

Accessing Green Marketing Awareness And Its Impact On Managing Electronic Waste

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Abstract: The aim of the study is to enquire into the green marketing approach adopted by household pertaining to the threats as caused by electronic wastes amongst Indian consumers. Four independent research constructs namely Customers Attitude (CA), Eco-Friendly Products (EFP), Environmental Concerns (EC), Replacement of Electronic Products (REP) were identified under Green Marketing Perceptions (GM) for managing electronic wastes (MEW) through an intensive review of available literature that was validated through the proper research process. The research design was planned for sampling process and appropriate items (questions) were framed and a questionnaire was administered to targeted respondents personally seeking their responses and thus data set was created in a proper tabulated sheet. The instrument was pretested and improved on the feedback of stakeholders in the study the led to the design and development of management scale.

Keywords: Customers' perception, customers' attitude, electronic waste, Green marketing awareness, green marketing impact, marketing approach, marketing environment

1 INTRODUCTION

Rapid urbanization and heavy uses of electronic gadgets during the last two decades have led to the generation of a huge amount of electronic wastes resulting in soil, water, and environmental pollutions. Thus pollution control and environmental safety have become the greatest concern of environmental scientists and activists worldwide. Dumping of electronic wastes, one of the by-products of this urbanization has become a major problem in our society. Waste is not biodegradable, gradual deposition of these e-wastes leads to accumulation of various toxic metals like lead, cadmium, etc. and contaminates the soil and the groundwater. Nowadays people and nations have become more concerned about the protection of the environment and a new format of business has emerged as Green Business. Green marketing has become a new trend in business where companies create an image of themselves as an environmentally friendly organization by claiming its products eco-friendly. Green marketing has emerged as a tool used by many companies to attract public attitude and emotions (Fisk, 1973). Products and operations that are Eco-friendly in nature contribute towards customer value enhancements because they have lower rates of impact on our environment which serves as a matter of significance to all. The present research work analyses the impact of green marketing on consumers and companies in India particularly in the electronics industry using comprehensive literature review and investigates the trends and direction in which the Indian green marketing is presently heading towards. This research has observed that customers want to associate themselves with companies and products that are eco-friendly and they are willing to pay more for an eco-friendly product.

This research paper explores various challenges which the green marketing concept faces and also the opportunities that can be put to use to overcome such threats and challenges. The American Marketing Association puts forward its views on green marketing stating that green marketing can be defined as the marketing of those products which are supposed to be safe on environmental grounds. Green marketing is a very wide and out spread term that includes activities such as altering the product, modifying the process of manufacture, bringing about changes in packaging and also modifications in media advertisements. There are few more terms and classification of green marketing namely environmental marketing and ecological marketing which are more comprehensive and integrated concepts of marketing, dealing with right from production process to the disposal of products, and keeping in mind their effect on the environment. Both marketers and consumers are becoming increasingly sensitive to the need for switching into green products and services. In modern times businesses are venturing into the green marketplace and are increasingly trying to be in the spotlight of environmental concern in response to the increased social and political pressure as well as broader interests like corporate citizenship and social responsibility. As depending upon low-cost leadership in production and differentiation in competitive strategy formulation, it's not enough for organizational success, the prominence of sustainability in business is growing and so the need for integration of environmentalism and green marketing is also growing. It's not just about pollution control and waste disposal anymore, but developing the unique differentiating factor by way of alternative packaging, product compositions, redesigning processes and environment-centric promotion etc. will give them a competitive edge in the industry along with increased market share and customer loyalty. Green Marketing includes using eco-friendly techniques in various stages of manufacturing and creating awareness for the purchase of such products. The main focus of the companies now a day is to go green rather than educating the consumers and spreading the message to influence their attitude and perception. The challenge still lies in adopting green techniques and making investments towards manufacturing and marketing the eco-friendly products and thus making consumers more satisfied as well as aware of the hazards

