



**The impact of green marketing tools on green product purchase behavior:
the moderation effect of consumer demographics**

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ABSTRACT

Purpose: The green concept has become a major concern of the modern world when consumers buy a product. Sri Lankan consumers also change their purchasing behavior toward green purchases. Even though environmental activists influence humans and firms' behavior very significantly, very limited academic disciplines have integrated the selected phenomenon into their literature especially true of marketing. Thus, this study focuses on whether Environmental Advertisements, Perception of Eco-labels, and Perception of Eco Brands impact on green purchasing behaviour.

Design/methodology/approach: The present study empirically tests the theoretical model in social-ecological paradigm association with green advertising tools and green purchase behavior. A survey of 150 consumers who used electronic home appliances is conducted as a self-administrated questionnaire.

Findings: According to the findings, green marketing tools positively impact Green Purchasing Behavior in the electronics home appliances market. Further, the moderation effects make sure consumer demographics such as gender and education level have significant effects on the green behavior of the electronic home appliances market, but the different marketing tools are different.

Originality: This study provides penetrations into studying the impact of green marketing tools on consumer purchasing behaviour with consumer demographics and motivation to purchase green electronic home appliances.

Implications: This study provides insights to marketers to use Environmental Advertisement, Eco-Labeling system, and Eco Brand System to motivate the customers to buy the green products. The green marketers can establish a uniform Eco-Label system with the support of the government. Further, the marketers can enhance customer awareness regarding the standardized Eco Label using the Environmental Advertisement.

Keywords: *Eco-Brand, Eco-Label, Environmental-Advertisement, Green Marketing Tools, Green Purchasing Behaviour*

INTRODUCTION

All over the world, environmental concerns are the major challenge facing every society. The essence of the earth contains land, air, and water. By reason of human activities, the whole balance of the earth's ecosystem has been troubled. As a result of this massive economic growth, the world is experiencing dissenting environmental effects like global warming, depletion of natural resources and acid rain, etc. As a consequence of these changes, environmental safeguard has become an insistent public concern in developed countries, and recently developing countries are also wide-awake to the green efforts (Chen & Chari, 2010). Accordingly, thoughtful attention of people has been evoked towards these environmental protection actions due to major environmental issues. Thus, their high consciousness of greenness and being more familiar with terms such as Ozone friendly, eco-friendly, recycling has promoted them to deal with environmental friendliness (Laroche et al., 2001). Most companies that try to keep a more competitive edge in their industries, tend to adopt green concepts due to consumers being more enthusiastic about it (Lu et al., 2013). According to Rahbar and Wahid (2011), green marketing is a philosophy that involves drawing and enhancing the attention to environmental-friendly products and services involving extensive promotional activities on it. Besides that, peoples express a proactive approach towards the significance of environmental protection actions due to major environmental issues. Hence, they are willing to purchase green products, which have shifted from traditional products to green attributes. Morel & Kwakye (2012) mentioned that 44% of Americans trust the environmental claims and 42% of them are unwilling to buy it due to its high price compared to conventional products. However, it emphasizes that people tend to think about the significance of environmental protection actions due to major environmental issues.

The green marketing concept is more comprehensive. With the evolution of consumers' environmental sensitiveness, the value for eco-friendly marketing has grown. It has several reasons for advancing the usage of green marketing concepts and tools in firms. Environmental marketing can be used to achieve organizational objectives (Polonsky, 1994). As environmentally friendly consumers, they are filled with the gratification of the instant needs and wants and delivering benefits to the environment in the long term. The current environment plays a vital role and directly impacts consumer purchasing behavior to consumers' environmental knowledge, awareness, and beliefs. Moreover, the majority of young consumers show more concern about environmental knowledge and awareness.

As a developing country, Sri Lanka faces a lot of environmental issues. The ecological value of the country is placed far behind the developed countries. Nevertheless, in recent times, most Sri Lankan people have paid their consideration to environmental troubles. On account of that, the buying behavior of Sri Lankan customers also has transformed (Samarasinghe & Samarasinghe, 2010). It further confirmed that firms tend to follow green strategies in relation to achieving the

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market due to the environmentally friendly customer segment in the Sri Lankan context. However, there is a notable gap in knowledge of the ecological green consumers who are willing to go green each time (Samarasinghe, 2012).

By studying some previous research, the researcher identified several literature gaps related to the green concepts. According to previous researchers, A. Ali and Ahmad (2012), identified the factors that influence the green purchase of Pakistani customers. Furthermore, according to Rex and Baumann (2007), they identified limited research conducted about the green marketing communication between the consumers. Besides that, in the existing literature on ecological behavior, there is little attention paid to green purchasing behavior (Lee, 2009).

In Sri Lanka, numerous research is available under the area of green marketing which has covered the area of green segmentation: identifying the green consumer demographic profiles, the influence of cultural values and environmental attitudes on green consumer behavior, and some research under green products. Nevertheless, there is less research done towards the green marketing tools and the green purchasing behavior and a fewer amount of research have been conducted to examine the effect of consumer education level for these relationships. Furthermore, various studies on consumer green purchasing behavior can be discovered, but most of the studies are focused on the American and other Western markets, with only a few notable studies focused on the Sri Lankan consumer market (Tracker, 2012). Major products categories that have focused on green research are cars and TVs and other electronic appliances (Olson, 2013). A limited number of studies have been conducted in this context. Climate change's impending threat has become an undeniable harsh reality. One of the biggest consequences of this threat is inept energy utilization. It is a shared responsibility to protect the aquatic and native ecosystem by reducing carbon footprints. The household sector's contribution is particularly valuable in this recreation, and the use of energy-saving, environmentally safe, green electronic home products can assist to reflect the objective of achieving sustainability (S. Ali, Ullah, Akbar, Akhtar, & Zahid, 2019). Electronic appliances have made our lives easier. Electronic home appliances are extensively polluting the world we live in as well as governments and manufacturers have perceived the price of this particular issue. In order to reduce the damage, the R & D department of companies, as well as industries, consider and reprocess green products (Chhabra & Thivedi, 2020). In order to fill the contextual gap of existing literature, the study will be focused on how green marketing tools will be affected on Green Product Purchasing Behavior in Sri Lanka.

