





INTERNATIONAL JOURNAL OF BUSINESS, MANAGEMENT AND ALLIED SCIENCES (IJBMAS)

A Peer Reviewed International Research Journal

"EFFECT OF GREEN MARKETING STRATEGIES ON CONSUMER BEHAVIOR: SPECIAL REFERENCE TO VIJAYAWADA"

M.V.A.L. Narasimha Rao¹, Divya Pandey², K Sandeep Kumar³

¹Asst. Prof, Dept. of Management, K L University, Vaddeswaram, Guntur (AP), India. ²Management Scholar, Dept. of Management, K L University, Vaddeswaram, Guntur (AP),India.

³Management Scholar, Dept. of Management, K L University, Vaddeswaram, Guntur (AP),India.



ABSTRACT

With the surfacing of a large number of embryonic problems all over the world, there ascends a need to ambit and safeguard the earth's natural milieu and predetermined possessions. Both the marketers and the consumers are these days concentrating on green products and services. Corporations are adopting green promotion and are fabricating green products that have fewer detrimental possessions on the environment, then the unadventurous products. Consumers are flattering more and more cognizant of the conservational problems and are vigorously trying to condense their bearing on the environment by procuring green products and poignant towards a greener regime.

This study also probes consumer principles and attitude on (environment) milieu protection and their purchasing behaviour of ecological products. This research study tries to govern whether the consumer purchasing decisions in Vijayawada are prejudiced by the green marketing practices commenced by the corporations. A sample of 200 respondents was carefully chosen in Vijayawada and a questionnaire was cast-off to assemble the primary data. Cross Tabulation & Mean Score was opted with the help of SPSS version 20.0 for scrutinising the primary data. The fallouts of the study acme that the consumer procuring decisions in Vijayawada are prejudiced by the green marketing practices commenced by the companies.

Key Words: -Green Products, Green Consumerism, Sustainability, Consumer Behaviour

Introduction

Through the swift hop of expansion & mechanization, the ecosphere is mounting and fetching much forward-thinking and this era is called the era of globalization where biosphere is changing and so does the customers. Laterally with spread of the whole shebang around us we do are alluring some



stern conservationalsnags. The crucialcombat for companies and customers these days is to sanctuary and shield the earth's natural atmosphere and limited resources. Production and consumption of goods all over the world has led to the advent of a large numeral of environmental problems. Customers are unconventional than before and have accumulative cognizance on the various environmental problems that has brought a gigantic change in perception of consumer in the route of conservancy of environment that is tainted due to us humans which commanded them to think and fetch upon a notion that aids in eco-friendly protection. This surfaced notion is named "Green Marketing". Also, labelled as "Environmental Marketing" or "Ecological Marketing".

Customer's attitudes are fluctuating in the direction of the situation to reassure modernization for preservation and the welfares from this cause of invention are firm to endure our up-to-date cohort. Nevertheless, this change in consumer intuition and attitude towards the eco-friendly shield point of view has been experiential by the organisations and they are trying to shift the effort of consumers that would profit them as well and trying to know the budding of emergent trend and market.

According to American Marketing Association, "Green Marketing is marketing of the products that are presumed to be environmentally safe."

With this organizations as well as consumers do want to go with the slogans and work on it like "GO GREEN", "LETS GO GREEN TO GET OUR GLOBE CLEAN".

Along with going green, it all depend upon the consumer buying behaviour of the consumers, how they will perceive the green brand, their marketing strategies as well as their consumption pattern for that we need to study the consumer behaviour. **According to Blackwell et al (2006)** Consumer buying behavioural study is a complex area of study and highly dynamic which cannot be defined easily. Hence, the concept of consumer behaviour has been defined in different perspectives by different thinkers.

Evolution of Green Marketing: -

Green marketing term was first discussed in a seminar on 'Ecological Marketing' organized by American Marketing Association (AMA) in 1975. The term green marketing has become popular concept of research and practice across the world in late 1980s and early 1990s. The first wave of green marketing has come up in1980s. The tangible milestone for the first wave of green marketing came in the form of published books titled 'Green Marketing' authored by Ken Pattie (1992) in the United Kingdom and by Jacquelyn Ottman (1993) in the United States of America.