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of such products which have electronic or chemical ingredients. The other marketing forces as identified in the literature for catalysing green marketing and its adoption is the intense competitiveness that exists between firms and businesses. Many a times it is seen that the firms try to follow or match the environmental promotional strategies of their rivals to gain popularity among customers viz. segmentation, targeting and positioning (STP) of its products. We have come across the evidence that the pressure of competition amongst all has led to the modification and modernisation of industries which as a result is less detrimental to the society and environment as a whole. Firms are now bound to think about their product development process, product components, research, and development issues, and the business strategies even attempting to address cost or profit related issues (Young et al., 2010). Electronic waste (E-waste) includes a varied range of electronic gadgets and electrical pieces of equipment which mostly comprises of toxic materials causing hazardous and irreversible impacts on human health and the environment altogether if not properly treated or disposed of. Electronic waste (e-waste) can be referred to as all electronic devices whether surplus, broken or obsolete, which have been thrown away by their original owners. The major problem in e-waste management faced these days is that there is no proper machinery or protective types of equipment available for the extraction of these materials. The waste components having no resale or reusable value are burnt or dumped leading to a huge amount of toxic gases emitted in the environment. Backyards melting using rough processes are resulting in major emissions and junk containing heavy metals is leading to pollution and health risk. Since consumers of today are becoming more environmentally conscious, it is important for the marketers to understand the potential of green marketing campaign over competitors and researches are showing a growing trend towards green marketing concepts for effective management of e-waste. In our country, around twenty-five percent of the consumers prefer environmental-friendly products (Rakesh Johri, 2008) thereby, leaving a scope of extremely diverse and sizeable an untapped segment to cater to such products. Understanding what motivates consumers to trigger environmentally conscious behavior (i.e. to buy green or to develop a positive image of the green product) and what discourages them from doing so is the first step in promoting green consumerism, we finalize to conduct the present research study in pursuit of our academic objectives particularly in the domain of marketing management. Marketing management as well as social science research in consumer behavior domain would make an important contribution and identify important constructs that bear upon managerial strategies, consumers product preference, consumers perception, and attitude out of this research study. The initial step in promoting green consumerism is to understand and find what is motivating the consumers of being so much environmentally conscious and what is abstaining them from becoming what they want to be. The identified factors that influence green buying to formulate a pattern that could support environmentally conscious consumer behavior. These consumer behavior patterns are the result of the behavior modification strategies that are applied by the marketers to attract the

potential consumer and therefore, important to identify, modify and develop such patterns that emerge across other relevant studies, rather than relying on the results from a single study and adopting them for a better greener future. The present study would develop a better understanding of electronic waste and its increased environmental and health hazards. The study would also help in determining the green alternatives of disposal and treatment of electronic waste and how green marketing can help in reducing, reusing and recycling (3R) electronic waste.

REVIEW OF LITERATURE

A literature review is an overview of what has been published on a topic by accredited scholars and researchers. Through a review of the related studies, the researcher can modify the research question based on the experiences of others and understands related literature on the topic taken up for investigation. The reviews are written are drawn from previous studies at the international, national and regional levels. Review of literature guides the important aspect for present research through which one can understand the past trends in research output in any particular problem and an important step to get a clear view of what has been done in the related areas and to get an idea of the suggestions recommended with regard to understanding of the problem at hand. The study of the previous research findings gives hint to the research scholar regarding the generation of new ideas related to the study. An attempt has been made by the researcher to collect the literature and studies which are related to the problem taken up for this study. Fisk (1973), has perceived that consumers should reduce their ecological footprint on the environment by using ecologically friendly products and green marketing attitude. The consumer remains the main focal point of the green marketing activities, so understanding the consumers' buying behavior towards green products would certainly help increase the green marketing in future business aspects in not only in electronic, electrical and computer software/hardware industry but all across the industrial sectors. Young et al. (2010), describes the rationale behind focusing on the consumer side in green marketing as every time a consumer decides to purchase a product, there is a possibility that the purchase in some way or the other may affect the sustainable consumption. The consumer considers the adoption of sustainable consumption like the adoption of green products as an extremely complex task, as it requires making a trade-off between practical functionality and their environmental concerns. The conventional consumer behavior wisdom also advocates that proactive marketers must focus on the needs of the consumer rather than being just in the business. From the point of view of societal/ holistic marketing, it is also important for marketers to make consumers aware of issues that focus on their long-term welfare. Therefore, in line with the arguments, the consumer is the focal point of environmental/green marketing. The author points out to the fact that the consumer has always been a focal point of green marketing studies, and green consumerism has been the most studied area of green marketing studies. In studies concerning environmental behaviours by Kaiser et al. (1999) it is reported that cognitive factors such as knowledge have a highly significant correlation with