Thereby, the main purpose of the study is to investigate the effect of Green Marketing Tools on to Green Product Purchasing Behavior of consumers in terms of Electronic Home Appliances in the Sri Lankan context.

Objectives of the study

- To examine the impact of Environmental Advertisement, perception of Eco-Labeling, perception of Eco Brand on Green Purchasing Behavior of Electronic Home Appliances.
- To examine the moderating effect of the Education Level of the customer on the relationship between Environmental Advertisement, perception of Eco-Labeling, perception of Eco Brand, and Green Purchasing Behavior.
- To examine the moderating effect of Gender of the customer on the relationship between Environmental Advertisement, perception of Eco-Labeling, perception of Eco Brand, and Green Purchasing Behavior.

LITERATURE REVIEW

Green Product Purchasing Behavior

Green product purchasing behavior is a particular type of environmental-friendly behavior that consumers implement to prompt their concern about the environment (Yam-Tang & Chan, 1998). Consumers exercise green purchases to decrease adverse environmental impact by guarding natural resources, dropping energy use and waste, and refining health and safety (Rahbar & Wahid, 2010). Green purchasing behavior focuses attention on the consumption of valuable products to the environment, recyclable and is sensitive to the biological concern (Mostafa, 2007). Several types of research recommend that attitudes are the essential analyst of customers' purchasing behavior (Schlegelmilch, 1996). When reflecting on the general acquiring process of the green customers, numerous key factors will assist the consumers in purchasing the product. Those factors can be recognized as the consumers' eco value should be robust, the consumer should have an understanding of the green purchasing, the consumer should have substantial time for judgment, the consumer should have consciousness concerning the environmental disputes (Young, Hwang, McDonald, & Oates, 2010).

Social-Ecological Model

The social-ecological paradigm investigates man's and the environment's mutual relationship at multiple levels, including individual, group, organization, community, and population (Lejano & Stokols, 2013). A graphical representation of the model is shown.

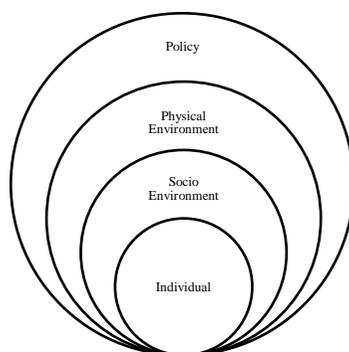


Figure 1: Social-Ecological Model of the Man Relating to the Environment

Source: (Bourdieu, 1992)

Environmental perception is utilized to characterize this paradigm; Bourdieu (1992) defines the habitus of the man as a complex of particular characters that allow a person to see, think, and act in a specific way. This behavioral model detects how a person acts in a changing environment.

The sum of ethical principles into brands that express and characterize their semantic meanings, according to that model, accounts for customer desire to purchase green products. Environment and communication, particularly at the cognitive level of man, refer to the ability to behave in the context of habitat and habitus sustainability, to which communities attribute long-term value (Bourdieu, 1992).

Methods of Behavioral Change According to Social-ecological Model

The social-ecological paradigm studies man's and the environment's mutual relationship at multiple levels, including individual, group, organization, community, and population (Lejano & Stokols, 2013). This behavioral model detects how a person acts in changing environments. Environment and communication, especially at the cognitive level of man, refer to the ability to behave in the context of habitat and habitus sustainability, which communities value in the long run (Bourdieu, 1992). Individuals' green habits are influenced by their connections and the environment in which they live. The social-ecological paradigm divides connections and surroundings into five tiers. The green marketing tools can be recognized as a part of the social-ecological behavioral model. There are different kinds of modification techniques, such as behavior change communication, social change communication, social mobilization, and advocacy strategies (Aronica, Crawford, Licherdell, & Onoh, 2012). Here green marketing tools are introduced as a part of behavior change communication. This system can be through direct communication with another individual (Aronica et al., 2012). These kinds of green marketing tools can be used for communication. There are different kinds of marketing tools, although there are three types of green marketing tools like Environmental Advertising, Eco-Labeling, and Eco Brands.

Relationship between Green Marketing Tools on Green Purchasing Behavior

As mentioned by Juwaheer, Pudaruth, and Noyaux (2012), there is a positive correlation between effective Green Marketing strategies and consumers' purchasing patterns for green products. Hence, there is a dominant eagerness with the companies to promote eco-branding, eco-labeling, and eco-packaging strategies to inspire the Green Purchase Behavior of consumers (Juwaheer et al., 2012). Further, environmental advertisement is a kind of significant impactor for consumer Green Purchase Behavior (Baldwin, 1993). Moreover, environmental messages which are in advertisements and product labels can affect consumers' buying

decisions on the retail floor (Chase and Smith, 1992). The brand also can change consumers' attitudes, and effective advertising strategies can transform consumers' decisions to purchase eco-friendly products (Cherian & Jacob, 2012). According to Rahbar and Wahid (2011), numerous green marketing tools can influence consumers' green purchase behavior. Eco-brand, Eco-label, and Environmental advertisements are known as the key Green Marketing Tools that are highly considered by green marketers.