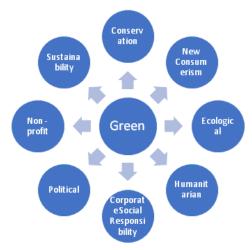


Figure 1: The Many Meanings of Green

Source: Peattie (1995), Environmental Marketing Management, p.26

Need & Scope of Green Marketing: Problems like global warming and weakening of ozone umbrella are the main perils for vigorous survival. Every person, rich or poor, would be involved in value life with full of well-being& so would the corporate class. Financial gain and fiscal profit are the main aims of any corporate business. But harm to environment and its cost for justifiable business across

the globe is comprehended now, though late. This sense is building corporate citizenship in the business class. So, green marketing by the business class is still in the self-centred anthological outlook of long term justifiable countries are catching with the need of green marketing from the developed countries but still there is a wide gap between their empathetic& implementation.

Advantages of Green Marketing:

- It guarantees continued long-term development along with productivity.
- It helps corporations market their products and services charge the atmospheric aspects in attention.
- It helps in retrieving the new markets and liking viable gain.
- Most of the employees also feel delighted and accountable to be working for an ecologically accountable company.

Literature Review

Green Marketing: According to M. J. Polonsky and P. J. Rosenberger (2011), environmental marketing, more popularly known as green marketing or sustainable marketing is an effort by a company to design, promote, price and distribute products in a manner which promotes environmental protection. Green marketing has been defined by them as, "All actionsintended to produce and enable any interactionsplanned to satisfy human needs or wants such that the fulfilment of these needs and wants arises, with slightdamaging impact on the natural environment". Green marketing today has become one of the most important areas of marketing research due to the increasing pressure on firms to adopt eco-friendly products, services and manufacturing and business processes and due to the increasing media exposure. Green Marketing has been adopted with respect to a wide range of organizational activities, such as product modification, changes to the production process, packaging changes and more (Polonsky,2007)."

Green Products: - Green products are those that have less of an impact on the environment or are less disadvantageous to human health. Green Products are also labelled as "earth friendly", "eco-friendly", "biodegradable" and many other buzzwords that make you an impact in the outlook of the consumers.

Characteristics of Green Products:

- Products those are originally grown, with natural ingredients, non-toxic chemicals.
- Products those are recyclable, reusable and biodegradable. i.e. eco-friendly
- Energy efficient, durable and often have low maintenance requirements.

Green consumer: - According to Elkington (1994: 93) defines "Green consumer as one who avoids products that are likely to endanger the health of the consumer or others; cause significant damage to the environment during manufacture, use or disposal; consume a disproportionate amount of energy; cause unnecessary waste; use materials derived from threatened species or environments; involve unnecessary use of, or cruelty to animals; adversely affect other countries.

Green branding: - Green branding and imaging were important when distinguishing products and services based on quality features (Hur, Yoo, &Hur, 2010). Brand images included symbolic meanings with the attributes of a brand that could help customers develop a mental picture of the brand and link it to offers (Chen, 2010). Eco labels: - Another vehicle that has been used with increasing frequency in recent years to convey environmental information to consumers is "eco-labelling." Eco-labelling programs are typically voluntary, third-party expert assessments of the environmental impacts of products.

Green positioning: - Sharma and Singh (2013), along with Schaper (2010), suggested that green positioning was an essential factor in the success of green branding strategies. By utilizing a green positioning strategy, a company could build functional brand attributes that built brand associations by delivering information on environmentally sound product attributes.

Green ethical consumerism: - Refers to buyer behaviour that reflects a concern with the problems that arise from unethical and unjust global trades, such as child and low-paid labour, infringement of



human rights, animal testing, labour union suppressions, inequalities in trading relations with the Third World and pollution of the environment. Ethical consumerism (alternatively called ethical consumption, ethical purchasing, moral purchasing, ethical sourcing, ethical shopping or green consumerism.

Sustainable Development: FAO (1989) defines Sustainable Development is management & conservation of the natural resource & the orientation of technological & institutional change in such a manner as to ensure the attainment & continued satisfaction of human needs for present & future generation.

