

Customer Attitude towards Green Marketing Practices: An Empirical Study on Indian Companies' Green practices

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Abstract

The current generation is facing environmental issues like climate change, pollution, environmental degradation, resource depletion etc. The current state of global warming is creating great necessity for sustainable practices by the entire market participants. As a result, green marketing is on the rise, the companies should follow and implement 3-R's to avoid further depletion of environment.

The current study focuses on the preview of green marketing w.r.t. green producer, green product and green consumer, it also examined the sustainable practices as to water and power consumption by few major Indian MNCs and to find the attitude of customers towards green marketing practices by companies.

To analyze the results an online survey of 500 customers was undertaken to know their attitude and opinion about green marketing practices by companies. Factor Analysis was employed to identify the most important green practices by companies, which included product design, resource usage, green packing and green promotion. The study observes that companies can play an influential role in promoting sustainability and protection of environment.

KEYWORDS: Sustainability, Green Products, Green Consumers, Green Packing.

Introduction

Climate Change is the major concern of the current period and we are at a defining moment. The climate change can be felt in the form of ever-changing weather patterns that effect food production, rising sea levels leading to huge the risk of catastrophic flooding, every country on this planet is impacted by this climate change, and aftermath effects are and unprecedented in scale. this year entire Europe is facing temperatures as never before, the US facing heavy floods and most countries on this planet facing severe climatic conditions which is the outcome of global warming. Without drastic action today, adapting to these impacts in the future will be more difficult and costly.

There is a need for the world economy to shift towards a low-carbon economy as water and air are getting polluted beyond permissible limits which will impact the mere survival of human race on earth, a 2014 report by UN [Intergovernmental Panel on Climate Change](#)

(IPCC) stated scientists are 95% certain that most of the global warming is caused by higher concentrations of greenhouse gasses (GHG's), also the weather reports are ringing the danger bells with rising sea levels from one to three feet by the end of the century, fast melting ice sheets in Greenland and Antarctica (NASA report, 2015), which shed an average of 303 gigatons of ice a year over the past decade. China became the world's largest emitter of carbon-di-oxide with extensive manufacturing activities fueling its economic growth and India is in third place (Hindustan Times, 2015). Therefore there is immediate need for curbing GHG's which form major part of global warming. The rise in GHG should be credited to rapid industrialization, and the huge effluents released into the atmosphere. Today's ecological problems are severe, that corporations do not act responsibly toward the environment and that behaving in an ecologically favorable fashion is important and not inconvenient, customer's often consider ecological issues when making a purchase (Michel Laroche, Jasmin Bergeron, Guido Barbaro-Forleo, 2001).

"Climate change is a terrible problem, and absolutely needs to be solved. It deserves to be a huge priority"
-Bill Gates

India is also facing the pinch of global warming and pollution (Business Monitor International, 2013); it is at risk of severe environmental problems with its rivers and air getting severely polluted in many cities, which is generating doubts about sustainability of its rapid economic growth. Delhi surpassed Beijing in the list of most polluted cities (World Health organization Report, 2014), Ganga and Yamuna scored place in 10 most polluted rivers list, these are few things to speak about the fate of Indians health, and there is every need to curb pollution on war foot. It is high time to implement environmental conservation, the Kyoto Protocol was signed in the year 1997 to tackle the effect of global warming, India can have its own carbon credit market, where energy efficient firms may vend carbon credit internally to other energy intensive firms, thus reducing global warming to some extent. India being third largest producer of greenhouse gasses (GHGs) is facing tremendous pressure from international community for its reduction, by reducing energy intensity through adopting energy conservation and energy efficiency measures India can achieve its targets (Pravin Agrarwal et al, 2010).

"The future will either be green or not at all".

Bob Brown hints at the emergency of being green and sustainable. The responsibility of achieving environmental sustainability lies in the stakeholder's attitude and behavior. Stakeholder's include the owners/shareholders, employees

and importantly the consumer who determine the fate of any marketer. The global marketing trends are fast changing with changes in global consumer's purchase behavior; as consumer is heading towards ecological and green practices. The environmental friendly purchasing is transforming the entire market activities into eco-friendly or green practices having less impact on the environment, which is termed as green marketing;

Green Marketing:

Green marketing is the marketing of products that are presumed to be environmentally safe as defined by the American Marketing Association (AMA); in fact any activity that is environmental friendly can be termed as a GREEN activity.