Green Marketing Tools

Green Marketing and Advertising are the most effective strategies for raising customer consciousness (Tiwari, 2014). Therefore, successful Green Marketing can be shaped by addressing social influence, consumers' apprehension for self-image, and consumers' sensitivity to effective environmental behavior (Garg & Garg, 2014). Sharma and Trivedi (2016), have identified many kinds of Green Marketing variables and their effects on consumers' buying behavior for eco-friendly products. Eco-label, Environmental Advertising, and Eco-Brand are the new Green Marketing practices adopted by the marketers (Rahim, Zukni, Ahmad, & Lyndon, 2012). Furthermore, Eco-Label, Eco-Advertisement, Eco-Brand are recognized as the main green marketing tools. As a result of these tools, customers appeal to purchase environmentally friendly products (Delafrooz, Taleghani, & Nouri, 2013).

Environmental Advertisement

Green advertising principally focused on promoting consumers to buy products that either do not harm the environment or have a positive impact on its environment (Rahbar and Wahid, 2011). Further, Akherst, Alfonso and Goncalves, (2012) stated that as a result of green marketing the potential final consumption decision of consumers can be led to sustainable consumption. Thus, the major duty of Environmental Advertisement is to act as a stimulus to customers to be awake about their eco-friendly products or services. That thoroughly emphasizes the ethical, resource, and community consequences of all buying actions. Green Advertising supports the promotion of green products through an emphasis on their benefits. Examples for green advertising can be used as a strategy using eco-friendly less consuming power sources, using electronic marketing instead of printed resources entirely, for printing marketing materials using eco-friendly inks and papers, having recycling programs as well as continuing waste disposal methods (Chhabra & Thivedi, 2020). The concept of Environmental Advertisement in Electronic Home Appliances refers to resources used in the manufacturing of Mobile Phones, Computers, Televisions, and different types of other electrical devices that are not harmful to the environment (Chhabra & Thivedi, 2020). A recent study in Pakistan found cooling fans, washing dryers, and air-conditioners promoting Environmental Advertisements and they can be achieved through energy efficiency criteria toward consumer buying behavior (Bhutto, Liu, Soomro, Ertz, & Baeshen, 2021). Since advertising creates both awareness and persuasion towards

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green products, it is vital to study how it affects the purchase intention of consumers for green products. Its hypothesis is that:

H_{1a}: Environmental Advertisement has a positive impact on consumers' Green Purchasing Behavior of electronic home appliances.

Perception of Eco-Label

The Eco-Label reduced the information gap between buyer and seller. Therefore, Eco-Label has used the markers to easily access the consumers for the information regarding how the products are made (Gunne & Matto, 2017). Further, Eco-Labels primarily play two important roles, which are information functions and value functions (Sharma & Trivedi, 2016). There are several forms of Eco-Labels. Those are mandatory labels and voluntary labels. These labels provide information only to influence the consumers who anticipate eco-friendly products (Rex & Baumann, 2007). As a result of environmental labeling, it enables competitive advantages bound to ecology, and they reflect thousands of marketing statements and praise the ecological properties of their products and services (Murin, Markova, Zelency, & Jadudova, 2015). In recent years, various systems and schemes of environment labeling in the market and their specifics have been awarded by particular organizations (Murin et al., 2015). According to Rusko and Kolar (2010), in the European Union, there are various kinds of labels including national labels.

H_{1b}: Perception of Eco-Label has a positive impact on consumers' Green Purchasing Behavior of electronic home appliances.

Perception of Eco-Brand

The American Marketing Association defines brand as, "a name, term, sign, symbol or design or the combination of them, intended to identify the goods and services of one seller or group of sellers and differentiate them from those of competitors." For this reason, Eco-Brand makes a product diverse from one product to another product among thousands of product categories. Hence, Eco-Brand is a signal of recognition about green and non-green products (Sharma & Trivedi, 2016). Nevertheless, understanding the influence of brands on consumers' purchasing decisions is very significant for marketers. Most consumers who are environmentally conscious are more inspired to buying of products that generate a low-level impact on the environment compared to the other products (Chatterjee, 2009). As highlighted by Rahbar and Abdul Wahid (2010), Malaysian consumers have identified some product categories such as glass-based, household cleaning, aerosols, pesticides, and plastics that have a higher level of effect on the natural environment.

Moreover, as proved in past studies consumers in western countries such as the USA and Germany have responded more positively towards the eco brands such as Body Shop (Wustenhagen and Bilharz, 2006). Hence, in the current study its hypothesis is that:

H_{1C}: Perception of Eco-Brand has a positive impact on consumers' Green Purchasing Behavior of electronic home appliances.

The Green purchasing behavior regarding the electronic home appliances

All over the world, there are so many companies struggling to improve and introduce innovative products to satisfy customers' needs and wants. The new creation brings major changes in the consumers' buying behavior (Awan & Zara, 2014). The study focused on two major product categories that are environmentally impacted such as cars and TVs and has found that consumer attitudes and behavior influence green attributes of eco-friendly products. These findings recognize that buyers of hybrid cars have a much greener profile than diesel or gasoline buyers. But, LED TV buyers do not have a greener profile, and they are only attracted to its technical attributes (Olson, 2013). Further, Seitz, Razzouk, & Wells (2010) mentioned that purchase decision of air-conditioning systems is significantly influenced by their serviceability, reliability, and energy-saving features as the most crucial attributes of the customers. Moreover, the study proved that Eco-Labeling of household appliances critically affected consumers' behavior (Knoxville & Ward, 2010), Sammer and Wustenhagen (2005). Bhutto et al. (2021) mention that products with energy-saving labels such as bulbs and washing machines in Europe have gained attentive concern as the energy-efficient elements, and consumers have paid attention to it while choosing to buy a washing machine that came with an Eco-Label. However, in the case of light bulbs, the brand has less impact on buying behavior of the customers. Further, customers do not pay much attention to brand; consumers have extra preparedness to pay for features of the energy savings label. In fact, it can be summarized that the validity of Green Marketing towards Green Purchase Behavior demonstrates the discrepancy from one context to another.