environmental behaviours. This positive correlation indicates that those respondents who have greater knowledge are more likely to engage in environmentally responsible behaviours. Schahn and Holzer (1990) have advocated that environmental knowledge is a deemed condition to ensure that correct actions have been taken for protecting the environment. Their study suggests that such consumers also scores high as compared to others when it comes to certain behaviours such as recycling than non-supporters. The author also mentioned that the knowledge about the environment also promotes and cultivates a positive ecological attitude in making purchasing and consumption of green products. Andrees and Salinas (2007), also confirm that individuals that engage in green behaviors such as recycling devote a significant amount of their time in learning about the environment and environmental marketing which can address sustainability issues of organizations. Environmental marketing and Green orientation are seen as important strategies to enhance a firm's competitiveness. They argue that knowledge is a factor that influences every step in buying decision process from the consumers' side. Milfont and Duckitt (2004) defined environmental attitudes as a collection of beliefs, affect and behavioral intentions held by an individual towards environmentally conscious activities. The conventional consumer behavior wisdom also indicated that attitudes are essential to the study of consumer behavior. They argue that strong attitudes related to a social issue and particular product category can predict purchase behaviors and further, attitudes are good predictors of a consumers' willingness to purchase. This is highly relevant when there is a strong attitude towards performing acts such as adopting green products. In studies concerning environmental behaviors by Kaiser et al. (1999) it is reported that cognitive factors such as knowledge have a highly significant correlation with environmental behaviors. This positive correlation indicates that those respondents who have greater knowledge are more likely to engage in environmentally responsible behaviors. Studies carried out by Berger and Corbin (1992), Moisander and Uusitalo (1995) and Hines et al. (1987) established a weak relationship between attitudes and eco-friendly behaviors and reports that the cause of the weak relationship is that studies often focus on attitudes at a very general level and find that attitudes get weakly associated with specific green behaviors such as adopting green behaviors, attitude-behavior correlation is less when attitudes are conceptualized as a general attitude towards the environment. This means thereby that a positive attitude towards eco-friendly living results in eco-friendly behaviors like buying and using green products. Rokeach (1973); Follows and Jobber (2000) argue that attitudes are based on values, i.e. on beliefs about a particular situation or object that helps an individual to make a decision. They further advocate that values are more consistent than attitudes and values act as a standard on which attitudes are formed. They point out that once a value is learned it becomes part of our value system and it serves as a guide to behaviors. Schwartz and Bilsky (1987) define values as, "values are concepts, or beliefs, pertain to desirable end states or behaviors and events and are ordered by relative importance". The authors put forward a value theory based on the collective- individual dichotomy. Collective values are

concerned with the interests of in groups and are categorized into two motivational domains; these are pro-social and restrictive conformity. Pro-social values portray an active concern for the welfare of others and a desire to improve the society, while restrictive conformity values reflect an individual's conscious confirmation to social expectations. The pro-social domain was renamed self-transcendence and this factor included values that reflect the degree to which they motivate individuals to transcend selfish concerns and promote the welfare of others. According to Milfont and Duckitt (2004), environmental concern has been defined as a one-dimensional factor that ranges from unconcerned regarding the environment at a lower end to highly concerned, as measured by the new environmental paradigm. Schultz et. al. (2000) explains this factor in detail and points out that environmental concern has three correlated factors viz., concern for self (egoistic); concern for others (altruism) and concern for the biosphere (biospheric). Shamdasani et al. (1993) stated that consumers having environmental concerns have more of self internal control as they are of the opinion that even the actions of one single individual can prove to be effective and beneficial for the environment. This can be attributed to the fact that individuals who are concerned about the environment will only show a more proactive behavior and their actions relate to adoption and disposal of a green product which may help in effectively addressing the environmental problems. Rakesh Johri, (2008) commented that the waste management approaches in India when compared with the procedure followed worldwide has got huge differences. He states that because of environmental degradation and concerns from the consumers, e-waste management has become very crucial as a result of existing illegal and unacceptable processes and protocols. In India management of e-waste is very monotonous and cumbersome process because of lack of proper enactment of policies and procedures to be followed. E-waste contribution in India can be segregated into two major sources that is 23 percent from household activities and 77 percent from commercial activities. Out of the commercial waste, 84 percent goes in for new product and the remaining as second hand because of the prevailing poor economic conditions. This is the principal reason as to why the commercial sector has become the biggest contributor of e-waste in the country. M. Khurram, et al., (2011) concludes in their research that e-waste near one thousand tons annual contribution comes from producers and sellers in India. As per the agreement made across countries, waste from one country cannot be dumped into some other country. In spite of such laws, India ranks as the top receiver of e-waste. 64 big cities and towns of India are the major contributor of such waste totalling around 66 percent of country's e-waste. Moreover, state wise approximately 11 states are contributing to about 71 percent of e-waste in the country. Kuehr and Williams (2003) states that in case of many developing countries, the market for reused personal computers is on the rise as these are available at prices affordable to many. They add that the charitable organisations are making remarkable contributions by donating electronic products such as computers and other accessories to schools helping them to broaden the area of technology. Such efforts are of great importance because they ensure the reuse of electronic products and helps in