The theoretical framework of this consists of all the consumer behaviour and buying behaviour theories relating to the investigation that how the buying pattern of consumers are affected due to the marketing strategies. The consumer behaviour theories cover two broad areas of consumer perception and collective consciousness (Cohen, n.d.) wherein the consumer perception theory suggests that consumers understand how perception of a product or service influences their behaviour

- Perception relates to the consumer's ability to make some sense of reality from external sensory stimuli (Rosenzweig&Gilovich, 2011).
- Branding involves imposing an identifying feature on products or services so that they
 w3would be easy to identify by the public (Kher et al., 2010).
- Positioning occurs when marketers try to build up their brand. Positioning involves actively creating images that are both appealing to and recognizable by certain target groups.
- Repositioning relates to altering the image to appeal to a larger market of consumers to help influence a larger target market, whereas dispositioning relates to the practice of trying to devalue a substitute (Timofte, 2013).
- Value relates to the customer's perception that a product's benefits outweigh its cost. These benefits can either qualitative or quantitative.
- Quality relates to value, while taking into account measuring goods and services against the competition (Timofte, 2013).
- Buyer's remorse relates to a feeling of regret that occurs after one has made a purchase and, then, realizesthat one has missed a better opportunity to buy a product or service (McKnight, Paugh,McKnight, & Parker, 2010).

Secondly, In the cognitive dissonance theory, cognition (e.g., attitudes, desire, intention) is dissonant, or conflicted, when consumers are unable to keep away from a situation, as well as from information, that might add dissonance (Sahgal&Elfering, 2011). Similarly, cognitive dissonances that occur after a purchase is post purchase dissonances (Bose &Sarker, 2012). As well in the theories of collective consciousness reflects the shared beliefs and attitudes held within a society Researchers such as Dekker, Hummerdal, and Smith (2010); Filippakou and Tapper (2010); and Jung (2012).

Thirdly, the buying behaviour theories includes generic buying behaviour of the buyer, cultural theory of buying behaviour, and the environmental theory of buying behaviour. These three theories are explaining how consumers tend to buy products and services (Lehtinen, 2012).

- The generic theory of buying behaviour highlights the basic procedures followed by consumers when making a purchase. The customer would recognize a need to make a purchase and start researching potential products and pricing (Hyllegard, Yan, Olga, &Ottman).
- While making a purchase, proponents of the cultural theory of buying behaviour highlights
 the cultural influences shown to affect the buyer's behaviour(Penn, n.d.). These values and
 beliefs lead to certain purchases (Yuan, Song, & Kim, 2011).
- And lastly the environmental theory of buying behaviour suggests that purchasers would buy different items based of different circumstances and variations in customer knowledge (Mazar and Zhong ,2010)



Again, talking on the grounds of the consumer attitude -behaviour link where the behaviour of consumers are linked to the various phenomenon.

Consumer Attitude towards the Environment: Green marketing hangs on the consumer's attitude towards the environment. If there is no solid call for such a shift in consumer attitude, businesses will not put in the further effort to move in the direction of introducing green products and services.

Perceived Seriousness of Environmental Problems: According to (Dunlap, 1994), most of these studies intense on shaping the subjects view of the problem, its seriousness and how is differs from the numerous cultures. Green marketing is done by businesses to increase consciousness levels and to show that people anxious about the atmosphere can do something to solve some of the issues.

Perceived Environmental Responsibility: According to a study by (Lai, 2000), the citizens of Hong Kong were found to be much more literate when it comes to issues regarding the environmental problems over the past few years. This clearly shows that people living in Hong Kong are more accountable when it comes to defending their environment. The study also resolute that even though they were more aware of the problems their sense of individual duty towards taking corrective measures was expressively weak.

Consumer Behaviour towards Eco Labelling: One important instrument of green marketing involves the promotion of eco labels on environmentally friendly products (D Souza et al., 2006). Eco labelling is an effective measure which helps in linking the gap between sellers and buyers by providing information on two aspects: Information functions presenting intangible quality measures including product quality and Value function which presents the recyclables and CSR related brand prestige (Sammer and Wustenhagen 2006).Rashid (2009) has identified that when consumers are aware of eco labels they react more positively towards knowledge of green marketing and the purchase of green products.

Consumer Behaviour towards Environmental Advertisements: The main aim of presenting green advertisements is to present to the consumer that the company is eco centric while at the same time making an effort to influence the purchase behaviour of the consumers by presenting them with choices of availability of products which do not cause harm to the environment and directing their attention to positive consequences of purchase behaviour.

Consumer behaviour towards pro-environmental marketing: The formation of attitude and action is found to be dependents on the development of values (Rokeach, 1973) however the impact these may have on behaviour in a real-life condition. Thoughts (cognitive function) and feelings (affective function) are directly impacted by the attitude people show hence impacting their overall perception of purchase related behaviour (Hoyer and MacInnis, 2004). This identifies with the idea that there is a need to change the overall attitude consumers have towards a product thereby impacting their decision making.