Green marketing incorporates a very broad range of activities that help in less consumption of natural resources and less wastage throughout the product life cycle (PLC). Green marketing follows green practices all through the process of converting raw-material to finished goods and supply them to the customers, in other words it deals with Green Supply Chain Management (GSCM) integrating environmental initiative to product design, raw-material sourcing and selection, manufacturing process, delivery of final product to the consumer, and most importantly end-of-life product management which deals with proper disposal of goods after their productive life e.g.: batteries, electronic appliances, etc.

Green marketing has a wide scope of activities ranging from product modifications, changes to the production processes, packaging changes and advertising (Rambalak Yadav, GovindSwaroop Pathak, 2013). Packaging materials also causes great pollution, they can have a negative impact on environment, although environmental pollution seems to be one of the most important issues worrying the customer, they neither realize nor show awareness regarding the importance of recycling and bio-degradable packing. The reason being lack of adequate information and most consumers believe it is government's task to provide incentives to manufacturers to use recyclable and bio degradable packing, but it should be a combined task of government, companies and consumers (E.Chiellini, 2008) to achieve reduction in carbon footprint.

Promotion in implementation of sustainable development strategies can be elevated by setting up top-down energy-saving management system, environmental regulatory agencies, etc to improve organizations efficiency. Advocating green consumption through public participation and implementing the systems of standards, certification and energy efficiency labeling to consumer goods and several measures to promote green

consumerism (China's National Report on Sustainable Development, 2012) can make green marketing activities realistic. Green movement and participation of business and industries either out of a real interest in saving the planet or out of a desire to capitalize on the growing consumer demand for green products should aim at common goal of sustainability. The government, non – governmental organization and marketers should come together to formulate policies in support of green practices (K. Saleem Khan et al, 2013).

Review of Literature:

With the rise of global warming and green-house gasses, it has become mandatory to reduce emissions wherever possible, the overall nature is at stake and green practices can protect nature to some extent. This literature helps to identify the progress of green marketing activities globally; Jiang Lin (2002), observed China has developed efficiency standards and labeling to reduce greenhouse gasses emissions for household appliances. This resulted in developing China's comprehensive energy conservation policy and achieved significant reductions in energy consumption by appliances. This article reviews the historical development of Chinese programs, summarizes the most recent activities, and documents to the extent possible their impact on appliance efficiency and energy consumption.

Peter Jones, Daphne Comfort, David Hillier, (2008) made a study on government policies and marketer initiatives in areas like ecosystems, waste, water, climate change, nutrition, etc. The study made recommendations for implementing sustainable development at various levels to achieve a sustainable food system and provided a platform for discussion among academics and planners studying industry sector.

Martin Joerss, Jonathan R. Woetzel, and Haimeng Zhang (2009), stated in their article that China has started rapid industrialization over the past three decades as a result China has become the world's largest emitter of greenhouse gasses surpassing United States, China is home to one-fifth of world's pollution. So, there is increased urgency for China to identify alternative resources causing less pollution with technology up gradation and alternative power generation other than coal. They have initiated in technologies, such as electric vehicles, new semiconductor-manufacturing equipment that's better at controlling fluorocarbon emissions, and the use of agricultural waste as a fuel for co-firing with coal (to reduce coal consumption) in cement kilns.

Amanda Min Chung Han (2010) stated that China made remarkable growth over past three decades in economic development but resulted in poor air quality, polluted water

and lack of energy. China is the world largest carbon emission nation as of 2010, thus the government is focusing on environmental friendly businesses. China is focusing on developing alternate energy sources like solar, wind power and other renewable resources. The government aims to encourage low carbon product exports, low carbon consumption, electric car use, and low carbon construction.

Jacquelyn Ottman (2011) stated about responsible consumption, which is concerned about conserving resources while using products and reduce waste. The article stated about zero waste and zero energy with consumers responsible consumption. The role of government is important to shift for energy-water efficient appliances, light bulbs, etc. It stated the role of companies is important in communicating the need for consumer responsibility.