reducing the detrimental impact on environment as the life of these products increases and the level of e-waste decreases. Sivakumaran & Anandkumar (2017) stated that there needs to be cooperation among manufacturers and also awareness in public so that we can ensure that e-waste management system progresses. Further, the government should take initiatives that all the international agreements relating to waste disposal are properly met for the better of each nation. It is also important to minimise illegal smuggling of e-waste and to ensure that there should be a system of proper licensing and certification for dealers of e-waste. This is important because e-waste have high ratio of hazardous and heavy metals which can lead to bad effects on human nervous, respiratory and immune systems. Sukeshini Jadhav (2013) had observed that management of e-waste in a proper manner will help in well organised locating and assemblage from extraction and disposal of materials in order to ensure that e-waste are turned into productive or efficient products leading to profitable business opportunities. The manufacturers have to take responsibility for adopting the guideline for manufacturing sound environment product and sustainability management should be started from the product manufacturing stage i.e. raw material selection, product and process design can be the important factors for the designed for environment practices, which can facilitate recycling and reuse. The manufacturer should also try and initiate a take-back program to handle the waste so that proper management and disposal of e-waste can be done. Shubham Gupta et al. (2014) studied that in developing countries like India, China, Indonesia, Brazil, commercial organizations tend to focus more on economic aspects rather than environmental regulations of e-waste recycling. The resourceful recycling of this waste has been decreed as essential for the beneficial recovery of refillable materials and ecological environment. Sikdar & Vaniya (2014) stated that education can be a powerful media and platform to raise knowledge about green marketing. Keeping this in mind, the government should ensure that the waste disposals, recycling of waste, harmful effects of e-waste on the human body and health should be incorporated as compulsory areas of teaching to higher and lower grades students. The researcher also observed that education is a very strong medium and can alone bring lot of changes in the society to ensure protection of the environment. Education should be made more extensive and reachable to larger parts of the country in order to create an understanding of e-waste and its management in such crucial times. Binegde et al. (2015) studied that the repair shops of electronic goods of the study area contributed an important role in extending the life span of electronic goods and thus reduce the number of thrown away e-goods. The study indicated that the high repair cost of the electronic goods and availability of comparatively cheaper new electronic goods with more features attract the consumers towards the throwaway culture, leading to the accumulation of obsolete electronic items. Strengthening of formal recycling of e-waste is very essential for attaining sustainable development. Environmental attitude can be defined as the opinion a person has towards the promotion and protection of the environment. There has been different opinions and results that have been put out in regards to the relationship that presently exists between the attitude

that one has towards the environment and the behaviour that one exhibits (Kotchen and Reiling, 2000). Rashid (2009), identified that customers tend to have more positive attitude and reaction for green marketing and such purchases when they are well aware about eco labels. Kuhn (1999) supports to this research that companies or firms with strategies relating to sustainability helped them to increase their market share because of promotion and adoption of products which are eco-friendly. Leire and Thidell (2005) had a contradictory opinion and according to them, products having eco labelling on them do not lead to purchase increments. This argument is further supported by the research of Bleda and Shackley (2008) who stated that eco- labelling have a negative impact on the performance of the firm. D'Souza et al. (2004) had identified that to understand the relationship between eco labels and its impact, not much empirical evidence is available. This is mainly because there doesn't exist much trust among the consumers when it comes to eco labels effectiveness as they are quite ignorant.

Objectives of the study

1. To understand the green marketing concept and its impact on consumer buying behavior
2. To study consumers attitude towards green marketing initiatives and effective management of e-waste
3. To investigate consumer perception formation towards green products and discuss its implications on marketing strategies.
4. To identify the profile of Indian consumers who are willing to pay more for green products.

Hypothesis

1. There is no significant impact of green marketing on customers' attitude
2. There is no significant impact of green marketing on eco-friendly product
3. There is no significant impact of green marketing on environmental concern
4. There is no significant impact of green marketing on replacement of e-product
5. There is no significant impact of green marketing on effective management of e-waste