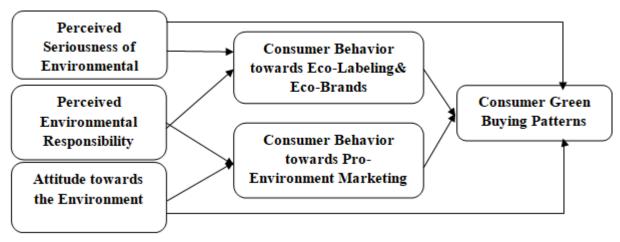


Figure 2. Theoretical outline of Green Marketing



Deficiency of communication is considered to be a key cause for commercial let downs of environmentally sustainable products mainly because communication is a key step in the advancement of a positive behaviour towards consumer's consumption patterns.

Research Methodology: "Methodology" is the methods that are used for collection of the data. The method used is structured questionnaire and a five-point balanced Likert scale for measuring consumer awareness and attitude towards green marketing and green branding. Primary data was collected from respondents of Vijayawada designed for a sample of 200 respondents by using the convenience sampling like mall intercepts, Big bazaar etc. representing both the genders, different age groups, education level, and monthly income. The data collected from the respondents are coded, tabulated and analysed into reasonable statements using SPSS 20.0 Secondary data was collected from the accessible literature, journals and web search wherever obligatory. The Questionnaire method was chosen for its elasticity, rapidity and cost benefits.

Research Problem: The problem founded here in this research is that how much consumers are:

- The recent green marketing wave is based on a better, more consistent and focused green market exploration (or any at all).
- How consumers distinguish the "eco-friendly products" and they consumption pattern of the study has to be studied.

Objectives of the Research

- To know the concept of green marketing, identify the importance and need of green marketing
- To understand consumer awareness on the availability of environmentally friendly products, consumer beliefs and attitudes on green products &understand that whether the influence of marketing efforts in Vijayawada are influenced by the green marketing practices undertaken by the companies.

Data Analysis & Interpretation

Table1. Demographic Profile of Respondents with mean scores (N=200)

Age	%	Gender		Occupation	%	
		Male	Female			
15-25 yrs.	36	123	77	Job (Private Sector)	30.5	
25-35 yrs.	32	(61.5)	(38.5)	Government Employee	15.5	
35-45 yrs.	21.5			Business	24.0	
45-55 yrs.	5.5			Self-Employed	12.5	
55 & above	5.0			Student	6.5	
				None	11.0	
Total	100			Total	100	
Monthly Income	%			Qualification	%	
Below 30,000	25.0			SSC	2.0	
30,000-50,000	31.0			Intermediate	11.0	
50,000-75,000	10.5			Under-Graduate	35.5	
75.000-1,00,000	7.5			Post-Graduate	43.0	
Above 1,00,000	9.0			PHD	6.5	
None	17.0			Others	2.0	
Total	100			Total	100	

Table2. The computed mean and percentage of respondents

S.N.	Environmental Beliefs		D	N	A	SA	Mean
		0/0	%	0/0	0/0	0/0	score
1	I have knowledge about Green Marketing & aware	3.0	4.5	25.0	54.5	13.0	3.700
	of green products.						
2	For Green features, I am willing to pay more or a	3.5	8.5	24.5	54.0	9.5	3.575
	premium price than non-green products.						
3	I became aware of green products through	3.5	9.0	25.0	52.5	10.0	3.565
<u> </u>	advertisements.						
4	I pay attention to the eco-friendly advertising.	1.0	4.5	21.5	47.5	25.5	3.920
5	I worry about environmental state around the world	3.0	1.0	10.0	47.5	38.5	4.175
	and concerned about its protection.						
	I consider my every purchase decision as a step	2.5	5.0	29.5	49.0	14.0	3.670
	towards environmental awareness & conservation.						
	My purchase decisions are influenced by green	3.5	6.5	38.0	45.0	7.0	3.455
	marketing strategies.						
	Green Marketing is more effective than regular	1.0	5.5	21.0	55.5	17.0	3.820
	marketing.						
	It is important to me that product I use do not harm	2.5	5.0	29.5	49.0	14.0	4.005
	the environment.						
	I appreciate the package/design of eco-friendly	1.5	2.0	18.0	53.0	25.5	3.990
	product.						
11	I believe that the products should be of easy	3.0	-	9.5	48.5	39.0	4.205
	degradable disposal.						
12	I believe use of bio-chemical products/processes is	2.0	4.0	15.5	43.0	35.5	4.060
	leading to global warming effects.						
	I am concerned about not wasting natural resources	1.5	1.0	10.5	50.0	37.0	4.200
	of our planet.						
	It is the responsibility of corporates to develop	1.5	2.0	14.5	52.5	29.5	4.065
	certain strategies that is environment friendly.						
15	Government should take initiative in making	1.5	1.5	8.5	46.0	42.5	4.265
	companies to go green. (Corporate Ecological						
	Responsibility).						
16	I believe the consumers are the ultimate decision	1.0	1.0	15.0	53.0	30.0	4.100
	makers in creating demand for existing green						
	products.						
17	I believe digital marketing as green marketing	2.0	4.5	20.0	56.0	17.5	3.825
	initiative.						
18	I recommended everyone to use green products or	1.5	2.0	10.0	52.5	34.0	4.155
İ	services.						