Ekta Rastogi Singh and M.S. Khan (2014), piloted a study on impact of green marketing on society and their purchasing behavior. They tried to find the importance and implication of green activities in marketing activities. It helped in minimizing the wastages and making environment neat, clean and safe. The paper identified customers have strong positive attitude and awareness towards green products, and companies with green image will have competitive advantage.

Rex, E., & Baumann, H. (2007) conducted a study and observed that ecolabels are important tools of green marketing but its market share is very low. His study suggested, the marketer should concentrate on positioning strategies as to place, price, promotion and promoting creativity instead of promoting labeling.

Xiucheng FAN, made a study on Green marketing and sustainability and Marketing to the new generation. The paper highlighted the basis of development of green products and evolution of dozens of green stores in Beijing, Shanghai, Guangzhou and other cities. Also stated several aspects of low carbon consumption like low-emission cars, environmental friendly house ware, and people consider sustainability as new luxury.

A study by Elham Rahbar et al. (2011) proposes to determine the effect of green marketing tools on consumer's actual purchase behavior in case of Penang (Malaysia). A survey was carried out on 250 Chinese, Malay, Indian and other races that represent the Penang population. The result revealed that customer's trust in eco-label and eco-brand and their perception of eco-brand show positive and significant impact on their actual purchase behavior. The paper observed that government can promote green marketing can by providing promotional incentives to green products manufacturers and

encouraging public to buy products with eco-labels.

Le Zeng, Siyuan Chen (2014), have made a case study on Emerson Electric Co., Ltd with regard to its green marketing strategy in China. The study found the green marketing strategy is high in international companies with their advanced technology and services, but on other hand green consumers in China are low with lack of green awareness among major population. They made suggestions that international companies should work with Chinese government to promote green education and awareness among Chinese consumers. .

Objectives of the Study:

Based on the review of literature the following objectives were studied in the paper:

- 1.To study the different activities in Green Marketing i.e. green producer, green products, green consumer.
- 2.To identify the green practices employed by major Indian companies.
- 3.To study the consumer attitude towards green marketing practices by Indian companies.

Research Methodology:

The present study is focusing on consumer's attitude towards green marketing practices by Indian companies, it



Green Producer- Manufacturer

Produces goods that are ecologically safe, sustainable sourcing of raw materials; Eco-design of products and packaging with recyclable or biodegradable material.

Firms operations are energy efficient and implement better pollution controls, etc.

Follow green advertising, which means the advertisement should show relationship between product and biophysical environment.

Retailer –

Sale of sustainable/green products.

Eco-design of buildings and facilities; energy and water efficiency.

Consumption and end-of-life practices –

Engagement of consumers in sustainable consumption.

Ensuring proper consumer disposal after products life.

Traditionally marketing gave least consideration towards the pollution caused to the environment through their production activities; regarding the usage of raw materials in process of manufacturing or about the packaging

tried to identify the factors which customers consider will have better impact on environment. Based on literature review some variables were identified which would improve the green practices by companies, and to seek customers opinion about the same. A questionnaire was designed with the parameters related to the production, packing, usage of resources, etc. A sample of 500 customers was selected based on convenience sampling and final 432 filled and qualified forms were received. Factor analysis was performed to identify the interrelationship between variables. SPSS 20 version was used for statistical analysis.

Activities in Green Marketing:

Green marketing incorporates a very broad range of activities from manufacturer to consumer, production of environment friendly goods which can be incorporated through product alteration, changes to production process, modifying packaging and advertising, both producers and the customers must be aware about the eco-labeling of the products. The green economy should not only aim at producing clean energy but also for cleaner production processes that reduce environmental impact and improve natural resource usage that would promote sustainability in the 21st century (Mohajan, Haradhan, 2012). The main participants in green marketing are;

materials used. Conventional marketing concentrated on making profit, while green marketing concentrates on environmental policies and maintains the philosophy that doing business for a longer period is not possible without protecting the environment. Now more marketers are employing sustainability for improving manufacturing process and pursue growth instead of concentrating only on reputation (McKinsey Global Survey results, 2011).

Thus, manufacturers joined the team of governments and consumers in promoting sustainability, substantially green consumers are increasing and the demand for a wide range of green products is also increasing, green products range from food to car, a building to IT parks, etc. those argued to be environmentally safe.

