

**Analysis of Factors Influencing Consumer Preferences for Green  
Cosmetic and Food Products: A study in and around Kolkata  
(West Bengal, India)**

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RANCHI**

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# Declaration of Authorship

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I declare that this thesis entitled “Analysis of Factors Influencing Consumer Preferences for Green Cosmetic and Food Products: A study in and around Kolkata(West Bengal,India)” submitted by me in fulfillment of the requirements for the award of the degree of Doctor of Philosophy of the ICFAI University Jharkhand, Ranchi is my own work. It contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

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# Acknowledgments

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I am particularly grateful to all my relatives, specially my parents, brothers and wife. I would not have been able to do this without their constant encouragement and support.

Date:

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# Thesis Completion Certificate

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**This is to certify that the thesis on “Analysis of Factors Influencing Consumer Preferences for Green Cosmetic and Food Products: A study in and around Kolkata(West Bengal,India)” by Mr. Sudipta Majumdar, in Partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy is an original work carried out by him under our joint guidance. It is certified that the work has not been submitted anywhere else for the award of any other diploma or degree of this or any other University.**

**(Dr. Sumanta Basu)**

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**(Dr. Sukanta Chandra Swain)**

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## **1. Executive Summary**

Since the concept of environmental consciousness has become a necessity to save the mankind, promoting consumption of green products is the need of hour, owing to the fact that green products are environment friendly or sustainable products and are organic in nature. It is evident that the feeling for the health of environment and consumers is being resulted in the emergence of the usage of green products at the cost of traditional or conventional products. However, the magnitude of usage of green products is much behind the ideal one to safeguard the consumers and environment at large. Thus stretching the incidence and depth of usage of green products is a must. In order to achieve the pious objective, it is necessary to know the factors which insist the users to go for the green products so that the same can be ventilated to the masses for extending the consumer base for the green products.

On this backdrop, this study has been undertaken to collect responses from the green product users, specifically in cosmetic and food category in and around Kolkata to find out the significant factors, through factor analysis, which contribute for the popularity of the Green products. The study also tries to find out the impact of different psychographic variables with respect to popularity of green products. After identifying the factors, prioritization of the factors on the basis of the magnitude of their influences on consumers' preferences was undertaken with respect to both Cosmetic and Food products.

The study also tries to establish whether there is any significant impact of demographic profile of the consumers on their preference towards green cosmetic and food products. Demographic profiles considered in this study are; age-group, gender, education, occupation, income and number of members in the household. In fact, the objective is to map demographic profile of

consumers (on the above mentioned facets) with their preference by way of applying one-way ANOVA for the data obtained. The findings so obtained will certainly lend a hand to contrive for stretching the incidence and depth of usage of green cosmetic and food products focusing on influential facets of demographic profile of the consumers.

The findings so obtained will definitely help in augmenting the usage of green products and hence contribute to safeguard the health of consumers and environment at large.

**Keywords:** Green Cosmetic products, Green Food products, Factors, Psychographic variables, Demographic variables, Kolkata.

## **2. Introduction**

### **2.1 Overview**

From the last decade onwards people became more concerned about their health as a result of which they are using more of green products. Green products can be stated as having less of an impact on the environment and are less damaging to human health than conventional products, and hence are also called as sustainable or environment friendly products. Green products are produced from recycled components,(i.e., the decomposition of residues of food and food products instead of chemical fertilizers) are manufactured in a more energy-conservative way, or are supplied to the market with more environmental friendly way. So, people are becoming more aware about the concept of environment and health consciousness. This reduces the usage of conventional products. Conventional products are those manufactured in the conventional way. They are not being produced keeping environmental considerations in mind. In today's competitive scenario green products are competing with the conventional or regular products (products produced by conventional methods).But, this usage pattern is not applicable to all parts of the society. Knowledge and awareness about the green products play a very vital role in enabling the customers to use them. But, this awareness and knowledge do not exist holistically throughout all the spheres of the society, thus restricting the usage of the green products. From the last decade onwards, we have started using the green products and it will take time before it penetrates to all parts of the society. In comparison to the conventional products, green products are generally biodegradable, non-toxic in nature and more environment friendly. In their book "The Green Consumer", John Elkington, Julia Hailes, and John Makower discussed several characteristics that a product must have to be regarded as a "green" product. They contended that a green product should not endanger the health of people or animals, damage the environment at

any stage of its life, including manufacture, use, and disposal, consume a disproportionate amount of energy and other resources during manufacture, use, or disposal, cause unnecessary waste, either as a result of excessive packaging or a short useful life, involve the unnecessary use of or cruelty to animals and use materials derived from threatened species or environments.

The concept of green products is becoming more popular with the aspect of cosmetic and food items. Since people are becoming more health conscious, they are giving more importance to the consumable and daily usable products. People started using more green products to minimize their health risk. But, here also like normal green products knowledge and awareness is not there in all parts of the society. So, these are more being used by the more knowledgeable parts of the society. Also, organizations and government are not fully capable of promoting the concept of “Green”. But the best part is the concept has started and it is penetrating to the society at a very fast pace. If all the factors which contribute to the popularity of green cosmetic and food items, such as price of the product, its quality, customer’s perception about the products, awareness about them, are being handled carefully by the government and the organizations, then green cosmetic and food items will become more popular in the society.

The concept of green products, specifically green cosmetic and food items can be popular only if organizations understand the concept of green marketing. But to define green marketing is not an easy task. While green marketing came into prominence in the late 1980s and early 1990s, it was first discussed much earlier. The American Marketing Association (AMA) held the first workshop on "Ecological Marketing" in 1975. The proceedings of this workshop resulted in one of the first books on green marketing entitled "Ecological Marketing".

*"Green or Environmental Marketing consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs*

*and wants occur, with minimal detrimental impact on the natural environment.*"(Chinnici et. Al. , 2002)

According to Pride and Ferrell (1993) Green marketing, also alternatively known as environmental marketing and sustainable marketing, referring to an organization's efforts at designing, promoting, pricing and distributing products that will not harm the environment. Polonsky (1994) defines green marketing as the activities designed to generate and facilitate any exchanges occurred to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal negative impact on the natural environment(Chang , 2011).

Green marketing is a business practice that takes into account customer concerns about the natural environment. Green marketing campaigns highlight the different environmental protection characteristics for a company's products and services. The green marketing strategies include reduced waste in packaging (Elkington and Makower 1988; Wasik 1996), increased energy efficiency of the product in use Metcalf (2008) and Sue Wing (2008), reduced use of chemicals in farming, or decreased release of toxic emissions and other pollutants in production (Sumathi & Hung, 2006). Organizations have responded to the growing customer demand for environment-friendly products in several ways, thus adopting the various components of green marketing. These include: 1) promoting the environmental characteristics of products; 2) introducing new products for the consumers concerned with energy efficiency, waste reduction, sustainability, and climate control, and 3) redesigning existing products to satisfy these same consumers.



## 2.2 Green Marketing

Environmentally responsible or "green" marketing refers to the satisfaction of consumer needs, wants, and desires in conjunction with the preservation and conservation of the natural environment. Considered an oxymoron by many environmentalists (because it still promotes consumption), green marketing manipulates the four elements of the marketing mix (product, price, promotion and distribution) to sell products and services offering superior environmental benefits in the form of reduced waste, increased energy efficiency, and/or decreased release of toxic emissions.

The evolution of green marketing can be divided in three phases:

1. The first phase was termed "Ecological" green marketing. During this period all marketing activities were concerned to solve environment problems and provide remedies for such problems.
2. The second phase was "Environmental" green marketing and the focus shifted to clean technology that involved designing of innovative new products, which takes care of pollution and waste issues.
3. The third phase was "Sustainable" green marketing. It came into prominence in the late 1990s and early 2000.

Defining green marketing is not a simple task because several meanings intersect and contradict each other. An example of this is the existence of varying social, environmental and retail definitions attached to this term. Other similar terms used are *Environmental Marketing* and *Ecological Marketing*. According to the American Marketing Association, "green marketing is

*the marketing of products that are presumed to be environmentally safe*". Thus, green marketing incorporates a broad range of activities, including product modification, changes in the production process, packaging changes, as well as modifying promotional strategies including advertising.

Polonsky in an edited book of K. Suresh defines green marketing as, *"All activities designed to generate and facilitate any exchange intended to satisfy human needs or wants such that satisfying of these needs and wants occur with minimal detrimental input on the natural environment."* Green marketing involves developing and promoting products and services that satisfy consumers' want and need for Quality, Performance, Affordable Pricing and Convenience without having a detrimental input on the environment.

To understand green marketing one needs to know the four Ps of green marketing.

### **2.2.1 Green Products**

There is no widespread agreement on what exactly makes a product green. Some general guidelines include that a green product:

- does not present a health hazard to people or animals
- is relatively efficient in its use of resources during manufacture, use and disposal
- does not incorporate materials derived from endangered species or threatened environments
- does not contribute to excessive waste in its use or packaging and
- does not rely on unnecessary use of or cruelty to animals.

Other favorable attributes from the green point of view are the incorporation of recycled materials into the product and the product's own recyclability.

### **2.2.2 Green Pricing**

A central concern of many environmentalists is that product prices do not reflect total environmental costs. A number of companies have undertaken audits of their production processes to identify hidden environmental costs and to provide better information for pricing decisions. Emissions charges, carbon taxes, and increased fines are possible methods governments might use to implement better environmental costing. European firms have been particularly proactive in this area, developing a method of environmental auditing (*the eco balance*) bridging the gap between standard accounting practice, in which data are expressed solely in conventional monetary terms, and qualitative environmental impact reports.

### **2.2.3 Green Promotion**

Perhaps no area of green marketing has received as much attention as promotion. In fact, green advertising popularity grew so rapidly during the late 1980s that the U.S. Federal Trade Commission (FTC) issued guidelines to help reduce consumer confusion and prevent the false or misleading use of terms such as "recyclable," "degradable," and "environment friendly" in environmental advertising.

The FTC offers four general guidelines for environmental claims:

1. Qualifications and disclosures should be sufficiently clear and prominent to prevent deception.
2. Environmental claims should make clear whether they apply to the product, the package, or a component of either. Claims need to be qualified with regard to minor, incidental components of the product or package.

