate a high level of awareness regarding green marketing, as evidenced by their responses to the survey questions. Most participants fall into the well-informed category (Y = 2), indicating they know about green marketing practices and their influence on purchasing decisions. The few questions with lower "Yes" percentages still show moderate awareness, placing those respondents in the moderately informed category (Y = 1). No significant indication of respondents being less informed (Y = 0). This high level of awareness suggests that consumers are increasingly knowledgeable about the environmental impact of their purchasing decisions and are more likely to support sustainable and eco-friendly products.

Challenges and Managerial Solutions in Effective Marketing of Green Products.

Lack of education, confusing government policies, and inadequate advertising emerge as the top challenges, indicating a communication gap between businesses and consumers regarding the environmental benefits of green products. Additional hurdles include a lack of promotion, misinformation, and product pricing issues, suggesting that companies need more effective marketing strategies, transparent communication about environmental impact, and efforts to reduce product costs. Furthermore, challenges in green product management, technology, and performance highlight the need for investments in new technologies, streamlined internal processes, and ensuring that products meet consumers' expectations for sustainability and performance.

In response to these challenges, the study presents managerial solutions and insights from respondents. Notably, 90% of respondents believe the identified challenges can be managed. The comments emphasise the importance of promotion and awareness in advancing green marketing. Recommendations include effective promotion of eco-friendly products, consumer education on their benefits, government involvement through supportive policies and incentives, and enforcing regulations on non-biodegradable products. Building consumer trust through accurate product information, adopting eco-friendly packaging, and continuously improving sustainability policies are critical steps for successful green marketing.

Figure 2: Challenges in Effective Marketing of Green Products



Source: Field Study, 2023

Inferential Analysis

Common method bias: The full collinearity test combines several techniques to find collinearity among predictor variables. Using this approach, each variable is regressed against a common variable, and all the VIF values were less than 3.3, indicating no issue of standard method bias (Batra & Rastogi, 2023).

Table 4: Full Collinearity Test

CBTE	ECB	EL	GPB	GPPP
1.036	1.043	1.119	1.045	1.042

Measurement model assessment

Internal Consistency Reliability and Convergent Validity: The CA and CR were evaluated for internal consistency reliability. Similarly, Factor loadings and average variance extracted (AVE) were assessed for Convergent Validity. As per Hair Jr et al. (2020), loading values should be ≥ 0.5, AVE values should be ≥ 0.5, and CR and CA values should be ≥ 0.7. All the AVEs were higher than 0.5, and all the CRs and CAs were higher than 0.7 (Table 5). This satisfies the threshold, indicating no problem with internal consistency reliability and convergent validity (Hair et al., 2019).

Table 5: Measurement Model

Order Constructs	Items	Factor Loadings	AVE	CR	CA
Eco-Labeling (EL)	EL2	0.795	0.563	0.794	0.787
	EL4	0.698			
	EL5	0.755			
Green Packaging and Branding (GPB)	GPB1	0.766	0.575	0.802	0.832
	GPB2	0.719			
	GPB3	0.788			

Order Constructs	Items	Factor Loadings	AVE	CR	CA
Green Product, Premium and Pricing (GPPP)	GPPP2	0.848	0.594	0.814	0.76
	GPPP5	0.755			
	GPPP6	0.702			
Environmental Concerns and Beliefs (ECB)	ECB4	0.708	0.513	0.808	0.785
	ECB7	0.697			
	ECB8	0.729			
	ECB10	0.728			
Consumer Beliefs towards the Environment (CBTE)	CBTE1	0.689	0.520	0.844	0.811
	CBTE4	0.756			
	CBTE5	0.695			
	CBTE6	0.719			
	CBTE7	0.745			

Discriminant Validity

For discriminant validity, HTMT ratios and FNL criteria were examined. The HTMT readings should be below 0.90 to meet the discriminant validity criteria (Voorhees et al., 2016). All the HTMT values for the construct fall below threshold 0.9, thus meeting the discriminant validity criteria and indicating the data's validity. Moreover, to support the result of the HTMT ratio, the FNL criterion suggests that the square of the AVE of a construct should be greater than the inter-construct correlation. This criterion was also fulfilled by the data, indicating the discriminant validity of the data.