Influence of consumer demographic differences for green purchase behavior

Men and women are evolving in a different socialization process so that they behave differently, and gender can moderate the particular relationship (Blocker and Eckberg, 1997; Davidson and Freudenburg, 1996). As explicit in the gender socialization theory, it further proves that in early childhoods different genders pass the different socialization process by developing different social expectations and values (Chee, Pino, & Smith, 2005). Younger consumers such as undergraduates are a more powerful group and lucrative segment who are willing to engage with green purchases (Mokhlis, 2009). When concerned about adult consumers, they tend to involve green consumption to enhance their image with this green consumerism (Wahid et al. 2011). Moreover, compared to men, women's consideration for environmental issues is very high and has positive feedback towards it (Lee, 2009). Further it confirmed that across fifteen countries, women have a higher level of consideration for environmental issues than men. However, as emphasized by, Shahnai (2012), there are no significant differences displayed

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between gender groups in Malaysians on green purchasing, but it further proved that higher education level is positively influenced in this regard. Hence its hypothesis is as follows:

H_{2a}: Consumers' gender has a moderating relationship between Environmental Advertisement, perception of Eco-Labeling, perception of Eco Brand, and Green Purchasing Behavior of Electronic Home Appliances.

H_{2b}: Consumers' Education Level has a moderating relationship between Environmental Advertisement, perception of Eco-Labeling, perception of Eco Brand, and Green Purchasing Behavior of Electronic Home Appliances.

METHODOLOGY

This research was conducted using the quantitative method (Hammersley, 2017). There are two basic research approaches. They are the deductive approach and the inductive approach. This research hypothesis is derived from the theory of previous research. Hence this research follows the deductive approach. Wilson (2010), stated that "a deductive approach is concerned with developing a hypothesis or based on existing theory, and designing a research strategy to test the hypothesis." Therefore this research was conducted through a deductive approach (Crowther & Lancaster, 2008). The purpose of the study is explanatory (Zukauskas, J., & Andriukaitiene, 2018). Zukauskas et al. (2018), recommended that exploratory research is suitable for research findings relevant to the whole population. The research paradigm was positivism because the researcher generalized the research findings to the whole population (Collins, 2010) as well as the time horizon of the research was cross-sectional because the researcher would be collecting the data at once. The study was conducted as a survey by collecting data from a self-administrated questionnaire. The research strategy would be selected as the survey method because the researcher wouldn't collect data from the whole population; the researcher would be selecting the sample from the population and collect data from the sample. Data was collected conveniently from the individual as a unit of assessment, from those who are the customers of Singer showrooms in the Matara District in Sri Lanka. According to the study, Matara district was conceded as the geographical area. The selecting of the Matara district as the sampling venue was done for the convenience of collecting data and the ability to access respondents without any restriction. Therefore, the researcher selected the Matara district Singer Sri Lanka showrooms as the research site. The target population of this research is defined as all consumers who are dealing with Singer showrooms in the Matara District (Taherdoost, 2020). A total of 150 respondents were used in the study as well as this research considers male and female respondents above 18 years of age because, according to Simpson (2018), young adulthood is generally defined as 18 years to 22 years or to 25 years.

The primary data was collected through the structured questionnaire (Sadan, 2017). The questionnaire was prepared by using two scales. In order to measure the Green Marketing Tools, the scale which is developed by Rahbar and Wahid (2011), has

been used. The Green Purchasing Behavior has been measured through the scale which is developed by Yam-Tang & Chan, (1998). Demographic questions were asked from nominal and interval scales, in addition to the respondents' gender, age, marital status, monthly household income, education level, whether the respondent was familiar with the environmentally friendly brand in refrigerators and the respondent familiar with the eco-friendly brand in CFL and LED bulb market, and whether the respondents can identify the Eco-Label in the products and also whether they lately purchased or did not purchase electronic appliances.

The second part of the questionnaire consists of eight questions developed to get information on Green Marketing Tools such as Environmental Advertisement, Perception of Eco-Label, and Perception of Eco-Brand. The third part of the questionnaire will consist of four questions to measure the dependent variable, Green Purchasing Behavior.

Table 01: Measurement of the variables

Environmental Advertisement	Enhance my knowledge about green products, happy to watch the telecast of Environmental Advertisements. Environmental Advertisements guide customers to make an informed purchasing decision.	Rahbar and Wahid (2011),
Perception of Eco-Label	Aware of Sri Lankan best logo., the best logo is easily recognized by me.	Rahbar and Wahid (2011),
Perception of Eco-Brand	Aware of Eco-Brand, Eco-Brand symbol of product reliability, Eco-Brand is truthful.	Rahbar and Wahid (2011),
Green Purchasing Behavior	Check ingredients that contain environmentally damaging things, prefer green products over non-green products, choose to buy green products, buy green products even if they are more expensive.	(Yam-Tang & Chan, 1998)

Source: Researcher Compiled (2021)

Conceptual Model

A conceptual model for this study consisted of three variables, of which the independent variable was green marketing tools which presented three items: Green Advertising, perception of Eco-Labeling, and Eco-branding. The dependent variable was green consumer behavior and here further study about the effect of consumer demographic factors (Gender and Education Levels) as moderating variables.