3. Environmental claims should not overstate the environmental attribute or benefit. Marketers should avoid implying a significant environmental benefit where the benefit is, in fact, negligible.

4. A claim comparing the environmental attributes of one product with those of another should make the basis for comparison sufficiently clear and should be substantiated.

The FTC's Environmental Marketing Guidelines provide additional guidance for a number of specific claims including "Degradable/ Biodegradable" "Compostable," "Recyclable," "Recycled Content," "Refillable," and "Ozone Safe/Ozone Friendly." They strongly recommend avoidance of overly general claims such as environment friendly.

#### **2.2.4 Greener Distribution**

Logistics and transportation costs are coming under greater scrutiny due to rising fuel prices, congested highways, and global-warming concerns. Package redesign for lighter weight and/or greater recyclability reduces waste while simultaneously reducing costs. In some countries, marketers must also consider two-way flows, as governments pass legislation requiring manufacturers to take back products at the end of their useful life ("reverse logistics").

### **2.3 Green Consumer Behavior**

#### **2.3.1 Green Consumer**

A green consumer is one who is very concerned about the environment and, therefore, only purchases products that are environment-friendly or eco-friendly. Products with little or no packaging, products made from natural ingredients and products that are made without causing pollution are all examples of eco-friendly products. The green consumer would be the type to

drive a hybrid vehicle, buy products made from recycled materials. Green consumers can be defined as one:-

*“Who is mindful of environment related issues and obligations, and is supportive of environmental causes to the extent of switching allegiance from one product or supplier to another even if it entails higher cost.”*

Marketing to the Green Consumer often make purchase decisions based on information about the product rather than a catchy advertising campaign. According to Jacquelyn Ottman of J. Ottman Consulting, green consumers seek out the following when making purchase decisions:

- Green consumers want to know how raw materials are procured and where they come from, how food is grown, and what their potential impact is on the environment once they land in the trash bin.
- Green consumers patronize manufacturers and retailers they trust and boycott the wares of suspected polluters.
- Green consumers often do not have the same consumptive spending patterns as the mass consumer.

### **2.3.2 Green Consumerism**

Green Consumerism is based on public awareness of publicizing environmental issues. Green marketers hope to capitalize on this by developing strategies that allow consumers to integrate green products into their lifestyles. Many such efforts by green marketers have met with considerable success. The "organic" industry, for example, specializes in the sale of organically, based foods, health and nutritional products, and other green lifestyle items.

### **2.3.3 Green Consumer Purchasing Behavior**

Consumer behavior involves the psychological processes that consumers go through in recognizing needs, finding ways to solve these needs, collect and interpret information, make plans, and implement these plans (eg. By engaging in comparison shopping of actually purchasing a product), making purchase decisions (eg. whether or not to purchase a product and, if so, which brand and where) and post purchase behavior. In simple words, consumer behavior can be defined as, *“Study of how people or organization behave when obtaining, using, and disposing of products and services”*.

Green Consumer behavior involves the use and disposal of products as well as the study of how they are purchased. This means understanding the consumer’s behavior as a process in purchasing goods and services. Product use is often of great interest to the marketer, because this may influence how a product is best positioned or how we can encourage increased green consumption.

In India even the post purchase behavior such as, product disposal is great area of interest in green consumer behavior study, for example second hand market for car is quite big, hence Maruti entered in this segment by introducing True Value.

### **2.4 Green Consumer Conservation Behavior**

Limiting use of scarce natural resources for the purpose of environmental conservation can be called as green consumer conservation behavior. When are consumers likely to conserve and how can consumers be motivated to act in more environment friendly ways are two big questions

in front of marketers. Consumers are most likely to conserve when they accept personal responsibility for the environmental problem. For example, consumer who perceive that there is an energy shortage because of consumption by all consumers (including themselves) are more likely to accept personal responsibility and so do something about it. However, consumers often do not feel accountable for many environmental problems and are not motivated to act. Thus for conservation programs to succeed, messages must make the problem personally relevant. For example, to get consumers to conserve energy by turning down the thermo star, messages could focus on how much energy and money consumers will save each year and over a longer period of time. Consumers are also most likely to conserve when there are no barriers in doing so.

## **2.5 Green Consumer Attitude**

An attitude is a way one thinks, feels, and acts favorably or unfavorably based on learning towards some aspect of market stimuli such as retail store, product, and brand.

Consumer attitudes are a composite of a consumer's (1) beliefs about, (2) feelings about, (3) and behavioral intentions toward some "object"—within the context of marketing, usually a brand, product category, or retail store. Thus Attitudes are:

- Predispositions towards action
- About or towards people and things
- Evaluating people, objects and ideas
- Made up of emotional reaction (affective), thoughts and beliefs (cognitive), and actions (behavioral) components.

Strength of attitude increases with accessibility and knowledge about the topic in question. Attitudes are often learned from other people and are often a defining characteristic of groups. It can also be genetic. A strong attitude is very resistant to change.

The main characteristics of attitudes are:

Attitudes are learned from personal experience, information provided by personal sources, and company sources, in particular exposure to mass media. Attitude is concerned with the evaluation of all the objects that are stored in the memory. Persons do not formulate attitudes for the objects that are not in the memory. Based on the learning in memory customer makes his purchase decisions. Marketer's job is to make customers learn about their product. For example, Pepsi came out with a promotion scheme at the launch of Lehar Pepsi. It gave an advertisement in the news paper, inviting readers to try it simply by tearing the advertisement and getting a free Pepsi in exchange of it. The promotion generated excellent word of mouth publicity for the brand. In the process consumers read the advertisement and learned about the new product.

1. Attitudes are predisposed. When customer learns then he formulates his attitude inclined as either positive or negative, which directs the customer actions. Thus, attitudes have a motivational quality; that is, they might propel a customer towards a particular behavior or repel the customer away from a particular behavior.

2. Attitudes are directed towards an object, here object that is stored in the memory of the individual. Customers can have attitude towards a tangible such as air-conditioning product, or intangible as Voltas AC brand, is called an attitude object. Objects in which marketers are interested to know the attitude of the customers are brand, company product, advertisement, price etc. In other words an attitude is about evaluating people, objects and issues. For eg. Coca-Cola knew that most of the Indians have positive attitude towards cricket (object). Also color red



is associated with youth, energy and passion (positive attitude); Coca-Cola got associated with the cricket fever in India. It said “The word which hits TV Screens was an attempt to show how much both cricket and red objects are linked to the Coca-Cola. This is forming an attitude toward the product with the help of favorable factors.

3. Attitudes are consistent, thus customer show consistency in behavior. Attitude once formed is long lasting because it tends to endure over time. But attitudes can change as they are not permanent. Hence marketers’ job is to maintain the positive attitude and change the negative attitude, if any, towards their product.

## **2.6 Attitude and Behavior Linkage**

There is a linear linkage between behavior and attitude. Research has discovered that there are several conditions that lead to a strong link between attitudes and behavior.

- **Attitude Specificity:** Some researchers believe that an attitude is only related to behavior if they are both on the same level of specificity in time, objects, scope and circumstances. For example, if attitude is ‘I really like green food products, there is a greater chance that one would buy green or organic vegetables and other green food products. This statement has reference to types of food products. Market researcher should measure an attitude grounded in the reality of time place and ability to act upon them. Therefore asking ones attitude toward food products would not be as useful in predicting whether someone would buy green or non-green products unless their specific attitude about buying food products is known.
- **Attitude Strength:** Some attitudes are extremely important, there is high degree of attitudes like enthusiastic or horrible, and they correspond to behavior. While other attitudes are less central or amenable to change that may not lead to behavior.

Additionally, the more “vested interest” a person has in the issue, the more likely attitudes and behaviors will be correspondent. Thus if a person has heart problem he is likely to have a negative attitude towards cholesterol oriented food and would avoid eating it.

- **Direct Experience:** As discussed before, attitudes are often formed from consumers’ direct experience. As compare to any other method attitudes held with greater confidence, are more specific, more easily recalled, more resistant to change, and more likely to influence or subsequent behavior. Those attitudes formed in this way are often more consistent with behavior.

## **2.7 Relevance of the Topic**

Green Marketing and Green Products are gaining popularity as we are progressing. People are becoming health conscious which leads to popularity of green items. But, with respect to India, not much of systematic research happened. So, with respect to existing literature from across the world, there are many factors which can affect the green products popularity. So, the research tries to identify the factors for green products’ popularity specifically in Indian context. Also, by understanding these facts the organizations’ can improve their strategy for making the green products more sellable and acceptable to the prospective consumers.

As we can see from the above discussion, green products are slowly gaining popularity due to green marketing. Also, as people are becoming more conscious about health and environment, they started behaving in a more conscious way. Still there are many barriers, such as price of the green products, their availability etc. In our study we are considering two categories of green products, such as green cosmetic and food products. Green products will be considered as

equivalent to organic products, specifically for the food category. These products will be produced by using organic fertilizers, without using any pesticides, insecticides, any inorganic fertilizers or toxic elements. So, these products will be healthier in nature and safe to use.

In this context, it is important to examine various psychographic and demographic factors which influence the usage of green products, specifically in cosmetic and food category in Kolkata and around Kolkata in West Bengal, India. The various psychographic variables, such as Environmental Consciousness, Health Consciousness, Price Sensitivity, Product Involvement and Innovation in buying products are selected from a thorough literature review. The demographic variables are also studied from a detailed literature review. The consumers' perception about each psychographic variable is being understood using specific items. The study aims to provide a snapshot of consumers' belief about Green Cosmetic and Food Products about various Psychographic and Demographic variables in and around Kolkata, West Bengal (India).

## **2.8 Summary**

In this chapter, the aims of this project/study are being discussed, which is to analyze the factors influencing preferences for green products, specifically, cosmetic and food products in and around Kolkata, West Bengal, India. An introduction to the theoretical background of this thesis, including the contributions that it makes to research is also provided. This chapter ends with a discussion about the relevance of the research topic.