Green Products

Green products can be described as having qualities that protects environment and has replaced chemical ingredients with natural ingredients (Green Retail decisions, 2011). These goods are produced with least impact on environment in an energy-conservative manner or made from recycled components, without use of chemicals that could harm both consumer and environment and supplied to market with recyclable or less packing.

Table 1.1: Some examples of green products

Product	Green product	Green features
Food	Organic food	Produced using environmentally and animal friendly farming methods on organic farms
Beverages	Organic wine	Produced from grapes through organic farming without use of chemicals and pesticides
Textiles	Organic fiber	Produced from cotton, jute, silk or wool obtained from organic farm, free from genetically modified seeds, without use of harmful herbicides and pesticides
Automobiles	Hybrid vehicles, hydrogen fueled, electronic vehicles	Low carbon emissions, follow Euro VI or California's Zero Emission vehicle standards causing less pollution
Electronics	Energy efficient products - CFL, LED bulbs	Low power consumption and less release of gasses in electronics like television, refrigerator, etc.
Plastics	Bioplastics	Biodegradable, producing plastic bags and products with thickness above 20 micron which is recyclable
Paints	Lead free paints, paints with zero volatile organic compounds (VOC)	Release low level toxins after application, chemical free
Perfumes	Eco-friendly perfumes	Without chlorofluorocarbons (CFCs) propellants, using hydrocarbons and nitrous oxide as propellants
FMCGs	Herbal soaps, cosmetics, shampoos, etc.	Without chemicals, artificial colors and compounds harming skin and complexion

Source: Wikipedia and Google.

The product and production process should help in upgrading environmental quality, but there is fear of GREEN WASHING where by companies adopt green practices outwardly or name product just to propagate they are green to increase profit rather than real concern for environment and do very little for the environment benefit to attract the niche eco-friendly customers segment, i.e. GREEN CONSUMERS.

Green Consumer

A green consumer is one who uses eco-friendly or environmental friendly products, he has environmental conscious and uses products with little or no packing, products made from natural ingredients and products that are made without causing pollution using green technology which are termed as green products. Consumers play a key role in promoting sustainability, as such their awareness towards environment has increased, and its safety is demanded forcing manufacturers to adopt green and sustainable practices. Global warming can be averted by buying eco-friendly products from clothing and cars to homes and vacations (Alex Williams, 2007).

The change in trend of advertising will also have impact on green consumers (K.S.Thakur, Sweta Gupta, 2012).

A survey by SC Johnson has identified a shift in consumer environmental actions and behavior between 1990 and 2011, whereby twice as many Americans recycle now as compared to 1990, there was a rise of 20% of consumers who know about environmental issues and problems and about 74% agree that a manufacturer can reduce environmental impact by making smart business decisions (GfK Roper and SC Johnson, 2011).

Consumers are segmented by Roper in 1996, as those who consume eco-friendly products to protect environment (Roper, 1996);

True Blue Greens- They hold strong environmental beliefs and have willingness to pay more and forgo convenience to have cleaner environment, whereas Greenback Greens are also willing to pay extra for environmentally preferable goods but are confined to themselves and have no impact on others. Sprouts also have concern for environment but don't spend more for green products. On contrary there are, Grouser- consumers who believe individuals cannot play a major role in protecting environment and feel it is government and corporations responsibility and Basic Browns are those who have least concern for environment.

Mostly women are in the forefront of green purchasing as they show motherly care towards environment and family's health. The primary motive for people to purchase green products is to improve personal health and reduce

environmental impact was secondary (Magali Delmas, 2012).

Some feel there is no such thing as green consumer as people buy energy efficient appliances to save money on power bills, while others may pay premium for natural products like herbal cosmetics as they are safer than conventional chemical based cosmetics.

A survey says only 7% of consumers are motivated by altruism (Sarah Lozanova, 2010) but the majority are motivated to buy green products because they see the product is better in some way for themselves, like health benefit, lower energy consumption, safety, etc. Whatever may be the reason going for green products is good for the environment and in a long run for over all self (better air quality). Some activities like turning off equipment when not in use can reduce energy usage by 25%, turning off computers at the end of the day can save additional 50%; walking for small distances; car sharing among same office goers; using solar heating devices; using cloth or paper bags instead of plastic bags; a plastic bag takes about 1000 years to decompose, etc. account for a better greener world.