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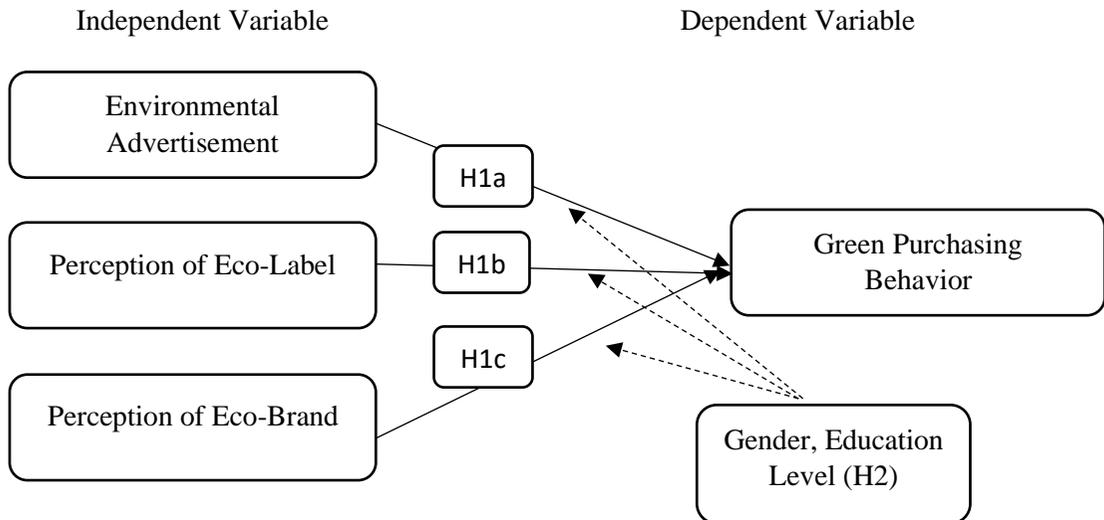


Figure 2: Conceptual Framework

Source: Developed by the researcher based on literature (Rahbar & Wahid, 2011)

FINDINGS

Respondent's profile

According to responses of sample profile, the majority of the respondents are male (54%), and 46% of respondents are female. The larger majority of people are in the age group 26-35, which is a percentage of 42% of the total. The marital status of the respondents is taken into consideration, and 34.7% of respondents are unmarried while 65.3% of respondents are married customers. In the group a larger majority of the people earn Rs. 21000 - 40 000 as monthly income which is as a percentage 27.3% from the total; when considering the education levels, 36% or a large majority of the respondents are graduated customers, and 2% or a small minority of customers are in the professional category.

Test of Reliability and Validity

Cronbach's alpha is a reliability coefficient that measures how well elements in a set are positively associated. According to Table 1, the Cronbach's alpha values of all the above green marketing tools variables are greater than the 0.70 expected level (Sekaran, 2003), (EA=0.880, PEL=0.862, and PEB=0.856 respectively). Therefore, the measurement of these dimensions has reliability. Further, the Cronbach's alpha value of Green Purchasing Behavior (GPB=0.918) and this value was in the range of 0.70. Therefore, it can be confirmed that the measurement of the Green Purchasing Behavior dimension has reliability.

Accordingly, the validity of the measurement was extracted to ensure the stability and the consistency with which the instrument measures the concept and helps to assess the “goodness” of measures (Sekaran, 2013). In the present study, standardized regression estimates of items in the final measurement model were above 0.5; thus, convergent validity is established according to Hair, Black, Babin, & Anderson, (2010). Table 1 presents the results of CR, AVE, and correlations for latent variables. The CR for all latent variables exceeds 0.6, (Bagozzi & Yi, 1988) then convergent validity is established. Furthermore, for all constructs, AVE is greater than 0.5. According to Malhotra and Dash (2011), AVE is more conservative; hence convergent validity can be determined just by CR. Therefore, based on the CR, the study ensures the convergent validity of the constructs in order to verify discriminant validity. On the other hand, the correlation coefficients among the study constructs are below 0.85; then, discriminant validity is established (Kline, 2005). Accordingly, this study established discriminant validity. Further Bartlett's Test provides statistically significant results (Chi-Square 1376.883, df: 66, sig .000) by indicating the sufficient correlation among the variables, and the advocacy of the sample has strived through Kaiser-Meyer-Olkin. (KMO) .914 (> 0.5).

Furthermore, by looking at the validity and reliability tests results, it can be concluded that the measurements of Green Marketing tool dimensions and Green Purchasing Behavior variable are sound measurements.

Table 2: Reliability and Validity

	CR	AVE	Cronbach's Alpha	EA	PEL	PEB	GPB
EA	0.799	0.571	0.880	0.756			
PEL	0.777	0.636	0.862	0.651	0.797		
PEB	0.802	0.575	0.856	0.692	0.659	0.758	
GPB	0.867	0.620	0.918	0.712	0.648	0.664	0.787

Source: Survey data (2021)

Hypothesis Testing Results

Here, the hypothesis testing results of four hypotheses, the impact of Green Marketing Tools on Green Purchasing Behavior and the effect of gender for different Green Purchasing Behavior are discussed and summarized.