### **3: Background and Contributions from Existing Literature**

#### **3.1 Attitude and Behaviour**

Consumers all around the world are turning “green.” In the US, outrage over the 1989 Exxon oil spill shifted the environmental movement from the radical fringe and placed environmental concerns into the mainstream. During the past decade in Western Europe, Green party members have moved into positions of power within local and national governments, and even the European Parliament in Strasbourg examines green consumption in the context of an increasing focus on sustainable lifestyles said Ottman (1992) one of the rigorous writers on the topic. The author argued that green buying must be seen in the context of wider debates surrounding the development of sustainable ways of living that incorporate other environmental actions in a holistic conceptualization of sustainable lifestyles. This framework is operationalized in a study of environmental action in and around the home, in which 1600 households in Devon were asked questions concerning their everyday environmental actions. These results were manipulated so as to investigate how the different behaviors related to each other and also whether different groups of individuals could be identified, conforming to different lifestyles.

As the concern for the environment has become a universal phenomenon, surely the profile of the ecologically conscious consumer has evolved along with this fundamental shift in public attitude said Roberts (1996). He looked at the demographic and attitudinal correlates of ecologically conscious consumer behavior (ECCB). From the responses of 582 adult consumers to a nationwide survey ( $n = 1,302$ ), a profile of the ecologically conscious consumer was developed. The findings suggest that ecologically conscious consumers of the 1990s differ from

their predecessors. Demographics explained only 6% of the variation in the sample's ECCB. The consumers' belief that they, as individuals, can help solve environmental problems (perceived consumer effectiveness) was found to be the best predictor of ECCB.

Environmental concern can be driven by biospheric, egoistic or altruistic motives. Few studies, however, have compared these three environmental motive concerns across cultural groups. Duckitt and Linda (2006) investigated differences between European New Zealanders and Asian New Zealanders in environmental motive concerns and their implications for pro environmental behaviors. The results demonstrated that the tripartite model of environmental concerns provided good fit in both samples. They also indicated that Asian New Zealanders were significantly higher than European New Zealanders on egoistic concern, whereas European New Zealanders were significantly higher on biospheric concern. For European New Zealanders, biospheric concern predicted pro environmental behavior positively, whereas egoistic concern predicted it negatively. For Asian New Zealanders, in contrast, both biospheric and altruistic concerns predicted pro environmental behavior positively.

Willits (1994) conducted a statewide survey of Pennsylvanians in 1990 and provided data on residents' opinions about ideas contained in the new environmental paradigm (NEP) and behaviors that are environmentally protective. Although Pennsylvanians expressed support for the NEP, they were not likely to engage in activities that contribute to environmental protection. Correlation analysis revealed that although support for the NEP was predictive of environmental behavior, the linkages were not strong. Social characteristics were more predictive of environmentally oriented behaviors than supportive of the NEP.

Research on consumers' attitudes toward the environment is being conducted mostly in the context of developed countries. There is a need to investigate this topic in less affluent societies, said Sarigollu and Bodur (2005). Their study investigated the relationship between Turkish (affluent society) consumers' attitudes and their behavior towards the environment. A multistage area sampling procedure was used to select 1,000 residences in Istanbul at which at-home personal interviews were conducted using standard surveys. A consumer cluster analysis based on behaviors toward the environment was conducted, and three distinct segments were identified:

1. Active concerned,
2. Passive concerned and
3. Unconcerned.

For each cluster, attitudinal, demographic, socioeconomic and leisure activity profiles were identified. Attitudes toward specific behaviors were found to be the best predictors of behavior, followed by general attitudes, education, and locus of control. Policy implications were provided for each cluster.

Times of India, Nielsen Company and Oxford University Institute of Climate Change conducted a study in October 2011, which revealed that while Indians were "very concerned" about climate change; globally, concern on the topic has declined. The study which measures consumer attitudes towards the environment and climate change, surveyed 27,548 online consumers in 54 countries globally out of which 37 % consumers said they were very concerned about climate change. This is lower than consumer concerns over climate change in 2009 (41%). According to the survey, concern for climate change in India has increased by 1% in the last two years, with

54% Indian consumer expressing deep concern about climate change. In India, a majority of consumers believe that the main responsibility for solving climate change should lie with the government, 37% Indians said that governments should restrict companies' emissions of carbon dioxide and other pollutants.

Gilg, Barr and Ford (2010) examined green consumption in the context of an increasing focus on sustainable lifestyles. The authors argued that green buying must be seen in the context of wider debates surrounding the development of sustainable ways of living that incorporate other environmental actions in a holistic conceptualization of sustainable lifestyles. The results suggested that conventional forms of green consumption can indeed be related to other forms of environmental action and that at least four different types of environmentalist can be identified.

The literature examining the behavior of environmentally conscious consumers has focused mainly on the examination of non-product specific environmental knowledge and attitudes or environmental knowledge and attitudes in relation to single product lines, argued Bridget and Antonis, who employed the constructs of product-line-specific environmental knowledge and attitudes, that is knowledge of and attitudes towards the green products and their impact on the environment. Presenting the results of an exploratory study examining the relationship between product-line-specific environmental knowledge and attitudes for multiple green product lines, testing hypotheses generated from the literature, utilizing a questionnaire measuring self-reports of environmental knowledge and attitudes. No direct relationship was found between product-line-specific environmental knowledge and attitudes, and that consumers do not simply believe that a green product was good for the environment without also knowing how the product impacts on the environment.

Arcury (1990) found that environmental knowledge is consistently and positively related to environmental attitudes, although the relationship was not especially strong. With the correlation of knowledge and attitudes, the low level of environmental knowledge has disturbing implications for environmental policy. For the research purpose, increased knowledge about the environment was assumed to change environmental attitudes, and both environmental knowledge and attitudes were assumed to influence environmental policy. As a very little research has focused on public environmental knowledge or the relationship between knowledge and environmental attitudes, the researcher used telephone survey data from 680 Kentucky residents to address this gap in the literature. Specifically, the analysis examined how environmental knowledge and attitudes were related to socio-demographic factors (gender, age, education, income and residence). As in similar research, the respondents to the survey also did not score well on the measures of environmental knowledge.

It was expected that adolescents who demonstrate more pro environmental attitudes were more likely to demonstrate pro environmental behaviors. Meinhold and Malkus (2005) hypothesized that perceived self-efficacy would have a moderating effect on the environmental attitude-behavior relationship. In that the relationship between pro environmental attitudes and behaviors would be stronger among adolescents with high levels of self-efficacy. Their study examined the relationships among adolescent environmental behaviors and self-efficacy, knowledge, and attitudes. Participants were 848 students from three academically achieving high schools on the West coast. Hierarchical regression analyses were used for all subsequent analyses. Results indicated that pro environmental attitudes significantly predicted pro environmental behaviors and that environmental knowledge was a significant moderator for the relationship between environmental attitudes and environmental behaviors. This was especially true for males.



Literature suggest that environmental attitudes of Americans were more pro-ecological, were more internally consistent, and were more likely to be related to environmental behavior and knowledge and other attitudinal and personality variables. To check the views of previous writers, Arbuthnot and Lingg (1975) matched samples of French (n=56) and American (n=112) adults. They conducted surveys assessing environmental behavior (recycling), knowledge and attitudes as well as more general attitudes and personality traits. While minimal differences were observed in recycling, the relationships of this behavior with other variables indicated differing conceptions between cultures. It was suggested that knowledge may act as a mediating variable between attitudes and behavior.

Chang (2001) examined the influence of various cultural and psychological factors on the green purchase behavior of Chinese consumers. To this end, a conceptual model has been proposed subjected to empirical verification with the use of a survey. The survey results obtained in two major Chinese cities provide reasonable support for the validity of the proposed model. Specifically, the findings from the structural-equation modeling confirmed the influence of the subjects' man–nature orientation, degree of collectivism, ecological affect, and marginally, ecological knowledge, on their attitudes toward green purchases. Their attitudes toward green purchases, in turn, were also seen to affect their green purchase behavior via the mediator of green purchase intention. Although the findings of the study provided a better understanding of the process and significant antecedents of green purchasing, they also highlighted two areas for more thorough investigation. These were the exact role of ecological knowledge in Chinese consumers' green purchasing process and the underlying factors that account for their low level of green purchase. This study also discussed how the findings of the study can help the Chinese government and green marketers to fine-tune their environmental programs.

### **3.2 Environmental Attitude**

Environmental Attitudes (EA) is a crucial construct in environmental psychology. This can be stated as psychological tendency expressed by evaluating the natural environment with some degree of favor or disfavor. There are hundreds of EA measures available based on different conceptual and theoretical frameworks, and most researchers prefer to generate new measures rather than organize those already available. Milfont and Duckitt's (2010) research provided a cumulative and theoretical approach to the measurement of EA, in which the multidimensional and hierarchical nature of EA was considered. Reported findings from three studies on the development of a psychometrically sound multidimensional inventory to assess EA, cross-culturally and the Environmental Attitudes Inventory (EAI) shows that the EAI has twelve specific scales that capture the main facets measured by previous research. The twelve factors were established through confirmatory factor analyses, and the EAI scales are shown to be unidimensional scales with high internal consistency, homogeneity and high test-retest reliability, and also to be largely free from social desirability.

According to Balderjahn (1988) Demographic, socioeconomic, cultural, personality, and attitudinal variables were specified to predict five different patterns of ecologically responsible consumption. He analyzed a casual model of ecologically concerned consumers by the LISREL (linear structural relations, is a statistical software package used in structural equation modeling) approach. The results suggested that each behavioral pattern has its own cluster of predictors, although the ecologically concerned consumer belongs to the upper social classes. The results presented can provide a foundation for market segmentation strategies and for educational programs of policy makers.

Kaiser, and Wilson (2000), further develop the General Ecological Behavior (GEB) scale in order to apply it cross-culturally. The scale was proposed to be relatively open, neither bound to a particular set of ecological behaviors nor to a particular questionnaire response format. Questionnaire data from 686 California students were compared with the original Swiss calibration data. Reliability, internal consistency, and discriminate validity recalled that the GEB could be applied to the California students as well as to the Swiss sample, which consisted of older adults. Because the GEB measure makes use of behavior difficulties—caused by situational influences—the then proposed approach also guided the search for political actions that could promote changes in more ecologically behaving societies.

Antil (1983) said that accurate measures of attitude are critical if a researcher hopes to obtain high correlations between attitude and behavior. His research suggested the use of response certainty as a valuable method to increase attitude-behavior correlations and assist the researcher in interpreting results from attitude measurement. Empirical evidence and theoretical support for the use of response certainty was also provided.