(SD= Strongly Disagree, D= Disagree, N= Neutral, D=Disagree, SA= Strongly Agree)



Findings:

- Majority (60 percent) consumers expressed that they are aware of the green products. This speaks about consumer's awareness of the green brands.
- Consumers countered positively about buying brands which are less destructive to environment. However, the anticipation of the customer is not away from the activeworking of green brands as that of non-green products.
- Marketing plays a vital role in fetching consumer consciousness. As the reply shows
 consumers would be more likely to choose ecologically friendly brands but still unable to
 recall green products/brands. This speaks about the gap in marketing effort put by the green
 marketers in fetching consumer alertness.
- Survey reveals that the green products presentation was pointedly affected by ecological beliefs. Further it is expressed by as large as more percent of plaintiffs are likely to trust well known products and judge green products basing on previous practice.
- Here, the variable is independent so due that, item analysis has to be done where their diverse variables has been taken trying to prove connection effect on buying behaviour of consumers.
- However, moreover according to the test on relationship of age, qualification and income, moreover it is observed in this survey that any of the following doesn't have much dominance on buying behaviour for green products.
- Majority (54 %) of the respondents are willing to a premium price for the green products.
- Majority (55%) of respondents agreed that green marketing is more effective than regular marketing.
- But however, respondents are neutral about purchase decisions influenced by green products.
- Majority (47%) of people pay attention towards eco-friendly advertisements.
- 51 % of respondents believed that use of such products to be done which don't harm the
- Majority of respondents agreed on recommending green brands & products to others.
- However, the study shows that the green strategies do not have much influence on the buying behaviour.

Conclusion

Green marketing is still in its underpinning and a lot of exploration is to be done on green marketing to wholly discover it's latent. There are some suggestions that an organisation should implement for serving encounters of green marketing and successful manipulation of green marketing. Consumer needs to be more cognizant about the merits of green products. This study checks the presence of an environmental value-action gap, a gap between consumers' beliefs and behaviours over being green. This paper has emphasized various aspects of consumer behaviour and shown that consumer fondness for greener goods could be inclined by marketing. The consumers' needs to be educated and made conscious of the environmental terrorizations. It should be made sure that the consumers are alert of &worried about the matters that your product shots to address. Green marketing undertaking& green publicity is a moralphasein the direction of it. Consumers must be inspired to shift brands or even pay a premium for the greener substitute. Make sure that consumer feels that they can make a difference. This is called "empowerment" and due to this main reason consumers will buy greener products. Further steps should be taken to govern untruthful promises and claim by the marketer to maintain legitimacy and trustworthiness green products. For effective & efficient enactment of this concept of green marketing, the factor that plays a major role is the government. Unless the government creates precise and rigorous laws and exploits its expert witness to implement them, the notion cannot be theorized. If the consumer, the organisation and the government work in accord towards the common goal of minimising the disadvantageous



environmental impact of their activities, then they can assuredly save this environment and make this world a better place to live in. It is not plentiful for a company to go green its products, consumers expect the products at concise approachable price and also to help reduce the environmental impression in their own lives too. Companies can grasp a higher price if they can boost the product's performance and offer extra product value by providing better visual appeal, better function, enhanced performance, better design better use or better taste. Thus, companies must try to locate these chances and must take advantage of them. Green marketing is very little on the agenda of most business. Therefore, effective green marketing embattled at the right spectators will make a difference.