Table 03a: Model Summary

Model	R	R Square	Adjusted Square	Sig. F Change	Durbin- Watson
1	.846	.708	.692	.000	1.780

a. Predictors: (Constant), (Constant), PEB, PEL, EA

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b. Dependent Variable: GPB

Table 3b: Summarized Results of Hypothesis Testing

Path	Hypothesis	Standardized Coefficients (β value)	Mean Difference (N=150)	Sig.	Status
EA \rightarrow GPB	H _{1a}	.396	-	.000	Supported
PEL \rightarrow GPB	H _{1b}	.235	-	.002	Supported
PEB \rightarrow GPB	H _{1c}	.236	-	.003	Supported

Source: Survey data (2021)

The pre-determined hypothesis 01 (H1) examined the relationship between green marketing tools and consumers' green purchase behaviors. In the regression model, Green Advertising, perception of Eco-Labels, and perception of Eco-Branding in green marketing tools as independent variables and consumers' Green Purchase Behaviors as the dependent variable were entered. The regression model was applied there, and findings pointed out, the various inflation factor (VIF) for all variables should be less than 05 (Rogerson, 2001) (VIF for all variables < 3.2), and all tolerance value well below 1, which indicated that free of multicollinearity of the variables in the regression model. Further, Durbin-Watson (dub=1.80) which is close to 2.0 is consistent with no serial correlation among the independent variables.

As derived through regression analysis, the overall model indicated that around sixty-nine percent (69%) consumer green products purchase decisions can be formed through the influence of independent factors. Further it makes significant influence in this group ($R^2 = 0.689$, $F = 70.354$, $\text{sig} = 0.00$ $P < 0.001$). Moreover, Environmental Advertising ($P = .651$, $\beta = .396$, $\text{Sig} = .000$), proved that hypothesis H1a can be accepted, and Environmental Advertising is more favorable for Green Purchasing Behavior. Further, hypothesis H1b considered the perception of Eco-Labels, and findings showed that there is a significant relationship among variables ($P = .692$, $\beta = .235$, $\text{Sig} = .002$) and accepted the H1b. Therefore, the Perception of Eco-Label also has an impact on Green Purchasing Behavior. Further, the β value is positive meaning there is a positive relationship between the Perception of Eco-Label and Green Purchasing Behavior as well as if Perception of Eco-Label is enhanced it will help to increase the Green Purchasing Behavior also. Moreover, the standardized coefficient (β) value for Perception of Eco-Brand is 0.236 ($P = .712$, $\beta = .236$, $\text{Sig} = .003$). Therefore, accepted hypothesis H1c: The Perception of Eco-Brand affects Green Purchasing Behavior. Although, there is a positive relationship between the two variables because the β value is positive. It can be explained as follows. Perception of Eco-Brand increase can help to increase the Green Purchasing Behavior.

Moderating effect

Influence of consumer gender differences for green purchase behavior

H2a, H2b examined moderating effect of consumer demographic factors: Gender and Education Level on the relationship between Green Marketing Tools and consumers' Green Products Purchase Behavior. In order to test the moderation effect of Demographic factors Gender and Education Level, SPSS Process Macro: model one (Hayes & Preacher, 2014) was applied.

Table 04a: Moderation effect of Gender on the relationship between Environmental Advertising and Green Purchase Behavior

		(β)	SE	t	p	R ²	AR ²	F	P
<i>Step 1</i>									
1	EA	.6580	.1998	3.294	.0012	.5101		50.664	.000
2	Gender	- .1452	.5317	-.273	.785				
<i>Step 2</i>									
3	EA x Gen	.0481	.1212	.397	.692		.0005	.1579	.692

Table 04a shows that the effect of Environmental Advertising (β =.658, t (3.294) p=.0012), and the variance of the consumer Green Purchasing Behavior depends on Environmental Advertising for 51% and further it confirms that Environmental Advertising has a positive effect on Green Purchase Behaviors. However, the gender of the consumers doesn't make a significant influence on their green purchase behavior as a separate variable (β =-.145, t (-.273) p=.785). Moreover, as past literature proved, based on consumer gender sometimes their green purchase behavior can be decreased. As similarly, when the interaction term was regressed, it also didn't proceed with a significant effect (β =.0481, t (.397) p=.692) which can be regarded as no moderation effect was proved. Accordingly, it's concluded that in terms of Environmental Advertising and its influence on consumers Green Purchase Behavior didn't vary on their gender difference.

Table 04b: Moderation effect of Gender on the relationship between perception of Eco-Labeling and Green Purchase Behavior

		(β)	SE	t	p	R ²	AR ²	F	P
<i>Step 1</i>									
1	PEL	.3911	.2053	3.143	.0587	.4309		36.843	.000
2	Gender	- .7707	.5408	-1.425	.156				
<i>Step 2</i>									
3	PEL x Gen	.1596	.125	1.277	.203		.0064	1.6319	.203

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Table 4b displays the moderating effect output related to Eco-Labeling and Green Purchase Behavior. As proved there, the perception of Eco-Labeling as an independent variable makes a significant positive impact for the dependent variable ($\beta=.391$, $t(3.143)$ $p=.000$). As a result of the second independent variable gender, does not have a significant effect ($\beta=-.7707$, $t(1.425)$ $p=.156$). Further, the interaction effect of PEL x Gen also ($\beta=.1596$, $t(1.277)$ $p=.203$) doesn't make a significant effect on consumer green products purchase behavior which proved that there is moderating effect. Because of gender sometimes consumer willingness or tendency to buy the green product can be decreased.

Table 04c: Moderation effect of Gender on the relationship between perception of Eco-Branding and Green Purchase Behavior

		(β)	SE	t	p	R ²	AR ²	F	P
<i>Step 1</i>									
1	PEB	.8400	.2306	3.643	.0004	.4434		38.763	.000
2	Gender	.5928	.5408	.4165	.6777				
<i>Step 2</i>									
3	PEB x Gen	-.0682	.139	-.491	.6242		.0009	1.6319	.6242

As presented in table 4c. findings of Process Macro analysis, to test for the moderation effect of gender in the relationship between perception of Eco-Branding and green purchase behavior and the variance of the consumer Green Purchasing Behavior depends on Eco Branding for 44% and further, it confirms that Eco Branding has a positive effect on Green Purchase Behaviors. However, gender as an individual variable or an infarction effect didn't display any significant effect on the dependent variable ($\beta=-0.682$, $t(-.491)$ $p=.6242$). Further, it indicates that the positive effect of Eco Branding towards the Green Purchase Behavior can be decreased according to the gender of the consumer.