Kilbourne and Pickett (2007) examine the relationship between materialism, environmental beliefs, environmental concern, and environmental behaviors. The study used a random telephone survey of 337 US adults. Using a causal modeling approach, the study demonstrated that materialism has a negative effect on environmental beliefs, and these beliefs positively affect environmental concern and environmentally responsible behaviors. The article then provided implications of the results for consumer and environmental policy.

Michal, Tarrant and Cordell (1997) indexed five different environmental attitude scales on an 11-item self-reported general environmental behavior index derived from a confirmatory factor analysis. Correlations between each of the 5 attitude scales and the behavioral index were computed and a Fisher's Z-transformation was used to test for the effect of six respondent characteristics (gender, residence, education, income, age, and political orientation) on the attitude-behavior correlations. Although all of the five scales were significantly correlated with the behavioral index ( $p < .001$ ), correlations for some attitude scales were highly affected by respondent characteristics. Of the 5 scales examined, the Environmental Concern (EC), New Environmental Paradigm (NEP), and Awareness of Consequences (AC) scales were associated most strongly with behavior, but the EC and NEP also were significantly affected by respondent characteristics. Implications for future studies and use of the scales were discussed.

Stern (2000) developed a conceptual framework for advancing theories of environmentally significant individual behavior and reported on the attempts of the author's research group and others to develop such a theory. He discussed definitions of environmentally significant behavior; classifies the behaviors and their causes; assesses theories of environmentalism, focusing especially on value-belief-norm theory; evaluates the relationship between environmental concern and behavior; and summarizes evidence on the factors that determine environmentally significant behaviors and that can effectively alter them. The article concluded by presenting some major propositions supported by available research and some principles for guiding future research and informing the design of behavioral programs for environmental protection.

Given their definition of subjective norms, rational-choice theories must be located within the realm of social conventionality. However, subjective norms can be grounded in moral as well as conventional considerations. Not surprisingly, then, rational-choice theories insufficiently explain behaviors that are at least partially moral, such as ecological behavior. Florian, Britta and Bogner(2007) established and expands rational-choice model of environmental attitude that extend into the moral domain by using feelings of personal obligation toward the environment (i.e., feelings of responsibility) as an additional predictor of intentions to behave ecologically. Findings from two studies were presented. In Study 1 a sample of Swiss adults (N = 436) was used to test the proposed model. Study 2 replicated the findings of Study 1 with a sample of California college students (N = 488). Assessments were carried out in a structural equation modeling framework. Environmental knowledge, environmental values, and responsibility feelings together explained 45% (50% in Study 2) of the variance of ecological behavior intention which, in turn, predicted 76% (94%) of the explainable variance of general ecological behavior. As the inclusion of responsibility feelings increased the proportion of explained variance of ecological behavior intention by 5% (10%) above and beyond a more basic attitude model, the moral extension of the proposed attitude model is largely supported.

Mainieri, Barnett, Valdero, Unipan and Oskamp (1997) investigated the variables that predict “green buying” (i.e., buying products that are environmentally beneficial). Predictor variables included awareness about environmental impacts of products, specific environmental beliefs of consumers, several general environmental attitude scales, demographic variables, and several pro environment behaviors other than buying behavior. A written questionnaire, mailed to randomly selected residents of 8 middle-class communities in the Los Angeles area, was answered by 201 respondents. The results of hierarchical multiple regression analyses supported the hypotheses

under study: Specific consumer beliefs predicted several green-buying variables as well as general environmental attitudes, whereas general environmental attitudes predicted only one aspect of green buying. Women were significantly higher than men on two aspects of green buying and on the environmental attitude scales. Home ownership was positively related to recycling behavior.

According to Young, Hwang, McDonald and Oates (2008) “attitude/ behavior gap” or ‘values/action gap’ is where 30% of consumers reported that they are very concerned about environmental issues but they are struggling to translate this into purchases. For example, the market share for ethical foods remained at 5 per cent of sales. The paper investigated the purchasing process for green consumers in relation to consumer technology products in the UK. Data was collected from 81 self declared green consumers through in depth interviews on recent purchases of technology products. A green consumer purchasing model was developed and a success criterion for closing the gap between green consumer’s values and their behavior was established. The paper concluded that incentives and single issue labels (like the current energy rating label) would help consumers concentrate their limited efforts. More fundamentally, “being green” needs time and space in peoples’ lives that is not available in increasingly busy lifestyles. Implications for policy and business were proposed.

As resource conservation is an imperative for sustainable development, it is crucial to achieve a deeper understanding of the factors involved in people's decisions to recycle. This is even more so because the level of environmental concern is usually higher than the level of ecological behaviors. Castro, Garrido, Reis and Menezes (2009) have taken this fact that decision-making regarding conservation behaviors happens in the context of an internal debate where

contradictory ideas were weighed up and the possibility of ambivalence arises. The main aim of the paper was therefore explored how contradiction and ambivalence impact upon the attitudes, intentions and pro-ecological behaviors of the private sphere. The paper focused specifically on the separation and deposition of metal cans, and compared the predictive capacity of beliefs, attitudes and intentions for two groups of respondents – one with a high and another with a low level of ambivalence, as assessed with a direct measure. The role of personal identity and the influence of structural constraints were also explored. Results demonstrated a clear moderating effect of experienced ambivalence, and showed, how beliefs, particularly negative ones, present a higher predictive capacity of the attitude in the high-ambivalence group, and personal identity play a relevant role in predicting behavior in both groups. They discussed the importance of pursuing the study of ambivalence when analyzing decision-making in the conservation area.

Gonzalo and Asuncion's (2005) work centered on the study of consumer recycling roles to examine the socio-demographic and psychographic profile of the distribution of recycling tasks and roles within the household. With this aim in mind, an empirical work was carried out, the results of which suggested that recycling behavior is multidimensional and comprises the undertaking of different roles with different socio-demographic and psychographic causal characteristics. The practical implications of these results can be applied in the implementation of segmentation policies that consider recycling behavior as the product on offer in a discriminate fashion depending on the role to be promoted among the population.

Karns and Khera (1983) reported a longitudinal analysis of residential energy conservation by residents in a medium size U.S. metropolitan community. Mail panel surveys were conducted during winter months of 1979, 1980, and 1981. The results were presented in the form of a multivariate causal model with cross-lagged correlations over time. Perceptual, attitudinal, and

behavioral variables were found to be the major causal factors with certain other variables having secondary effects. Demographic variables were not significant in explaining actual conservation. The model presented was a rotational, parsimonious model which suggested several avenues for public policy including indications of potentially effective conservation messages, audience segmentation and time required for such interventionist strategies to show results.

Kent and Bottom (1991) characterized participants in three related, but different environmental protection activities. The activities studied were donating items for reuse, recycling newspapers, and walking when possible for reasons of conservation and environmental concern. The findings indicated that demographic, media usage patterns, information sources, and knowledge provide modest understanding of environmental protection activities. The empirical findings of the study provided policymakers with insights into how environmental protection activities can best be promoted.

Barr (2007) studied three waste management behaviors (waste reduction, reuse, and recycling) with the use of a conceptual framework developed by him. It was posited that environmental values, situational characteristics, and psychological factors all play a significant role in the prediction of waste management behavior, within the context of a core intention-behavior relationship. The framework was tested in a self-report questionnaire of 673 residents of UK. It was found that the predictors of reduction, reuse, and recycling behavior differed significantly, with reduction and reuse being predicted by underlying environmental values, knowledge, and concern-based variables. Recycling behavior was, in contrast, characterized as highly normative behavior. The use of the approach taken for investigating other environmental behaviors was examined.



### **3.3 Conservation Behavior**

A sustainable planet is not possible without conserving behavior. The resource-costly life-styles that are characteristic of the current scenario present a historic challenge. Never before have so many behaviors needed to change in such a short time. More challenging is that they must stay changed. For many reasons the techniques commonly used to promote conservation behavior are more reliable at modulating short-term behavior than at achieving durable change. The perceived urgency of environmental problems tends to make immediate behavior change the major focus. But of equal importance is the stability of behavior once changed. Thus one goal of conservation behavior research is to discover techniques that change individual behavior while minimizing or eliminating the need for repeated intervention. Raymond (1993) categorized behavior change techniques first by their informational or motivational nature and second by the source of the change: derived from others or gained by direct personal involvement. Evaluated selected techniques using five proposed dimensions suggested why durable behavior change has been so hard to achieve.

To cut down the overuse of plastic shopping bags, the Indian government had implemented a restriction policy. Under this policy, hypermarkets and many other stores are prohibited from offering free plastic shopping bags. They can only sell them. Lam's (2006) study was aimed at using a set of psychological and situational variables to predict customer's bag-use behaviors, which included bringing one's own bag and buying bags from the hypermarket. The predictors were attitude toward the behavior, environmental concern, and personal norm; self-efficacy of bringing bags; self-efficacy of not requesting bags; response efficacy; and situational variables. Results showed that their model could predict both bag-bringing and bag-buying behaviors. Self-

efficacy of bringing bags was the main variable that determined whether customers would bring their bags to shopping, whereas situational variables determined whether customers would buy bags. Oskamp, Harrington, Edwards, Sherwood, Okuda and Swanson (1991) investigated factors encouraging or deterring recycling, telephone interviews were used to study recycling behavior, attitudes, and knowledge of 221 randomly selected adults in a suburban city that had begun a citywide curbside recycling program within the past year. Approximately 40% reported participation in the curbside recycling program, and nearly 20% more claimed that their household had been recycling in other ways. Most demographic variables did not predict participation in the curbside recycling program, nor did general environmental attitudes and behaviors, though simple conservation knowledge did. The main significant predictors of curbside recycling were a few demographic variables, attitudes, and behavioral variables that pertained specifically to recycling. As predicted, factor analyses showed that there was no general factor underlying (a) various environmental attitudes and (b) various environmental behaviors, all of which might seem on a priority basis to be related.