Green consumers can avoid green washing by preferring goods with ECO-LABELS of ISO 14024 type I certification which assure the green products of its validity (ISO declarations). Eco-label is the mark inscribed on products which define the environmental aspects of consumer products that quantify pollution or energy consumption by way of index scores or units of measurement or reduction of harm to the environment. Product specific labels like Energy star, EU Eco label, Nordic Swan, German Blue Angel, Forest Stewardship Council (FSC), etc. and General labels include recyclable, eco-friendly, low energy, recycled content or biodegradable.

Green Initiatives by Indian Companies:

India is one of the largest emitter of greenhouse gasses as it accounts for about 4.5 per cent of global greenhouse gas emissions, the increased concern and responsibility for environment is making companies to green issues for strategic change resulting in technological and product innovations (Verneker, S. S., & Wadhwa. P, 2011). Green marketing should be an important ingredient of the marketing process for most of the companies, they can improve operational efficiency and performance through green marketing (K.S.Thakur, Sweta Gupta, 2012).

In this backdrop, it becomes crucial for local companies to take initiatives to go green.

TATA GROUP: The approach to climate change is three-

fold comprising of building awareness among stakeholders, reducing the environmental impact of manufacturing and developing cleaner and energy efficient vehicles. The group tries to avoid and mitigate negative impacts and enhance positive impacts on biodiversity. More dependence on renewable energy sources (20.76%) like solar and wind, achieving sustainability through energy efficient product design during product development stage, implementation of internal carbon pricing for driving investment in clean technologies in products and operation. Manufacturing plants have significant areas under Green Belt and there is a focused approach to biodiversity conservation.

RIL: It has installed solar photovoltaic modules across manufacturing units, its environmental management efforts are aimed at enhancing positive impacts and minimizing unavoidable negative impacts. Through technological interventions, operations are designed to deliver greater efficiencies thereby reducing the stress on the natural resources. They are using natural gas as a primary fuel for power generation. They do not use Ozone Depleting Substances (ODS) in our production processes. Effluents generated are treated to meet the most stringent state and central regulatory requirements, it has undertaken initiatives to ensure waste is converted to useful 'bio-manure' using vermin composting. They are investing in technologies to extract value from waste and create new products by reducing carbon foot prints and contributing to better environment.

DABUR: A consumer staples company, used 11per cent less raw water and increased the use of recycled water by 9per cent. Its main focus is on protection of endangered herbs, enhance livelihood of local farmers, it encourages and promotes use of solar energy by providing solar lamps to households, installing solar street lights, etc.

BIRLA GROUP: Life Cycle Assessments (LCAs) are made to better understand the impacts of carbon black product from manufacture to its end of use. LCA is a recognized approach that assesses all environmental impacts in a product life cycle: from raw material extraction through material processing, manufacture, distribution, use, repair and maintenance, to final disposal or recycling.

VEDANTA: The group has implemented technologies and systems to optimize water consumption, enhance energy productivity, safeguard biodiversity, maintain air quality, and recycle & up-cycle waste, met 11per cent of its water requirement through recycled water in FY17 compared with 6per cent in the previous year. Recycled 82% of high volume and low effect waste in sustainable applications

like fly ash, slag, red mud, gypsum, etc.

MAHINDRA GROUP: As per their sustainability report 2017-18, over the last 5 years, they saved enough energy to supply electricity to 14,525 Indian homes for a year. Over the last two years, their total water consumption has come down by almost 1,34,696 m³. Automotive Sector and Farm Equipment Sector recycled and reused 35% and 43% respectively of the total water consumed. Its flagship initiative, Hariyali has become a tree plantation movement. In FY 2017-18, over 1.5 million trees were planted under the project, and of this M&M alone planted 1,302,488 trees. They follow a zero-waste philosophy and manage waste at every stage - from prevention to minimisation, from reuse to recycling and from energy recovery and disposal.

Customers Attitude About Green Practices By Companies:

The present study is mainly focusing on the rising practices of green marketers and how they can impact environmental protection. Green Marketing helps in improving production and marketing practices and makes companies competitive in world markets.

FACTOR ANALYSIS is to understand Green Marketer practices:

Factor Analysis has been performed to represent the variables into smaller dimensions, to analyze interrelationship/correlation among the variables. It helps to identify the common underlying factor (dimension) and find smaller set of uncorrelated variables, these factors so derived may be treated as a new variable. 15 variables were considered for the study based on previous literature.