The overall effect of gender on green marketing tools and its effect on Green Purchase Behavior doesn't change based on consumer gender differences on all three variables. Hence, hypothesis H2a was rejected.

Influence of consumer education level differences for green purchase behavior

Table 05a: Moderation effect of Education Level on the relationship between Environmental Advertising and Green Purchase Behavior

		(β)	SE	t	p	R ²	AR ²	F	P
<i>Step 1</i>									
1	EA	.5485	.2407	2.279	.024	.5092		50.497	.000
2	Edu L	-	.298	-	.448				
		.2270		.7608					
<i>Step 2</i>									
3	EA x Edu	.0516	.0682	.7565	.4505		.0019	.572	.4505

Table 05b: Moderation effect of Education Level to the relationship between perception of Eco-Labeling and Green Purchase Behavior

		(β)	SE	t	p	R2	AR2	F	P
Step 1									
1	PEL	.1878	.2273	.8263	.410	.4380		37.923	.000
2	Edu L	-.597	.2791	-2.140	.034				
Step 2									
3	PEL x Edu L	.1372	.0658	2.086	.0387		.0168	4.351	.0387

Table 05c: Moderation effect of Gender on the relationship between perception of Eco-Branding and Green Purchase Behavior

		(β)	SE	t	p	R2	AR2	F	P
Step 1									
1	PEB	.1542	.229	3.674	.0003	.4689		42.96	.000
2	Edu L	-	.283	-2.537	.503				
		.7179							
Step 2									
3	PEB x Edu L	.177	.0667	2.653	.0089		.0256	7.037	.0089

The second phase of regression analysis in the Process Macro model was applied to test the moderation effect of consumer education level for the relationship between Environmental Advertising, Eco-Labeling, and Eco-Branding on Green Purchase Behavior, which is presented in table 5a, 5b, and table 5c respectively. As concluded there, both Environmental Advertising and Eco Branding as individual factors make positive significant effect dependent factor ($\beta=-0.5485$, t (2.279) $p=.000$), ($\beta=-0.1542$, t (3.674) $p=.000$) respectively. Secondly, the model added education level as the independent variable and its only explicit individual significant effect and significant interaction effect with Eco-Labeling ($\beta=-0.597$, t (2.086) $p=.034$) and ($\beta=-0.1372$, t (0.658) $p=.0387$). Moreover, it indicates that based on education level, the Green Purchase Behavior can be decreased. Indeed, it concludes that the significant interaction effect displays only with Eco-Labeling, proving that the effect of Eco-Labeling towards the Green Purchase Behavior will change with the differences of consumer's educational background. Hence, hypothesis H2b was accepted partially with Eco-Labeling.

DISCUSSIONS

The present study is conducted to investigate "The Impact of Green Marketing Tools on Green Product Purchase Behavior: The Moderation Effect of Consumer Demographics". Four critical linkages have been uncovered within the study model, all of which are linked with the defined research objectives. In order to

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investigate the findings, two basic objectives were built up as follows. The effect of green marketing tools was examined through Environmental Advertising, Eco-Labeling, and Eco-Branding. In order to address our research questions, the study employed multiple regression analysis to study the relationship between the two main variables: green marketing tools and consumer green purchase behaviors. Secondly, this study implies the moderating effect of consumer demographic: their gender and education level for the associations of above-mentioned mentioned constructs. In regression analysis, all three variables (Environmental Advertising, Eco-Labeling, and Eco-Branding) display a significant positive relationship towards consumer Green Purchase Behavior.

The findings of the current study are deviating from past research such as the relationship between Environmental Advertisement is not significant with actual Green Purchasing Behavior. But in the current study results in the Sri Lankan context is completely different from the study of Rahbar & Wahid (2011). According to Baldwin (1993), Environmental Advertisement has a strong impact on Green Purchasing Behavior. Further considered with its impact is a low level of positive coefficient with Green Purchasing Behavior ($\beta = 0.396$). Moreover, according to Sharma and Trivedi (2016), Environmental Advertisement effect the customer buying behavior of the green products.

The second hypothesis was created to see if the Perception of Eco-Label had an effect on Green Purchasing Behavior. As a result, there is a considerable impact on the Perception of Eco-Label on Green Purchasing Behavior. According to previous research by Leonidou et al. (2017), Perception of Eco Labels was not significant with actual Green Purchasing Behavior. But in the present study, Perception of Eco Label is also at a significant level but, it has a low degree of positive coefficient with Green Purchasing Behavior ($\beta = 0.235$). If the Perception of Eco-Label improves by one-unit, Green Purchasing Behavior improves by 0.235 units. The research findings of Suki (2016), indicate that Eco Labeling enhances the Green Purchasing Behavior of the customers. Moreover, Sharma and Trivedi (2016), identified that Eco Labelling has an effect on customer buying behavior of the green products.

As measured through hypothesis three, Perception of Eco-Brands has an impact on Green Purchasing Behavior. Therefore, the hypothesis was developed as having a considerable impact on Green Purchasing Behavior. Past researcher Suki (2016) has proved Eco-Labeling enhances the Green Purchasing Behavior of the customers. Moreover, Sharma and Trivedi (2016), identified that Eco Brands' effects customer buying behavior of green products. Also, in the current study, the relationship between the Perception of Eco Brand and Green Purchasing Behavior is significantly positive because of ($\beta = 0.236$). But the impact is considered low if the Perception of Eco Brand enhances one-unit, Green Purchasing Behavior enhances as 0.236 unit.