Kalafatis, Pollard, East and Tsogas (1999) examined the determinants that influence consumers' intention to buy environmentally friendly products. The authors adopted the Ajzen's Theory of Planned Behavior (TPB) as the conceptual framework of the research and the appropriateness of the theory was tested in two distinct market conditions (UK and Greece). Although the findings offered considerable support for the robustness of the TPB in explaining intention in both samples, there was some indication that the theory was more appropriate in well established markets that are characterized by clearly formulated behavioral patterns (i.e. the model fitting elements of the UK sample were superior to the corresponding ones obtained from the Greek sample). The results were consistent with previous research on moral behavior. Chao and Lam

(2011) used both self-reported behavior (SB) and other-reported behavior (OB) as measures of responsible environmental behavior (REB) and examined their validities. The validation process included (a) comparing the frequency of behavioral intention (BI), SB and OB; (b) comparing the model fit of Ajzen's Theory of Planned Behavior (TPB) with SB and OB as dependent variables respectively; and (c) testing the effect of social desirability on BI, SB, and OB. Data were collected through survey and observation. The observers were 65 students trained to observe their 172 roommates. These roommates also reported their own REBs in the survey. Results showed that frequency of BI and SB were significantly higher than those of OB, and the TPB model predicting SB fitted much better than that predicting OB. These and other findings suggested that researchers should be careful in interpreting results based solely on self-reported REB.

The growing collective consensus among the public is to possess environmental attitudes, as the majority consider themselves to be "environmentalists." However, do the public's environmental attitudes or concern translate into environmentally responsible behaviors? The question answered by Thapa (1999), whose study sought to verify among undergraduate students the level of environmentalism—the relation of environmental attitudes and responsible behaviors. College students were targeted because they are the future custodians, planners, policy makers, and educators of the environment and its issues. Environmental attitudes were analyzed using the revised New Ecological Paradigm (NEP) scale, and behaviors were measured with the Environmentally Responsible Behavior Index. Overall, college students in the sample were sympathetic toward the environment, and they supported the NEP ideology. However, except for recycling, students were not very participative in various environmentally responsible behaviors.

Additionally, consistent with previous studies, the attitude-behavior relations were weak or modest at best.

Given the definition of subjective norms, rational-choice theories must be located within the realm of social conventionality. However, subjective norms can be grounded in moral as well as conventional considerations. Not surprisingly, then, rational-choice theories insufficiently explain behaviors that are at least partially moral, such as ecological behavior. Florian, Ranney, Hartig and Bowlerdf (1999) in their paper established an expanded rational-choice model of environmental attitude that extends into the moral domain by using feelings of personal obligation toward the environment (i.e., feelings of responsibility) as an additional predictor of intentions to behave ecologically. Findings from two studies were presented. In Study 1, a sample of Swiss adults ( $N = 436$ ) was used to test the proposed model. Study 2, replicates the findings of Study 1 with a sample of California college students ( $N = 488$ ). Assessments were carried out in a structural equation modeling framework. Environmental knowledge, environmental values, and responsibility feelings together explained 45% (50% in Study 2) of the variance of ecological behavior intention which, in turn, predicted 76% (94% in study 2) of the explainable variance of general ecological behavior. As the inclusion of responsibility feelings increased the proportion of explained variance of ecological behavior intention by 5% (10% in study 2) above and beyond a more basic attitude model, the moral extension of the proposed attitude model was largely supported.

People frequently fail to see themselves as environmentally conscious consumers; one reason for this is that they are often prone to dismiss their more common ecological behaviors (e.g., avoid littering) as non-diagnostic for that particular self-image. The cueing of commonly performed

ecological behaviors as environment friendly (what we call positive cueing) renders both cued and non-cued common ecological behaviors more diagnostic for the inference of pro-environmental attitudes (Study 1). As a result, positive cueing increases the likelihood that people will see themselves as consumers who are concerned with the degree to which their behavior is environmentally responsible (Study 2). The cueing of common ecological behaviors leads participants to choose environment friendly products with greater frequency, and even to use scrap paper more efficiently (Study 3). They also discussed the implications for effective social marketing campaigns.

It is well documented that if environmental degradation is to be halted then pro-environmental activities need to be put in place now. Bhate (2005) insisted that the participation of consumers (C), marketers (M) and policy-makers (in this case, the local council (LC) is required for the green lifestyle. An examination of the environmental portfolios of LCs and Ms indicated a noticeable increase in behavioral activity which has led to an improvement in their environmental provision. This included services ranging from recycling to provide information on environmental issues. However, empirical evidence indicated that consumers may have either inadequate or inappropriate knowledge about environmental issues which may have led to low involvement levels and consequently limited behavior. It may therefore be necessary to distinguish between cognitions that are affected under high or low involvement situations. The involvement levels, however, might be mediated by the consumer behavior settings (CBS). Using the Behavioral Perspective Model the study observes the impact of CBS and involvement on environmental behavior. The results indicated that in the low involvement condition CBS has a crucial role to play whereas in the high involvement situation its role might not be significant.

Due to the omnipresent attitude–behavior gap, conservation psychologists have ceased to believe that attitudes are traceable from people's behavioral records. In contrast to this conventional wisdom and to the current state of the art in attitude measurement, Florina, Oerke and Bogner (2007) developed a behavior-based attitude scale for adolescents, which were based on people's recall of their past behavior. Using a cross-sectional survey of 928 students, findings suggested that people's environmental attitude can be reliably derived from self-reported conservation behaviors by employing Rasch-type models. Their new attitude measure substantially overlaps with two previously established, conventional environmental attitude scales. Technically, behavior-based environmental attitude represents as much an attitude measure as it does a measure for people's goal-directed conservation behavior.

Research has demonstrated that environment friendly behavior is perceived as low status, which can explain why such behavior is not more widespread. However, greater awareness of environmental issues and the advent of a “green” movement may have seen a change in those attitudes. As some conservation behaviors used in past research may have been conflated with lower socioeconomic status, Kimerling (2001) in Study 1 identified financially neutral behaviors so that SES would not be confused for status in general. Study 2 utilized two of those behaviors to investigate whether engaging in conservation behavior is viewed as low status. Participants rated a target who performed zero, one, or two conservation behaviors. Counter to earlier research, it was found that neither number nor type of environmental behaviors performed affected the perceived status of the target. These results suggested that attitudes toward conservation behavior may be improving. Since the 1960s, environmental issues have gained importance in business as well as public policy discourses. Recent polls reported that 87% of U.S. adults are concerned about the condition of the natural environment , 80% believe that

protecting the environment will require major changes in current life-styles Ottman (1992) and 75% consider themselves to be environmentalists Osterhus, (1997). Goswami (2001) India also has witnessed rapid strides of development at sustained growth rates of more than 8% and has seen a huge spurt in consumption. Consequently, it has been estimated that the increased consumption may result in the country becoming one of the leading offenders relating to environmental pollution.

Not surprisingly then, some scholars believe that consumers are willing to pay premiums for green products because consumers often prioritize green attributes over traditional product attributes such as price and quality: 50% of Americans claim to look for environmental labels and to switch brands based on environment-friendliness according to Phillips(1999). Eriksson(2001) also assumes that consumers are willing to pay a premium for a good that has a low impact on the environment and examine if a little dose of such idealistic behavior can have a large impact on the environment, and thereby (partially) replace the environmental regulation that would otherwise be necessary to internalize externalities. The analysis was carried out in a model with product differentiation, where consumers differ in their preferences for product quality. Consumers' willingness to pay the environmental premium might be uniformly or non-uniformly distributed. However, it appeared that green consumerism will only be modestly influential in both cases, despite the fact that product differentiation leads to relaxed competition and increased profits, and thereby creates leverage.

Concerns related to the environment are evident in the increasingly ecologically conscious marketplace. Using various statistical analyses, Laroche, Bergeron, Guido (2001) investigated the demographic, psychological and behavioral profiles of consumers who were willing to pay

more for environmentally friendly products. They found that this segment of consumers were more likely to be females, married and with at least one child living at home. They reported that 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. They place a high importance on security and warm relationships with others, and they often consider ecological issues when making a purchase. According to a leading news paper Times of India (2011) it is an encouraging sign for the future market for environment-friendly products that 28% Indians felt that there should be major government-led initiatives for research into scientific and technological solutions like low-emission cars and renewable energy. Nearly three out of every 10 Indians said that there should be a change to use of more energy efficient bulbs, fixtures and electrical appliances to combat climate change. More than a quarter of Indian consumers believe in recycling consumer waste and saving electricity to address issues of climate change and global warming. Indians also believe that the government should invest in improved public transport systems (23%) and that there should be government incentives (tax breaks or subsidies 22%) to promote non-polluting behavior.

Gerard and Edmund (1998) said as consumers' environmental concerns have risen over the past decade, many companies have responded with "green" products, processes and public relations. Superficial and even spurious firm responses have resulted in claims that marketers have cynically segmented and exploited green markets in an opportunistic way. However, whether the hesitation of marketing managers or overall corporate policy is behind such claims has not been investigated. Their paper explored the issue by assessing the personal attitudes, opinions and behavior of senior marketing executives across a range of firms. The results suggest that the majority of marketers, in their personal lives, do in fact display attitudinal and consumption



patterns consistent with environmental concerns. Hence, when the finger of green-market exploitation is pointed, it should perhaps be in the direction of wider corporate objectives and not at beleaguered marketers.

However, the caveat is that such claims and attitudes may not always translate into actual behaviors. So far there is little consensus about the identity and nature of green consumers, except that there have been something of a disappointment to the marketers who have pursued them. These difficulties perhaps reflect the folly of trying to understand green consumption and green marketing by viewing it as simply a variation on conventional marketing, said Ken(2001). The green consumer has been the central character in the development of green marketing, as businesses attempt to understand and respond to external pressures to improve their environmental performance. Marketing practitioners and academics are attempting to identify and understand green consumers and their needs, and to develop market offerings that meet these needs. The article proposed some different ways of looking at green consumption and green marketing, which have the potential to prevent the hunt for the green consumer from deteriorating into a wild goose chase.