3 RESEARCH METHODOLOGY

Research has been defined as a scientific and systematic inquiry either to discover new facts or to verify old facts, their sequences, interrelationships, causal explanation and adherence to natural laws governing them. It also aims to discover the truth by applying scientific methods through aids the process of knowledge formation and serves as an important source of providing policy suggestions for different business, government, and social organization. The current research paper is a conceptual study of green marketing perceptions and its impact on managing e-waste. Therefore the researcher adopted an empirical research strategy that involves a dependent variable (Management of e-waste) and its impact on the independent variable (Consumer perception of green marketing, consumer attitude, environmental concerns, replacement of electronic products and eco-friendly products). First-hand questionnaires were administered to a sample of 300 respondents as identified by simple random sampling process from an identified population in the state

of Uttar Pradesh more specifically in the city of the state capital Lucknow (India). The questionnaire was designed and developed under the basic guidelines of Churchill (1973), tested and retested by researchers and other stakeholders. Data were tabulated and compiled in proper order as collected back from respondents with desired information in a predesigned instrument (questionnaire) on the green marketing perception and waste management.

Reliability and Validity of the instrument

Construct reliability was computed for the overall scale as well as at the dimension level. The results of the test indicated that green marketing perception and its impact on managing Electronic Waste is a reliable instrument for making consumers' assessment. The questionnaire has shown the Cronbach alpha value, 0.93 which is above the threshold and shows higher reliability of the instrument a hand and Nunnally (1978) adhering to the minimum value of 0.70. Hence, the internal consistency reliability of the measures used in this study was acceptable. Next, the validity of the instrument was assessed for which content validity refers to the degree which an instrument covers the meaning of the concepts included in particular research (Babbie, 1992). For this study, the content the validity of the proposed instrument is adequate enough because of the instrument had been carefully constructed, supported by an extensive literature review and opinions of other stakeholders.

Table-1 Reliability of the research instrument (questionnaire)

Cronbach's Alpha	.743
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.845

We also accessed Kaiser-Meyer-Olkin Measure of Sampling Adequacy value that comes to .845 which is above the threshold level of the test value and finally we deemed it fit for present research paper study.

Data Analysis

Table-1 shows that there were 60.70% of respondents belong to male while 38.90% of respondents belong to the female category. This gender ratio is common in most of the research studies where female participant are always less than male counterparts. So far the age profile of the respondents are concerned we find 63% of respondents belonging to 15-24 years participated in the study followed by 17.80% belonging to a slab of 35-44 years of age. These two groups have shown major participation and concerns in our research study green marketing perceptions and its impact in managing e-wastes as these two are more concerned with buying and uses of electronic gadgets and also concerned with the hazards of these gadgets upon the common life of the people. Out of total respondents' educational profile, highest 39.90% are graduate in streams of education followed by 30.70% post-graduates which shows that educated people genuinely have major concerns over our research domain of green marketing perceptions and their impact on managing e-waste.

Table-2 Demographic presentation of respondents

Gender of Respondents	Frequency	Percentage
Male	184	60.7
Female	118	38.9
Age of Respondents	Frequency	Percentage
15-24 Years	191	63
25-34 Years	23	7.6
35-44 Years	54	17.8
above 45 Years	34	11.2
Education of Respondents	Frequency	Percentage
Inter Mediate	74	24.4
Graduate	119	39.3
Post Graduate	93	30.7
Others	16	5.3
Occupation of Respondents	Frequency	Percentage
Student	170	56.1
Working	132	43.6
Annual income of Respondents/Guardian	Frequency	Percentage
1-5 lac	200	66
5-10 lac	58	19.1
above 10 lac	40	13.2
Use pattern of Respondents	Frequency	Percentage
Computer	120	39.6
Lab top	147	48.5
Cell phone	31	10.2
Camera	2	0.7
No. of electronic products used by respondents	Frequency	Percentage
1-2 product	78	25.7
3-4 product	124	40.9
more than 5 products	97	32

So for the occupations of the respondents are concerned we find that 56.10% of respondents are students and 43.60% are working category. Both the students and working populations have almost similar percentage share concerned with green marketing perceptions and its impact in managing e-waste. The income profile of the respondents shows that 66% are belonging to income slab of 1-5 lac per annum meaning thereby common income slab respondent have a major share in the study and 19.10% are in 5-10 ac income slab having lesser concerns with green marketing perceptions and its impact in managing e-wastes. We come across the use pattern of computer desktop, laptop, mobile and camera and find that respondents are the high user of laptops 48.50% followed by computer (desktop) 39.60% and 10.20% for mobile phones for such types of work which are done by desktop or laptop. The use rate assessment shows that 40.90% respondents use 3-4 electronic products in common tasks were 25.70% use 1-2 products and finally

32% of respondents use more than 5 electronic gadgets in their routine life official/ commercial). Shubham Gupta et al. (2014) studied that in developing countries like India, China, Indonesia, Brazil, commercial organizations tend to focus more on economic aspects rather than environmental regulations of e-waste recycling. So, for the profitable recovery of reusable materials and sustainable environment, the efficient recycling of this waste has been rendered indispensable and is considered as a challenge for today's society. Table-3 presents principal components analysis which is a method of data reduction. Though we have reduced our factors to six as identified and finalized and found a fit in the present study. The correlation matrix is used, the variables are standardized and the total variance equals the number of variables used in the analysis (because each standardized variable has a variance equal to 1). Commonalities are the proportion of each variable's variance that can be explained by the principal components. It is also defined as the sum of the squared factor loadings. The initial value of the commonality in a principal components analysis is 1.