Reliability of factor analysis (Field,2005) depends on sample size, large sample (n>300) is suitable for conducting factor analysis and communalities after extraction should be above 0.5 and the average communalities should be greater than 0.6.

Table.5.15- Communalities

	Initial	Extraction
Purchase goods with environmental standards	1.000	.683
Use bio-degradable material	1.000	.684
Usage of recycled material	1.000	.729
Reduce consumption of fresh material	1.000	.660
Use of eco -friendly packaging	1.000	.694
Encourage recycle of packing material	1.000	.655
Use of decomposable packaging material	1.000	.572
Educate consumers about eco-friendly products	1.000	.747
Motivate consumers to use eco-friendly products	1.000	.799
Reduction and treatment of waste	1.000	.588

Extraction Method: Principal Component Analysis.

The communalities after extraction is fairly above 0.5 for all the variables, the average communality is 0.68 (sum of communalities after extraction/no. of variables) i.e. 6.80/10. Thus, the data reliable and the sample size of this study is 500 (n=500)

Principal Component Analysis method is used for extraction; it is used to identify smaller number of uncorrelated variables (principal components) and avoid multi-collinearity in a large dataset. The main objective of Principal Component Analysis is to explain maximum amount of variance with least principal components.

Correlation Matrix: Annexure I: The Correlation Matrix

shows the correlation between different variables and significance values of each correlation in the matrix.

Determinant= 0.398. Determinant of the matrix is vital for testing multicollinearity or singularity. Determinant >0.0001, is an acceptable value. Therefore, multicollinearity is not a problem of this data, this implies that the questions correlate fairly and none of the correlation coefficients are particularly large.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling adequacy is used to assess the adequacy of correlation matrices for factor analysis. The index for KMO measure is between 0 and 1.

Table.5.16- KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.518
Approx. Chi-Square		455.525
Bartlett's Test of Sphericity	df	45
	Sig.	.000

The KMO measure of sampling adequacy is 0.518 ($KMO > 0.5$), thus KMO value is adequate (Kaiser, 1974).

Bartlett's Test of Sphericity tests the null hypotheses; that the correlation matrix is an identity matrix, which implies all the variables are uncorrelated. The significant value is 0.000 ($p < 0.05$) thus, null hypotheses is rejected which implies the correlation matrix is not an identity matrix and some relationship exists between variables in the dataset suitable for factor analysis.

Factor Extraction: This helps to identify the factors within which all variables can fit. The factors with Eigenvalues over 1 are selected (by default Kaiser's recommendation of eigen values over 1). Eigen value is a set of values of a parameter for which a differential equation has a non-zero solution (an eigenfunction) under given conditions (Definition), the eigen value of each variable denote the variance explained by that linear component.

Total Variance Explained table describes the eigen values related to each variable before and after extraction and after rotation. Before extraction there are 10 variables and after extraction 5 factors are considered with eigen value over 1. SPSS presents eigen value in terms of percentage of variance explained; Factor 1 explains 19.011% of total variance and 5 factors together explain 68% of total variance.

Extraction Sum of Squared Loadings in the table shows the same values of eigen values and % of variance as before extraction but the values of the discarded factors is ignored.

Rotation Sums of Squared Loading shows the eigen values of factors after rotation, it optimizes the factor structure and the relative importance of five factors is equalized. Before rotation factor1 has 19% of variance and after rotation it shows 16% of variance and so on for remaining factors.

Table.5.18 - Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.901	19.011	19.011	1.901	19.011	19.011	1.667	16.665	16.665
2	1.411	14.112	33.123	1.411	14.112	33.123	1.390	13.902	30.567
3	1.309	13.088	46.212	1.309	13.088	46.212	1.331	13.306	43.873
4	1.105	11.052	57.264	1.105	11.052	57.264	1.214	12.136	56.009
5	1.084	10.839	68.103	1.084	10.839	68.103	1.209	12.094	68.103
6	.795	7.953	76.056						
7	.754	7.539	83.595						
8	.657	6.574	90.169						
9	.529	5.291	95.460						
10	.454	4.540	100.000						