To establish the implications of environmental advertising on purchase behavior Hartmann and Ibanez (2008) studied the impact of environmental advertising on consumer purchase behavior as virtual nature experiences turn out to wield the most significant influences, regardless of the consumer's degree of environmental attitudes. The study suggested that consumer exposure to nature's media representation in green product advertising may lead to emotional experiences during product consumption that are analogue to those experienced in “real” nature. These “virtual nature experiences” may constitute emotional consumption benefits in consumer's

perception. Two further kinds of emotional consumption experiences related to environmental products were identified: the feeling of well-being from acting in an altruistic way (“warm glow”), and self-expressive benefits. The influences of the proposed consumption experiences on the consumer's attitude toward the product were analyzed in the scope of a survey of consumer perceptions of three competing energy brands, one of them positioned as a green energy brand. Results revealed mostly positive influences on product attitude, with the particular pattern of effects being significantly moderated by the environmental attitudes of the respondents.

Among leather, chemicals and others, the textiles industry in India is traditionally one of the worst offenders of pollution, with its small units following outdated technology processes. One opportunity to reduce the environmental impact of clothing industry in India is to concentrate textile production within environmentally certified or eco-labeled clothing. In the absence of any reach in the area, Goswami (2008) investigated whether the urban Indian population would be interested in clothing with eco-labels. The results suggested the existence of a segment of consumers who are positively motivated towards eco-labeled garments. This segment profile was described in terms of demographic and psychographic variables.

To overcome the problem of environmental degradation various governments have started Eco-labeling schemes. Eco-labeling is an important tool to overcome market failure due to information asymmetries for environmental products. While previous research has discussed the importance of labeling, Sammer and Wustenhagen (2006) provided empirical data on the influence of eco-labels on consumer behavior for household appliances. It reports on the results of a survey involving a total of 151 choice-based conjoint interviews conducted in Switzerland in spring 2004. Choice-based conjoint analysis (also known as discrete choice) has been applied to

reveal the relative importance of various products attributes for consumers. The EU energy label was used for the product category chosen in the survey, washing machines, and they also investigated the relative importance of eco-label compared with other product features (such as brand name) in consumers' purchasing decisions. They drew conclusions for sustainable marketing policy.

From a logical point of view, labels are conceived as claims put forward by sellers to inform buyers about certain characteristics of their products. In the case of sustainability, labels might identify relevant 'ideals' to approach and significant 'ills' to escape. Boer (1995) in his paper examined the role of labeling and certification schemes in the pursuit of policies to make production and consumption processes more sustainable. Toulmin's argumentation theory was used to show how claims can be substantiated and challenged. Based on literature on the behavior of the main stakeholders, the author discussed what labeling meant for producers, consumers, policymakers and other groups in the society. In the conclusion, attention was drawn to the way in which societal pressure might interact with market forces to shape the information on environment for products and services. As a result, the role of sustainability labels might become more differentiated, varying from direct shopping aids to background quality assurances. Previous research has suggested that consumers are becoming increasingly concerned by the effects of conventional agricultural food production practices on human health and environmental wellbeing. Forbes, Cohen, Cullena, Wratten and Fountain's (2009) study sought to understand whether environmentally sustainable practices in the vineyard would equate to advantage in the wine marketplace. Structured questionnaires were used to ascertain the views of wine consumers in Christchurch, New Zealand. The findings of the study indicated that consumers have a strong demand for wine which is produced using "green" production practices.

Consumers believe that the quality of sustainable wine will be equal to or better than conventionally produced wine, and they are prepared to pay a higher price for this wine.

The theoretical exposition of the trade-environment linkage (in the form of Environment Kuznets Curve) has been extensive. While one set of studies show that with the increase in per capita income environmental degradation would decline, the other set of studies has shown that no such trend exists for developing countries, said Keren and Gupta (2003). Though environmental laws are in place, firms display a very low level of compliance in developing countries. The article brought out the low level of compliance.

One reason behind the green behavior could be the social pressures to be 'green' explained Ritchie and McDougall (1985). Consequently, notwithstanding the claims about the concern for the natural environment, mass consumer markets for green products in most categories are yet to be developed.

### **3.4 Corporate Initiatives**

Kulkarni Prasad in the newspaper daily Times of India (2014) said that every year suburban areas around Kolkata witnesses at least 65 days during which ozone levels are dangerously high. These are the effects from the pollution by the various jute mills and other cotton industries along Ganges. The situation is worse in the heart of the city, which is urban in nature". According to scientists of Indian Institute of Tropical Meteorology (IITM) Ozone is the main ingredient of urban ppbv (particle per billion by volume) which is much above permissible limits.

Concern about the environment and its effects on industrial progress is on an increasing trend according to Roome and Hinnells (1993). Some environmentalists have suggested that environmental pressures and pollution are advancing at such a fast pace that many industries will

be obsolete in the recent future. As corporates are more concerned about the environmental degradation, the authors suggested that it is high time for the corporates to understand that only environmental friendly industries can only survive in the long run. The corporates are developing a conceptual framework to analyze the process of managing product development while considering the environmental aspects of the products. Existing researches consider the implications of such a conceptual framework against the empirical evidence emerging about product development in the industries.

Recently, a huge number of corporates declared themselves committed for sustainability and integrated environmental issues in their corporate strategies (Bloom and Scott Morton, 1991; Porter and Van der Line, 1995; Shrivastava, 1995; Walley and Whitehead, 1994). Several recent developments justifies such concern for environmental issues, such as the negative environmental impacts of the organizations' operations and products; the growing interest of public opinion, environmentalists and governmental institutions for the quality and sustainability of the eco-system and the benefits derived from the adoption of environmentally conscious programs.

According to Decicco and Thomas (1999) proper information about the environmental impacts of a product is essential for implementing environmental protection. Such information can influence consumers' choices and, by affecting product and corporate images in the marketplace, might also influence technology development and product planning.

Some Indian corporate leaders have begun to take matter seriously said Kumar (2008). Telecom companies like Bharti Airtel saves 96 trees a year by providing e-billing, uses video-

conferencing to avoid travel, and has created energy efficient green shelters at around 7000 sites. Companies like ONGC, ITC Nestle, Essar Oil, Tata Steel, Wipro, JSW Steel, ICICI, are also taking initiatives for environmental sustainability. It is encouraging to locate that several high pollution created sector firms (electricity generation, electrical equipment and construction) have taken the initiative to collect emissions data and allotting senior management staff for environmental sustainable, specifically climate control committee . But all these actions need to be long term. According to Times of India Kolkata (2013), one of the worst offenders to environment is pollution created by vehicles in the city. To combat the problem Mahindra and Mahindra launched the Bio-diesel tractor of the price at par with regular tractor. The tractor runs on 5% of biodiesel added to the regular diesel, it was also mentioned that minor changes in the fuel injection system, can convert a normal tractor into the bio-diesel tractor. Mahindra and Mahindra also plan to supply 200 liters of this fuel for free to initial customers to make it popular. Also, governments are strengthening their actions by providing stringent rules and regulations with respect to the running of automobiles in the urban and semi-urban areas.

In automobiles, almost all segments of the society are taking green initiatives. For example, two wheeler, three-wheeler and passenger car buyers have greener alternatives available now in the form of electric vehicles. These vehicles do not run on petrol or diesel instead run on electric batteries (TOI). As a result, there are no problems of emission or pollution problems. Mass transportation systems are also being served in an environment friendly way through Compressed Natural Gas (CNG) run buses and auto services. Two other sectors covered are hospitality and renewable energy. Four Indian hotels are certified by ECOTEL for their green operations, while Tata BP Solar market products run on solar energy for domestic use.

Not only the large enterprises, India's rapid growth in small and medium enterprises had its negative impact on the environment which is becoming a major concern to the Indian economy. According to D'Souza, (2002), the government concerning about economic development and raising the standard of living of its people, has actively supported the development of the small enterprise sector. Due to their labor intensity and importance in generating employment opportunities for the less well-off members of Indian society, they have been encouraged and given assistance by the Indian government. However, small enterprises are considered to be the worst polluters and, as the research findings indicated, government and authorities gave the least attention to environmental issues as part of their operations. It is not affordable for these enterprises to go for environmental friendly way of production. Although the existing environmental legislation is similar to that in other countries, i.e. they all serve the same purpose of protecting the environment. Negligence in implementing the environmental policies results in pollution.

Albino, Balice and Dangelico (2009) said to respond effectively and efficiently to the environmental sustainability challenge, an important role can be played by enterprises, through appropriate strategies and operations, such as green processes and product development. In the paper, they investigated whether the development of green products was supported by the environmental strategic approaches adopted by sustainability-driven companies, and whether there was economic sector or geographical area specificities. For this purpose, first authors developed taxonomy of environmental strategies and defined measurable proxies for both the environmental strategic approaches identified and the green product development. They studied a sample represented by the enterprises included in the Dow Jones Sustainability World Index (DJSWI). The methodology used was based on the content analysis of companies' websites and

relevant documents, such as environmental and sustainability reports. The main result was that the levels of adoption of different environmental strategic approaches were higher for green product developers than for green product non-developers. Moreover, the most implemented strategic approaches for green product developers vary depending on the economic sector, while a more homogeneous behavior was found from the geographical perspective.

According to Times of India, 25th Nov, 2009 scientists have successfully bio-engineered polymers, completely bypassing fossil fuel based chemicals. The team from KAIST Unichem, led by Sang Yup Lee, professor, focused on polylactic acid (PLA) a bio-based polymer; the key for producing plastics through renewable resources.

Coddington (1993) tracked back issues of environmental marketing to issues of environmental management—i.e., the issues of overall corporate environmental commitment and responsibility. It is absolutely essential that a commitment to corporate environmental improvement be in place before an environmental marketing program is launched. Additionally, marketers should play a central role in the greening of the corporation. The marketer brings at least two important skills or strengths to the environmental improvement process—strengths of perspective and strengths of skill set.

Giovanni and Manzini (2007) said, it is now widely acknowledged that environmental issues will increasingly affect the performance of firms in western countries, both in the short and in the long run. Environmental issues can act on revenues and on costs. They can influence revenues when a firm follows a ‘green strategy’, i.e. it enhances the characteristics of environmental compatibility of its products or it promotes a credible image of a ‘green company’ that employs



only clean technologies. They can influence costs as, on the one hand, more limiting environmental standards can result in higher manufacturing and non manufacturing costs and, on the other hand, programs focused on improving environmental performances can result in less spoils and wastes, hence in lower costs. Hence, environmental performance should be a structured part of the management control system of an industrial firm. Unfortunately, it is not completely clear how accounting information can be structured in order to obtain this result.