According to the findings of moderating effect analysis, the gender of consumers didn't show a significant moderating effect related to the Environmental

Advertising, Eco-Labeling, and Eco-Branding (respectively: $P=.692$, $P=.203$, $P=.624$) for their Green Purchase Behaviors. Accordingly, current study findings deviate from past findings as different gender perceive green marketing tools differently (Blocker and Eckberg, 1997; Davidson and Freudenburg, 1996). The findings show that women have more positive attitudes regarding purchasing green items than males, according to Witek and Kuzniar (2021). Fisher and Arnold claim that women are more environmentally conscious than men. Women are more likely than males to buy green items, and they buy ecological products more frequently than men (Urena, Bernabeu, & Olmeda, 2008). (Radman, 2005). Slovenia, according to the researcher, indicated that women were more concerned about the environment and were more knowledgeable of eco-products than men, despite no variations in green buying intents between men and women (Hojnik, Ruzzier, & Konecnik Ruzzier, 2019). Previous studies have shown that women with a greater level of education had more favorable attitudes toward environmentally conscious purchasing (Chekima et al., 2016). Women also have a more confident attitude toward commercials that organize stimuli pertaining to the environment, according to the researchers Haytko and Matulich (2008).

According to past research findings on educational levels, people with a higher level of education are more ready to purchase environmentally friendly products than those with a lower level of education (Dimitri & Dettmann, 2012). According to Lithuanian research, well-educated customers can discriminate against environmental issues and are more sensitive to them (Banyte, Brazioniene, & Gadeikiene, 2010). Sidique, Lupi, and Joshi (2010) also claim that there is a link between education and environmentally friendly behavior. Higher education is usually connected with greater knowledge, which has been translated into purchasing habits. Higher education promotes superior knowledge of social processes, a more practical approach to resource consumption and control in the home, purchasing decisions that prioritize ecological products, and it aids in the detection of environmental poverty and threats to the environment, as well as the acceptance of additional costs that must be tolerated in order to resolve environmental issues in general. According to the findings of Nguyen, Yang, Nguyen, Johnson, and Cao (2019), greenwashing has a greater negative impact on green purchasing intentions among higher educational customers than among low educational consumers. According to Yin, Du, and Chen (2010), there was no clear association between educational attainment and the purchase of environmentally friendly goods. As a result, the following hypothesis was proposed as a result of this research: Furthermore, education only moderated the association between Eco-Labeling and education level, implying that hypothesis H2b was partially accepted with Eco-Labeling.

THEORETICAL CONTRIBUTIONS

In terms of the study's theoretical contributions, it contributes to our understanding of some associated constructs that have not been explained in earlier work associating the Socio-Ecological Model with green consumer behavior

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according to consumer demographics in the Sri Lankan context. This study looks at how green marketing tools influence customer demographics' green purchase behavior in the electronic home appliance sector. According to research findings, the green model may be utilized to further investigate the impact of each Green Marketing Tools on Green Product Purchasing Behavior. The resulting model identifies the most important factors that influence green consumer behavior and can be utilized as a forecasting model to estimate the impact on green purchasing behavior in future research.

The Perception of Eco Brand and Perception of Eco-Label has a low degree of positive coefficient with the Green Purchasing Behavior and there is significant impact. When considering the impact of each green marketing tool dimension compared with each other, the highest impact is recorded by the Environmental Advertisement, and the lowest impact is recorded by the Perception of Eco Brand and Label dimension. Perception of an Eco-Label has little impact on Green Purchasing Behavior. The case for this could be a lack of caution when purchasing electronic home appliances in order to consider Green-Label rather than other factors such as durability, prices, and consistency. Hence, in order to increase the Green Purchasing behavior of the customers, the green marketers have to increase Environmental advertisements, Eco-Labeling, and Eco branding of the products. These research findings also suggest that green marketers should give their proper attention to Green Marketing Tools in order to enhance Green Purchasing Behavior.

PRACTICAL IMPLICATIONS

Previous research was conducted by the other purchasing consideration rather than the organization's green image, environmental concern, and environmental knowledge for buying eco-friendly products. Hence, current research study findings help to build up new theories or expand existing theory towards the organizational green image and environmental concern. In addition, the same research findings reveal that there is huge support by the retailers who are socially responsible towards green products. The consumers' Green Purchasing Behavior in Sri Lanka can be enhanced through green marketing strategies. Further, the present study was found to have a positive impact of Environmental Advertising, Perception of Eco-Labels, and Perception of Eco Brands on Green Purchasing Behavior. Besides that, this research study contributes to existing Green Purchase Behavior literature and proved the green marketing tool measurements as a valid measurement for the Sri Lankan context.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

One of the limitations is related to the sample selection of the study. The study was limited only to the consumers of Electronic Home Appliances and selected people in the Matara district who were aged above 18 years as the sample population by using convenience sampling. Hence the data and findings may not be

representative of the whole Sri Lankan context. If it is conducted for different age categories such as below 18 years only or below 60 years only age category, the result may be dissimilar with this finding because young generation so not caring about the electronic home appliances market as well as very old people. Further, if it had been adapted to the other districts, the result will be completely different because of the diversity of the population. The study is based on the consumer side since it may differ when it is relevant to the supplier side. The whole population may have no intention to purchase electronic home appliances. Some people would not touch the extended life products. They purchase only day-to-day consumer goods; according to this finding male consumers' responsive rate is higher than female consumers.

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COMPETING INTERESTS

The authors declared no competing interests.

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