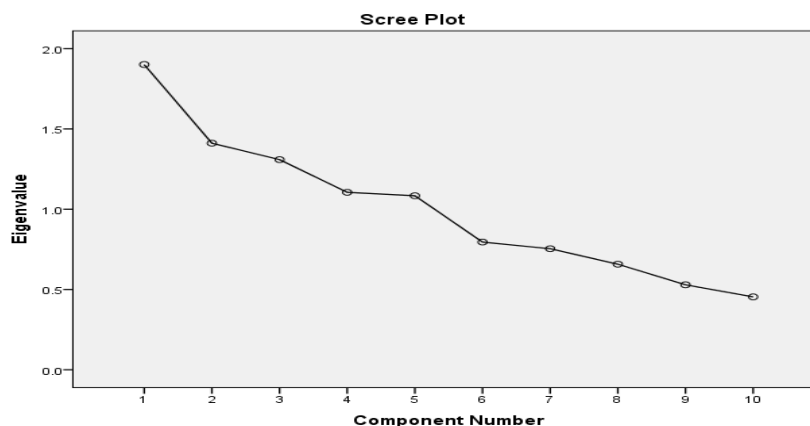
Extraction Method: Principal Component Analysis.

Therefore, 5 factors are considered under the principal component analysis, the same can be confirmed with the scree plot.

Scree Plot: The scree plot shows the eigen values associated with each factor in descending order for all variables, the scree plot helps to confirm the factors mentioned during extraction.

The below scree plot shows the inflexion on the curve, where a drop can be found at factor5 and tails off to reach a steady point.

Graph.5.8 - Scree Plot.



Both extraction method and scree plot states the same number of factors, thus 5 factors is considered for the dataset.

Rotated Component Matrix: It shows the factors with- in

which all related variables fit i.e. the loadings of different variables into each factor. The rotated component matrix shows the correlation between each variable and the estimated component.

Table.5.19 - Rotated Component Matrix ^a

	Component				
	1	2	3	4	5
Purchase goods with environmental standards	.825				
Use bio-degradable material	.666				
Usage of recycled material	.554			.528	
Reduce consumption of fresh material		.830			
Usage of eco-friendly packing		.731			
Encourage recycle of packing material			.675		M,
Use of decomposable packaging material			-.659		
Educate consumers about eco-friendly products				.807	
Motivate consumers to use eco-friendly products					.877
Reduction and treatment of waste			.595		.605

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Thus, the new factors can be stated as;

Factor1: Companies should purchase goods with environmental norms

Factor2: Usage of biodegradable material in production process.

Factor3: More focus on recycled material use.

Factor4: Use biodegradable and recyclable packing.

Factor5: Waste treatment and management.

Thus, an inter-relationship between identified factors can be observed from the study, the green marketing comprises of green production process, eco-friendly material use, and waste minimization.

Results and Discussion:

The study was made to understand the prospects of green marketing practices and view point of customer towards them; also to study the awareness levels of consumers towards green products, as this is the starting point towards sustainable environment by consumers.

The study reports that the consumer awareness towards green products is high and have a strong positive attitude towards them but the attitude is not transforming into purchase behavior. Even though consumers buy green products to be eco-friendly and better quality of life, other factors like price and quality of products are restraining towards green consumerism.

The study examined consumer's attitude towards green marketing practices by companies, many consumers are of opinion that companies can be sustainable by following 3R's reduce, recycle and reuse; and implementation of green practices in regular activities is highly essential for promoting sustainability. The customer also feels that companies can influence customers and encourage them to be sustainable in consumption of goods and services.

The customers feel that companies can be sustainable and show their eco-friendly nature by implementing green practices in product design, warehouse and stores, by implementing better transportation modes, using energy efficient equipment and recycling material in both production and distribution and recycling of packing material, which reduces pollution to a great extent.

Factor Analysis was performed to study the customer attitude towards green marketing practices by companies; out of the 10 variables identified five factors were extracted, which were classified into three heads; sustainable product design, packing material and waste minimization.

CONCLUSION:

The consumers show some awareness towards green practices by companies, they consider companies can play an important role in promoting sustainability. They can be eco-friendly by improving their operations like product design, transportation and packing and waste management activities. A green manufacturer can be energy efficient by offering energy efficient products and green sourcing and logistics of materials. In fact, they can influence supplier and consumer to be eco-friendly by changing products and consumption respectively.

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