The paper was aimed at developing a set of information that can be used for a managerial control focused on the environmental performance of an industrial firm and was organized in three main sections. Section I described the conceptual requirements of the management control system based on accounting information for monitoring the environmental performance of an industrial firm (completeness, long term orientation, external orientation, measurability and cost).

Section II analyzed different classes of Environmental Performance Indicators (EPI) used in practice. Both accounting measures (prevention costs and investments; operating environmental costs; contingent environmental liabilities) and non financial measures (physical indicators; compliance) are considered. Section III suggests an integrated approach to the design of the management control system focused on environmental issues, where different classes of indicators are used jointly. More specifically, two integrated systems, one mostly based on physical measures and aimed at external communication, the other focused on accounting measures and supporting managerial decision making, are suggested.

European Union (EU) policy makers implemented a Directive that will make producers responsible for waste electrical and electronic equipment at end-of-life (known as the “WEEE”

Directive) said Mayers, France and Cowell (2005) in February 2003. Under this new legislation, producers were required to organize and finance the take-back, treatment, and recycling of WEEE and achieve mass-based recycling and recovery targets. This legislation was part of a growing trend of extended producer responsibility for waste, which has the potential to shift the world's economies toward more circular patterns of resource use and recycling. The study used life-cycle assessment and costing to investigate the possible environmental effects of the WEEE Directive, based on an example of printer recycling in the United Kingdom.

For a total of four waste management scenarios and nine environmental impact categories investigated in the study, results varied, with no scenario emerging as best or worst overall compared to land filling. The level of environmental impact depended on the type of material and waste management processes involved. Additionally, under the broad mass-based targets of the WEEE directive, the pattern of relationships between recycling rates, environmental impacts, treatment and recycling costs may lead to unplanned and unwanted results. Contrary to original EU assumptions, the use of mass-based targets may not ensure that producers adapt the design of their products as intended under producer responsibility.

It was concluded that the EU should revise the scope of consideration of the WEEE Directive to ensure its life-cycle impacts are addressed. In particular, specific environmental objectives and operating standards for treatment and recycling processes should be investigated as an alternative to mass-based recycling and recovery targets. In recent years, the idea of 'green' or 'political' consumers expressing their political beliefs in everyday life has been widely embraced. Eager to satisfy the needs of this new market segment, firms have allocated substantial resources to environmental management, social accountability, corporate citizenship, occupational health and

safety etc. said Pedersen and Neergaard<sup>1</sup> (2006). During the 1990s, the industrialized world also witnessed a growing number of environmental labels, expected to guide the political consumers in their shopping decisions. Evaluations of these environmental labeling (eco-labeling) programs indicate that some labels and product groups receive a great deal of attention while others remain in obscurity. To understand these differences, the paper discussed some of the factors that determine the market impact of environmental labeling. It was concluded that the concept of the 'green' consumer is over-simplified and failed to capture the actual complexity of consumer values, attitudes and behavior. The results were based on existing literature and empirical findings.

According to Economic Times, the government has asked corporate to communicate with their shareholders electronically in order to cut down on the use of paper.

The move is a part of the latest green initiative by the ministry but could also help companies cut costs by eliminating the need of paper for paper communication. Caroline (2005) attempted to bridge business ethics to corporate social responsibility, and included the social and environmental dimensions as well. The objective of the paper was to suggest a conceptual methodology with which ethics of corporate environmental management tools can be considered. The method included two stages that are required for a shift away from the current dominant unsustainable paradigm and toward a more sustainable paradigm. The first stage was metaphoric and normative. The second stage was a practical stage, which in turn, was analytic, descriptive and positive. The method was applied to common industrial metabolism tools of ecological footprints (EF), environmental life cycle assessment (LCA) and industrial ecology (IE). The

application showed that all three tools can be used in business ethics, in particular, when the first stage of the method was applied to their use.

The economic times group on its 50th anniversary has initiated the green awards which is given to the corporate which has taken a green drive. As a part of its green drive global group enterprises has started green tip of the day, a daily column in economic times, to make people aware of small energy saving tips which can save a huge energy for the economy as a whole.

Not only corporates but NGOs are no way behind. “Save mother earth”- an NGO (TOI, 2010) has announced the Green ambassador award, 2020. This award was presented to MLC Vandana Chavan and additional commissioner of police Subhashchandra Dange for their green work.

It was believed that the hypothesized relationships were moderated and mediated by other stimulus, so managers were advised not to negate corporate social responsibility, but rather to invest wisely in environmental activities and its communication.

Countered with various changes in the competitive scenario, executives adopted a wide set of strategic options which differ in the complexity of the adopted environmental programmes (from compliance to existing regulation to the anticipation of future evolution of market expectations). Most initiatives have a great impact on the company’s economics, the corporate management system and the overall structure of the industrial system. Indeed, the improvement of environmental performance often requires executives to commit significant financial resources in new cleaner technologies (Financial implications) and to redesign business processes and the corporate organization (managerial and organizational implications).

Lubna (2007) in Economic Times has written that Eco-friendly measures seem attractive on paper, but they do entail a higher cost, at least initially. No wonder then that 46% of companies surveyed have declared they will only invest in low-carbon equipment if the running cost is the same or lower than those of conventional equipments. A mere 40% have invested in low-carbon equipments and only 38% have a company policy to do so.

It is because of the same reason that in approx two decades of its existence, only 12 companies have secured Eco-Mark license from the Bureau of Indian Standards (BIS), the scheme's implementing agency. It can be called as catastrophe only that till date only seventeen licenses have been issued under product categories of paper, wood substitutes and finished leather products.

Livesey (1999) in his article "McDonald's and the Environmental Defense Fund: A Case Study of a Green Alliance", discussed both academic and practitioner-oriented, views alliances between business and ecology groups as exemplifying a paradigm shift from command and control to a new kind of environmental practice, market environmentalism, and privileges the latter. This privileging occurs despite the claim made by the Environmental Defense Fund's (EDF) leader Fred Krupp, one of the early proponents of market environmentalism, that, the new form of supplements. The case study, examined the public discourse of one such alliance between McDonald's and EDF. Rather than indicating a paradigm shift, the analysis showed that both partners drew not only from the emerging discourse of market environmentalism, but also from the older, and purportedly displaced, paradigm of command and control. This symbolic ambivalence was emblematic of a larger discursive struggle, namely, the contemporaneous socio-political conflict over how the ecological crisis was to be defined and what should

constitute legitimate practice-by business, government and environmentalists-in its name. In author's view, the McDonald's-EDF partnership was at once constrained by the discursive struggle over the environment and a constitutive element in the struggle itself.

Some scholars claim that green policies/products are profitable: green policies can reduce costs; green firms can shape future regulations and reap first-mover advantages. Extending Maslow's (1943) theory, Herzberg (1966) developed a theory of work motivation that focused on two work-related factors: those that motivated employees (motivators) and those that prevented dissatisfaction among them (hygiene). As discussed by Prakash (2000), a key challenge for marketers is to understand whether consumers view firm/product greening as motivating factors (their presence induces consumers to purchase given product; preference for a product is an increasing function of the greening level) or hygiene factors (their absence may bother consumers but, after a low threshold of greening, the preference for a product is not an increasing function of the greening level). If consumers favor firms with green policies (for example, the one with ISO 14001 certification) notable exceptions exist. For example, the looming trade war between the US and the EU is partly due to the resistance of the European consumers to purchase cheaper but genetically altered food items from the US.

Prakash (1997) opines that consumers preferred green products (the one with a higher percentage of recycled inputs), green policies/products are motivating factors. Managers, therefore, have economic justification to ensure that their firms/products are greener than their competitors'. However, consumers do not care much about who is greener, but they do penalize firms that violate environmental laws or emit high levels of toxins, greenness is a hygiene variable – 33% of adults claimed to have avoided buying products, at least occasionally, from companies with

poor environmental records (Ottman, 1996). If so, then the managerial task is to obey environmental laws, to stay out of trouble with the regulators and to avoid bad press by undertaking minimal beyond-compliance initiatives. Greening firms/products often creates societal benefits (especially, over products' life cycles) but imposes private costs on firms. If firms do not/cannot pass on such costs to consumers, they hurt their shareholders. However, most consumers are perhaps not ready to bear increased direct costs (as opposed to indirect costs imposed by environmental regulations or more stringent product standards) either for societal well being or due to their skepticism about firms' environmental claims (Davis, 1993). Consequently, many mass marketers continue to focus on the conventional product attributes such as price, quality and product features (Hansen, 1997; Phillips, 1999).

### **3.5 Green Consumer Segmentation**

Marketers have become increasingly aware in recent years of the impact that the company's activities can have on natural resources and environment in the general. Though much of the attention accorded to this predicament of environmental degradation is focused upon business practices, many feel that a measure of responsibility lies with the consumers as well and therefore, a need to identify green consumer segments arise. A review of past literature indicates that efforts to identify the ecologically conscious consumer have been made. This can be found in the marketing literature far back as the early 1970s. There has been a plethora of research done in this area using a variety of segmentation variables, attempting to profile environmentally conscious members of the population in general. However there have been relatively few attempts to classify consumers specifically according to levels of green purchasing behavior.

Roper (1993) cited by K Suresh has tracked these segments of consumers since 1990. As of 1996, the five segments are:

- **True-Blues** - This 10% of the US population holds strong environmental beliefs and lives them. The most ardent of environmentalists, they believe they can personally make a difference in curing environmental ills. Politically and socially active, they dedicate time and energy to environmentally safe practices themselves and attempt to influence others to do the same. True-Blues are six times more apt to contribute money to environmental groups and over four times more likely to shun products made by companies that are not environmentally responsible. Among the most educated of the five groups these people are likely to be white females living in the Midwest or South. Almost one-third of them hold executive or professional jobs.
- **Green Backs**- Representing just 5% of the US population are so named because of their willingness to pay extra for environmentally preferable products. They make up that small group of consumers who say they will pay up to 22 percent more for green. They worry about the environment and support environmentalism. They feel too busy to change their lifestyles. Although Greenbacks are generally not politically active, they are happy and eager to express their beliefs with their wallets; green purchasing within this group is very high. Like the True-Blues, they are more likely than the average American to purchase any number of green products and packages made from recycled material or that can be refilled. Moreover, at 22% they are twice as likely as the average American to avoid buying products from companies they perceive as environmentally irresponsible. Green backs are likely to be married white males living in the Midwest (35%) and West (24%). They are well educated young (median age 37) and are more likely than any other groups to hold white-collar jobs.
- **Sprouts**- One third of the US population is classified as Sprouts. They are willing to engage in environmental activities from time to time but only when it requires little effort. Thus, recycling, which is curbside in many communities (as given in the study), is their main green



activity. They read labels for greenness- although less often than the True Blues and Greenbacks. Their greenness ends at the supermarket checkout; even though Sprouts and Greenbacks have similar median incomes. Sprouts generally won't choose a green product if it is more expensive than others on the shelf. When they do, they are only willing to pay up to 4 percent extra. More than half (56%) are female and they have the highest median age (43) among the five groups. Sprouts are distributed evenly across the country. They are well educated, and just under two-third of them are married. They comprise the swing group that can go either way on any environmental issue. With more education, they are often the source of new Green backs and True Blues.