Table 6: HTMT – Matrix

	CBTE	ECB	EL	GPB	GPPP
1. Consumer Beliefs towards the Environment (CBTE)					
2. Environmental Concerns and Beliefs (ECB)	0.998				
3. Eco-Labeling (EL)	0.546	0.513			
4. Green Packaging and Branding (GPB)	0.892	0.905	0.565		
5. Green Product, Premium and Pricing (GPPP)	0.809	0.833	0.482	0.803	

Source: Field Study

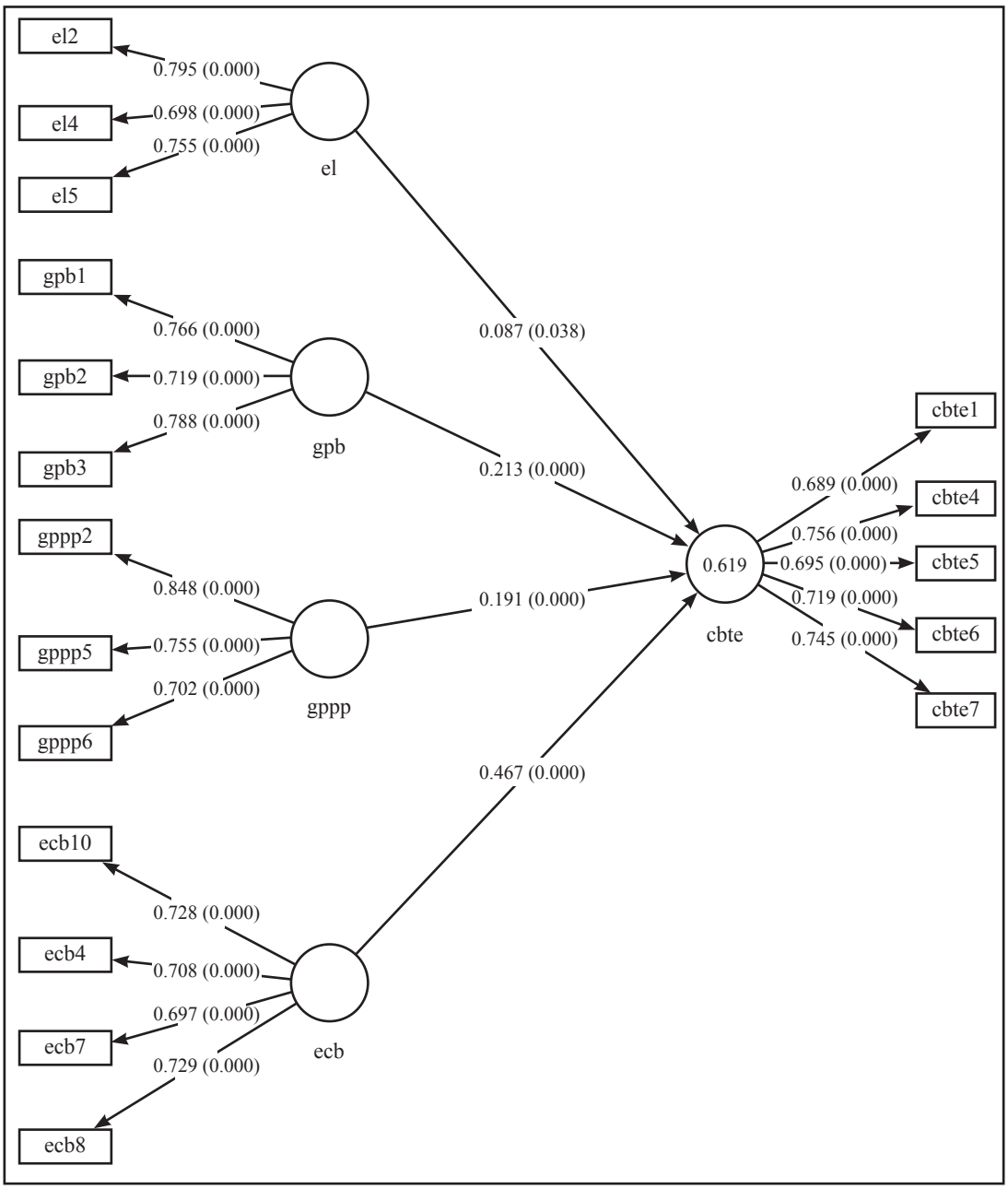
Table 7: Discriminant Validity – Fornell - Larcker Criterion

	CBTE	ECB	EL	GPB	GPPP
1. Consumer Beliefs towards the Environment (CBTE)	0.721				
2. Environmental Concerns and Beliefs (ECB)	0.729	0.716			
3. Eco-Labeling (EL)	0.374	0.331	0.75		
4. Green Packaging and Branding (GPB)	0.622	0.593	0.348	0.758	
5. Green Product, Premium and Pricing (GPPP)	0.593	0.56	0.306	0.531	0.771

Structural Model Assessment

The structural equation model created using Smart PLS consists of five constructs: four were exogenous, and the remaining one was an endogenous construct. With a sample size 10,000, bootstrapping is employed to determine the significant link between the variables. Each of the four constructs is significant. The R2 for consumers' beliefs towards the environment is 0.619, indicating moderate predictive power of independent variables (Hair et al., 2017). Therefore, the exogenous construct explains 61.9% of the variance in consumers' beliefs towards the environment.