Table-3 Component Matrix and communalities

Component Matrix and Communalities		
	Component	Extraction
Replacement of E-products (REP)	.530	.481
Environmental Concerns (EC)	.708	.501
Green Marketing (GM)	.651	.424
Management of E-wastes (MEW)	.783	.612
Eco-Friendly Products (EFP)	.591	.349
Customer Attitude (CA)	.729	.532

Extraction Method: Principal Component Analysis.

The Extraction values indicate the proportion of each variable's variance that can be explained by the principal components. Variables with high values are well represented in the common factor space, while variables with low values are not well represented. As it is shown in table our factor Management of E-wastes (MEW) have the highest extraction and explains more than 61% the subject whereas Eco-Friendly Products (EFP) explain the lowest 35% of the subject component.

Confirmatory Factor Analysis

In order to test and verify the validity of the measuring instrument (questionnaire), confirmatory factor analysis was conducted. Confirmatory factor analysis with partial disaggregation was performed on the five dimensions of consumer perceptions. The factor loadings and co-variances obtained from the confirmatory factor analysis are as shown in table-5. The score obtained from the analysis suggested an excellent fit between the data and the model ($X^2 = 256.34$, degree of freedom = 134, GFI = 0.923, AGFI = 0.911, TLI = 0.921, CFI = 0.923, NFI = 0.942, RMSEA = 0.081) all the fit indices comply with the values recommended by Heir et al (1998).

Results of confirmatory factor values

S.No.	Goodness- of -fit model index	Recommended value*	Consumer perception on green marketing and management of electronic wastes
1.	Chi-square/ degree of freedom**	≤ 2.00	1.71
2.	Goodness-of-Fit index (GFI)	≥ 0.90	0.923
3.	Adjusted goodness-of-index (AGFI)	≥ 0.90	0.911
4.	Tucker -Lewis index (TLI)	≥ 0.90	0.921
5.	Comparative fit index (CFI)	≥ 0.90	0.923
6.	Normalized fit index (NFI)	≥ 0.90	0.942
7.	RMS of approximation (RMSEA)	≤ 0.08	0.081

All confirmatory factor values resulted in accordance to recommended values and hence all our factors deemed adequate and fit for the present research paper which has yielded right results for all statistical operations.

Relative strength of Relationship (Correlation analysis)

Table-4 explains the strength of the relationship between the identified factors. We find a weak positive relation (.310) between replacement of electronic products and environmental concerns among the respondent. Green marketing has a weak positive strength of relationship with the replacement of electronic products and environmental concerns whereas management of electronic wastes have weak relation with the replacement of electronic products but have moderate (medium) strength of relationship with environmental concerns and green marketing. The Eco-friendly products have weak positive relations with the replacement of electronic products, environmental concerns, green marketing, and management of electronic wastes Finally, we find that consumer attitude has weak positive strength of relationship with the replacement of electronic products, environmental concerns, green marketing but medium positive strength of relationship with the management of electronic wastes and eco-friendly products.

Table-4 Correlation analysis

	REP	EC	GM	MEW	EFP	CA
REP	1					
EC	.310**	1				
GM	.377**	.387**	1			
MEW	.264**	.482**	.400**	1		
EFP	.236**	.280**	.257**	.358**	1	
CA	.337**	.398**	.372**	.441**	.418**	1

Model summary table-5 provides the value of r, r² and adjusted r² for the model that has been derived from using software SPSS. "r" represents the value of the multiple correlation coefficients between the predictors and the outcome (Field, 2005). Here, r has a value 0.532; this value represents the simple correlation between Replacement of E-products (REP), Environmental Concerns (EC), Green

Marketing (GM), Management of E-wastes (MEW), Eco-Friendly Products (EFP) and Customer Attitude (CA).