References

- [1]. Sudha, R., 2012. Green Marketing in India. Namex International Journal of Management Research, 2(1), pp.103-110.
- [2]. Mishra, P. and Sharma, P., 2010. Green marketing in India: Emerging opportunities and challenges. Journal of Engineering, Science and Management Education, 3(1), pp.9-14.
- [3]. Bhattacharya, S., 2011. Consumer attitude towards green marketing in India. UP Journal of Marketing Management, 10(4), p.62.
- [4]. Manaktola, K. and Jauhari, V., 2007. Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. International Journal of Contemporary Hospitality Management, 19(5), pp.364-377.
- [5]. Jain, S.K. and Kaur, G., 2004. Green Marketing: An Indian Perspective. Decision (0304-0941), 31(2).
- [6]. Cherian, J. and Jacob, J., 2012. Green marketing: A study of consumers' attitude towards environment friendly products. Asian Social Science, 8(12), p.117.
- [7]. Ramakrishna, H., 2011. Green Marketing in India: Some Eco-Issues. Indian Journal of Marketing, 42(11), pp.5-15.
- [8]. Rahbar, E. and Abdul Wahid, N., 2011. Investigation of green marketing tools' effect on consumers' purchase behaviour. Business strategy series,12(2), pp.73-83.
- [9]. Dr.Shruti P Maheshwari,2014 AIMA Journal of Management & Research, February 2014, Volume 8 Issue 1/4, ISSN 0974 497
- [10]. SyedaShazia Bukhari ,2011. Green Marketing and its impact on consumer behaviour. European Journal of Business and Management, ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol 3, No.4,
- [11]. Rouf Ahmad Rather and Dr. R Rajendran ,2014. A Study on Consumer Awareness of green products and its Impact on Green Buying Behaviour International Journal of Research (IJR) Vol-1, Issue-8 September 2014 ISSN 2348-684
- [12]. Rahul Argha Sen, Month: April 2014 September 2014. A Study of the Impact of Green Marketing Practices on Consumer Buying Behaviour in Kolkata International, Journal of Management and Commerce Innovations ISSN 2348-7585 (Online) Vol. 2, Issue 1, pp: (61-70)
- [13]. Abhimanyu Verma, &RitikaTanwa, February 2014. Green Marketing: The Revolutionary Road, International Journal of Business and Management Invention ISSN (Online): 2319 8028, ISSN (Print): 2319 801X www.ijbmi.org || Volume 3 || Issue 2 || || PP.01-06
- [14]. Bhimrao M Ghodeswar& Prashant Kumar July-December,2014. A Study of Green Marketing Practices in Indian Companies. International Journal of Applied Management Sciences and Engineering, 1(2), 201451-69,
- [15]. Dr. R. P. Sharma, Ms. Namrata Maheshwari, 2014. A Study on The Customer's Awareness and Perception Level Towards Green Cars. International journal of technology enhancements and emerging engineering research, Vol 2, issue 5 ISSN 2347-4289
- [16]. Jacob Cherian & Jolly Jacob, 2012. Green Marketing: A Study of Consumers' Attitude towards



- [17]. Environment Friendly Products. Asian Social Science; Vol. 8, No. 12; 2012 ISSN 1911-2017 E-ISSN 1911-2025 Published by Canadian Centre of Science and Education
- [18]. Yasmin begum r. nadaf1 & Shams Uddin m. Nadaf, May 20142014. Green marketing: challenges and strategies for Indian companies in 21st century. IMPACT: International Journal of Research in Business Management (IMPACT: IJRBM) ISSN(E): 2321-886X; ISSN(P): 2347-4572 Vol. 2, Issue 5, Page 91-104
- [19]. Hemantha Y,2012. Green marketing-An exploratory research on consumers in Bangalore city. National monthly refereed journal of research in commerce & management Volume No.1, Issue no.9, ISSN 2277-1166
- [20]. Prof. Jaya Tiwari,2014. Green marketing in India: An Overview. IOSR Journal of Business and Management (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN: 2319-7668 PP 33-40
- [21]. Anirban Sarkar, 2012. Green marketing and sustainable development- challenges and opportunities. IRJC International Journal of Marketing, Financial Services & Management Research Vol.1 Issue 9, September 2012, ISSN 2277 3622 PP 120-134.