Figure 3: Structural Equation Modeling



Hypotheses Test

Table 8: Hypotheses Test

	Beta	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	LL 2.5%	UL 97.5%	RESULT
ECB -> CBTE	0.467	0.467	0.052	9.012	0.000	0.365	0.566	Supported
EL -> CBTE	0.087	0.089	0.042	2.078	0.038	0.007	0.172	Supported
GPB -> CBTE	0.213	0.213	0.051	4.161	0.000	0.113	0.314	Supported
GPPP -> CBTE	0.191	0.193	0.051	3.748	0.000	0.089	0.287	Supported

Note: Hypothesis were accepted if $p<0.05$ and the β coefficient lies within the CI.

Based on the results, all four variables (ECB, EL, GPB, and GPPP) are found to be significantly related to the dependent variable, CBTE, as evidenced by the p-values of 0.000 for ECB, GPB and GPPP, and 0.038 for EL. These findings suggest that the variables under consideration have a statistically significant impact on CBTE. Moreover, the confidence intervals for each variable do not include zero, which further supports the hypothesis that a true relationship exists between the variables and CBTE.

Discussion

This chapter discusses the data interpretation of the analysis, presenting valuable findings related to the study's goals. The analysis focused on Green Marketing and its impact on consumer purchasing patterns in the Kathmandu Valley. The data analysis comprised descriptive and inferential sections, with the former providing statistics and tabular explanations and the latter discussing Partial Least Squares (PLS) findings. The descriptive analysis examined socio-demographic characteristics, general knowledge, research variables, issues, and management solutions. Inferential statistics were also discussed, including measurement model assessment, reflective and formative models, common method bias, reliability analysis, cross-loadings, HIMT, Discriminant Validity, and Convergent Validity.

The "Awareness Index" categorises respondents based on their level of knowledge, offering a comprehensive understanding of the overall awareness among the surveyed population. The study addresses the challenges and managerial solutions identifying hurdles in green marketing. Lack of education, confusing government policies, inadequate advertising, and pricing issues emerge as challenges, underscoring the communication gap. Managerial solutions, suggested by respondents, highlight the importance of promotion, awareness, education on green product benefits, government involvement, and trust-building measures.

The inferential analysis section, including the full collinearity test, measurement model and structural model, aligns with the research objective of understanding the impact of consumer attitudes on green marketing. These statistical analyses provide valuable insights into the relationships between key constructs (ECB, EL, GPB, and GPPP) and consumers' beliefs toward the Environment (CBTE), contributing to a deeper understanding of the factors. The ECB -> CBTE analysis revealed a strong positive relationship, with a beta value of 0.467, a significant T-statistic of 9.012, and a confidence interval from 0.365 to 0.566. The EL -> CBTE analysis showed a positive but weaker relationship, with a beta value of 0.087, a T-statistic of 2.078, and a confidence interval from 0.007 to 0.172. The GPB ->

CBTE analysis indicated a positive relationship, with a beta value of 0.213, a T-statistic of 4.161, and a confidence interval from 0.113 to 0.314. Lastly, the GPPP -> CBTE analysis demonstrated a positive relationship, with a beta value of 0.191, a T-statistic of 3.748, and a confidence interval from 0.089 to 0.287. These analyses suggest positive relationships between the respective variables and consumer purchasing patterns, with varying strengths.

Conclusion

The study on consumer awareness of green products in Kathmandu Valley reveals that while a significant portion of the population is aware of environmentally friendly products, there is moderate awareness among the youth, and a cluster of customers lacks awareness of green marketing. Consequently, the region has substantial untapped potential for green marketing. The study indicates that people in the Kathmandu Valley are concerned about the environment and health, showing interest in purchasing ecologically friendly and organic products. The goals of green marketing include promoting environmentally friendly goods and services, raising consumer awareness of environmental issues, and encouraging sustainable consumption habits.

Businesses adopting green marketing aim to minimize environmental impact while meeting customer demands. Consumers are willing to pay more for green products, and supporting environmentally conscious businesses enhances customer loyalty and brand reputation. However, businesses face challenges balancing environmental and financial objectives, requiring affordable and sustainable green initiatives. Collaboration with cross-functional teams, life-cycle assessments, and third-party certifications can help address these challenges. Building consumer trust through transparency about sustainability initiatives and engaging the entire supply chain is crucial for successful green marketing. Managers can involve stakeholders through collaborations, audits, and training to promote sustainable practices across the supply chain.

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