Table-5 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.532a	.283	.270	.3951

a. Predictors: (Constant), CA, REP, EFP, EC, GM, MEW

The “r2” is a measure of how much of the variability in the outcome is accounted for by the predictors (Field, 2005). The value of r2 is 0.283 which tells us that these five constructs in the green marketing approach. The adjusted “r2” gives an idea of how well the model generalizes and ideally its value is likely to be the same or very close to, the value of r2 (Field, 2005). Here, the difference between r2 and adjusted r2 is 0.13% (0.283 – 0.270= 0.013). This means that if the model were derived from the population rather than a sample it would account for approximately 0.13% less variance in its outcome. In the table-6 all five variables have positive b-values; which indicates the positive relationships between the variables. As green marketing perceptions increases, Replacement of E-products (REP), Environmental Concerns (EC), Management of E-wastes (MEW), Eco-Friendly Products (EFP) and Customer Attitude (CA) also increases, other variables held constant.

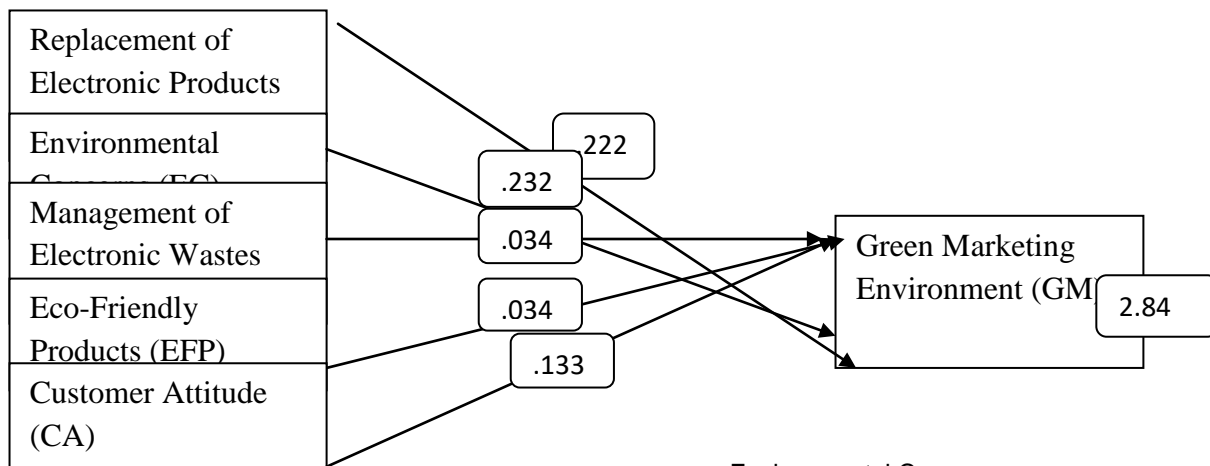
Table-6 Beta coefficient and significance of model

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	.990	.214		4.636	.000
	REP	.160	.040	.222	3.959	.000
	EC	.228	.060	.232	3.789	.000
	EFP	.028	.048	.034	.582	.561
	CA	.132	.064	.133	2.074	.039
	MEW	.114	.059	.034	1.916	.056

a. Dependent Variable: Green Marketing

The beta value tells us the number of standard deviations that the outcome will change as a result of one standard deviation change in the predictor (Field, 2005). Higher beta value signifies stronger correlation with the dependent variable.

Certified framework as proposed for the study



Regression analysis

Linear Regression estimates the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable. Therefore our liner regression equation explains as unit change in any independent variable, what would be resultant change in dependent variable. A linear regression line has an equation of the form $Y = a + bX$, where X is the explanatory variable and Y is the dependent variable. The slope of the line is b, and a is the intercept (the value of y when x = 0).

$$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + e$$

Whereby

Y=Dependent Variable (Green Marketing)

α = constant (Slop/tangent)

x = Independent Variables

x_1 = Replacement of electronic products

x_2 = Environmental Concerns

x_3 = Eco-friendly products

x_4 = Customers Attitude

β = regression coefficients of x_1, x_2, x_3, x_4

e = error term which is here assumed to be normally distributed with mean 0 and some constant variance.

Green Marketing (GM) = .990 + .222 (Replacement of Electronic Products (REP) + .232 (Environmental Concerns (EC) + .034 (Management of Electronic Wastes (MEW) + .034 (Eco-Friendly Products (EFP) + .133 (Customers Attitude (CA).

Results of hypothesis testing

<i>Hypothesis</i>	<i>Mean</i>	<i>f</i>	<i>Sig.</i>	<i>Results</i>
<i>Ho1: There is no significant impact of green marketing on effective management of e-wastes</i>	2.781	7.241	.000	<i>Rejected</i>
<i>Ho2: There is no significant impact of green marketing on replacement of e-products</i>	1.733	3.206	.061	<i>Accepted</i>
<i>Ho3: There is no significant impact of green marketing on environmental concerns</i>	1.475	5.668	.000	<i>Rejected</i>
<i>Ho4: There is no significant impact of green marketing on eco-friendly product</i>	1.334	3.236	.037	<i>Accepted</i>
<i>Ho5: There is no significant impact of green marketing on customers' attitude</i>	1.301	5.175	.000	<i>Rejected</i>
<i>Ho6: There is no significant impact of management of e-wastes on environmental concerns</i>	1.836	8.121	.022	<i>Rejected</i>

4 CONCLUSION

Green Marketing refers to marketing where ecological issues are the focal point of marketing decision-making. It ranges from the change in raw materials to change in packaging materials. It includes a change in product design or even substitution of one product by another. It also encompasses the disposal of waste generated during production and distribution, the disposal of surplus or expired products and even the disposal of packaging after the use of the product. There is ample scope for green marketing at both the manufacturers' end and marketers' end. Green Marketing is catching the customers' perceptions on in a big way. Marketers as well as consumers are slowly but strongly recognizing it. Awareness is being created about the use of such materials, which are helpful in conserving the environment and are eco-friendly. Though green products can be a bit costlier in comparison to their non-green counterparts, they are beneficial from the viewpoint of environment conservation, which will definitely prove advantageous in the long run. Green marketing is gaining increasing prominence across the world and in India. The majority of the participants who participated in our survey and voluntarily shared the primary and first-hand information about their perception as what they think on the role and perspectives of green marketing strategies in both the manufacturing and marketing especially electronic products. Fast replacement of electronic products due to technical up-

gradation is having a heavy impact on waste generation. Consumers are always seeking integrated facilities and consumer attitude has a positive relation to new and technological upgraded products. Customers have positive buying intentions towards eco-friendly products and have moderate concerns with environmental protection. Green marketing initiatives have a positive impact on the management of e-wastes, consumers' attitude, no major impact on manufacturing and marketing of eco-friendly products, replacement of electronic products and consumers have moderate concerns towards environmental concerns. Two null hypotheses are accepted but other four are rejected having the impressions on replacement of newly developed electronic products will have its market and consumers will have buying motives and green marketing and eco-friendly products have similar phenomena hence there is no significant impact on it. Moreover, it was also found that consumption of the specific profile as stated in our questionnaire are will to pay more if the find products with green initiatives are readily available apart from the factors identified for this study.

Managerial Implications

Green marketing strategies hold enormous abilities to ensure that business challenges are met and along with them there is creation of new opportunities. Currently there is unparalleled degree of mutual agreement that most of the countries face are significant challenges that impact the economic competitiveness. The most urgent and serious challenge which our nation along with the rest of the global economy faces is the sound e-waste management system. This challenge greatly depends on our national leaders and manufacturers of new technology and innovations that can modify products in future because of changing demands and supply patterns for green label products.

Recommendations

Green marketing is a process that is continuous in nature and requires regular efforts from governments in order to make and implement strong policies and rules. Huge efforts are also required on the part of the consumers and suppliers to have a sustainable future. This needs to be done in order to ensure sustainable competitive advantage of businesses. It is necessary that strategies and policies implemented in relation to green products be so that it can guide the retailers and customers and help them in moving towards a greener future. Firms and business housed should consider and focus on producing and creating a green product that not only satisfies the wants and demands of the consumers but also matches with the care positioning of the company. This needs to be done keeping in mind the risks associated with the cost of the product. Concluding it is not as easy and simple as it sounds when it comes to creating and implementing green marketing strategies because the concept in itself is quite complex and varies with time with change being the only constant. The framework that is presented in the current paper is based on the need to explain inconsistencies in attitudes and behaviours that have been revealed in past researches. The current framework will be framing the gap between the attitudes and behaviours as a social dilemma and also attempts to understand the gap by trying to identify individual factors by using the reference group theory.

Furthermore, the framework also tries to recommend certain ways to cover the research gap. The current study will provide valuable insight to both practitioners and theoreticians who want to understand environmentally conscious individuals. Since the success of green products depend on the consumers adopting or changing their attitude and behaviour towards such products, it is imperative that green marketers identify all the factors that encourage cooperation. Thus the current study will also be of benefit to the green marketers as it aids in developing a marketing strategy that persuades consumers to seek the value of collective gain over self-interest.

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