- **Grouzers-** Fifteen percent of the US populations are Grouzers. These people do not believe that individuals play any significant part in protecting the environment. Instead, they feel that the responsibility belongs to the government and large corporations. Often confused and uninformed about environmental problems, 45 percent of Grouzers recycle bottles and cans regularly but grudgingly; they do so to comply with local laws rather than to contribute to a better environment. They are far more likely than any other group including the Basic Browns, to use excuses to rationalize their lax environment behavior. True to their name, Grouzers complain that they are too busy, that it is hard to get involved, that green products cost too much and don't work as well, and finally that everything they do will be inconsequential in the whole scheme of things. Their overall attitude is that it is someone else's problem, so why bother. Demographically; Grouzers are similar to the national average, although with a somewhat higher proportion of African-American members.
- **Basic Browns-** Representing 37 percent of the population, Basic Browns are not tuned in or turned on the environment. They are simply not convinced that environmental problems are all that serious. Basic Browns do not make excuses for their inactivity, they just don't care.

The difference of this group makes them less than half as likely as the average American to recycle and only 1 percent boycott products for environmental reasons as proposed to the 11 percent national average. Three percent buy recycled goods compared to 18 percent nationally. The largest of the five groups, Basic Browns have the lowest median income, the lowest level of education, and live disproportionately in the South, for the basic browns; there are just too many other things to worry about.

Roper Organization has been conducting a Green Gauge survey since 1990. But now there are as many as six different segmentation studies, depending on how one behaves. That includes only the studies available for sale by market research firms and does not include the segmentation studies done privately by companies like Wal-Mart, Procter & Gamble, Clorox, and other consumer product makers. These and other companies have been assessing and tracking green-shopping attitudes and habits for their internal use.

The Natural Marketing Institute, surveyor of all things LOHAS, the market space that includes organic foods, health and wellness, alternative medicine, green energy, green living, and other goods and services divides the market into five categories. Approximately 25 variables were used to conduct the statistical analysis. Techniques such as exploratory factor analysis, confirmatory factor analysis, migration analysis, and K-means segmentation were utilized to ensure the optimal solution. The following five groups were made.

- **Lohas:** 19% (44 million) who are dedicated to personal and planetary health. Not only do they make environmental friendly purchases, they also take action, they buy green products, support advocacy programs and are active stewards of the environment. Very progressive on environment and society, they look for ways to do more; not too concerned about price.

- **Naturalites:** 14% (33 million) focused on natural/organic consumer packaged goods with a strong health focus when it comes to foods/beverages. They are not politically committed to the environmental movement nor are they driven to eco-friendly *durable* goods. Primarily concerned about personal health and wellness, and use many natural products; would like to do more to protect the environment.
- **Drifters:** 21% (49 million). This segment has good intentions, but when it comes to behavior, other factors influence their decision more than the environment. Somewhat price sensitive (and trendy), they were full of reasons *why* they do not make environmentally friendly choices.
- **Conventionals:** 29% (67 million). This, very practical segment does not have green *attitudes* but do have some "municipal" environmental behaviors such as recycling, energy conservation, and other more mainstream behaviors. Practical, like to see the results of what they do; interested in green products that make sense (save money) in the long run.
- **Unconcerned:** 17% (40 million) the environment and society are *not* priorities to this segment. They are not concerned and show no environmentally-responsible behavior. Have other priorities, not really sure what green products are available, and probably wouldn't be interested anyway; they buy products strictly on price, value, quality, and convenience.
- The Hartman Group, a Seattle-based market-research firm that's been tracking consumer attitudes, mostly related to food and organics, since the 1980s. Hartman recently released The Hartman Report on Sustainability: Understanding the Consumer Perspective, which looks at "how consumers feel about a world struggling to live in balance today for the benefit of future generations." It pierces the consumer landscape this way.
- **Radical Engagement-** These people do not band together and employ radical means to overcome major problems (36%).

- **Sustained Optimism-** They rely on rational intelligence and science, to overcome major problems and secure a hopeful future (27%).
- **Divine Faith-** Reluctant, leave things in God's hands, everything will turn out good automatically (20%).
- **Cynical Pessimism-** Don't even believe that an individual can make any difference by their acts (9%).
- **Pragmatic Acceptance-** They don't worry about the major problems facing the world because they are not individual's concerns but the job of government (8%).

Landor Associates, perhaps the most prolific - and most confusing - surveyors of green market research, revealed a study showing that 58% of the U.S. population considered themselves Not Green Interested (they do not care about environmentally friendly practices, including recycling, corporate social responsibility, or natural and/or organic ingredients); 25% were Green Interested (concerned about the environment, but not active in its defense); and the remaining 17% were Green Motivated (feel it's very important for a company to be green and base purchase decisions on whether or not a brand reflects "green behavior" in its packaging, ingredients, and corporate actions).

The measures used so far can be neatly classified into two broad categories: socio-demographic such as age, sex, education, social class and personality measures, such as locus of control. Since socio demographic can be measured and applied with ease, these have been widely used variables for profiling purposes. However revealed in the study "there is very little value in the use of socio-demographic characteristics for profiling environmentally conscious consumers. "They felt that the limited utility of socio-demographics could be explained by the fact that "environmental concern is no longer a marginal issue. Indeed "environmental concern is no

longer a marginal issue, indeed “environmental concern is becoming the socially accepted norm. Thus, it perhaps should not be expected that light levels of green purchasing behavior would be reflected in certain socio demographic sectors of consumer base.

On the other hand, personality variables have been found to have somewhat higher linkages to individual environmental consciousness. While this holds good for general environmental measures, the results were somewhat inconsistent for specific pro-environmental behavior such as green purchasing decisions. Furthermore, personality variables have been shown to “explain only a small part of the total variability of the behavioral measures used”. Moreover, it was also found that personality variables “do not easily lead to segmentation strategy” due to inherently complex processes involved in their measurement and interpretation. Given the failures of the above two classes of variables. Bodo Schlegelmilch, Bohlen and Adamantrios Diamantopoulos used a new segmentation approach through the analysis of the linkages between pro-environmental purchasing behavior and measures of environmental consciousness” The rationale for this approach was based to the premise that consumers traditionally expressed their environmental consciousness through the products they buy” (Schlegelmilch 1996). A Nielsen study further revealed that four out of five consumers were expressing their opinions about the environment through their purchasing behavior. It was therefore concluded that it is likely that consumers who exhibit high levels of environmental consciousness would make more green purchasing decisions than those exhibiting low levels. Thus it was envisaged that measures of environmental consciousness would be more closely related to purchasing habits than either socio-demographics or personality variables. Hence it was proposed to use the new segmentation approach on analysis of the linkages between pro-environmental purchasing behavior and measures of environmental consciousness. They also believed that as each specific behavioral

pattern has its own cluster of predictors, the results from this research would help marketers and manufacturers to be better equipped to target the ecologically conscious consumers and policy makers to be better able to encourage consumers who are willing to voluntarily choose an environment friendly product.

According to Thompson, Anderson, Hansen, Kahle (2010), Firms engage in *environmental marketing* in order to appeal to *environmentally conscious consumers*. Within the context of the forest product industry, the research used data from two studies to empirically test whether a relationship exists between demographic/psychographic characteristics and reported environmentally conscious intentions. In both studies, the results indicated that the environmental marketing of certified/ecolabeled forest products appeal to a segment of environmentally conscious consumers. This appeal occurs for both a value-added product (furniture) and a non-value-added product (plywood). Thus, there is a support for the argument that environmental marketing to environmentally conscious consumers can result in ‘green segmentation’. Key findings from the study suggested that those consumers reporting the strongest preferences for environmentally certified forest products were more willing to pay a premium for certified products, more likely to display environmentally conscious behavior and more likely to perceive that green consumer purchases effectively benefit the environment. These characteristics were most common among females and those familiar with the concept of environmental certification.

Polonsky, Bailey, Baker et al (1998) discussed the increased usage of questionable environmental marketing claims, which has become an issue of concern for academics, policy makers and consumers. Much of the research till date has focused on the accuracy of environmental claims in advertisements, with the information on product packaging being

largely ignored. This study used a content analysis to examine the environmental information on packaging. More specifically it examined the packaging of the population of dishwashing liquid bottles available in grocery stores in a large city in Australia. Evaluation criteria are developed to classify the various types of information and the degree to which the information was "misleading". Seven different informational categories and four accuracy categories were developed. These criteria were developed based on the existing environmental advertising literature and environmental marketing regulations in the U.S. and Australia. It was found that a majority of the packaging information can be classified as being not accurate.

According to D'Souza (2004) "The growing global public concern for safety and preservation of the environment has given rise to the perception that consumer purchases may be somewhat influenced by environmental labels". The author suggested that accuracy in label information is relevant so as to allow consumers to make an informed choice. The author also proposed that consumers can be grouped using a matrix of four different environmental positions. The results of these grouping were more likely to provide an effective profile of a green consumer, enabling marketers to segment and target these groups based on a clear understanding of consumer behavior.

Since the mid-1970s a number of studies have investigated that nature of frequency of corporate social responsibility disclosures, their patterns and trends, and their general relationships to corporate size and profitability, Scott, Ferreri and Parker (1987) sought to extend their knowledge of the relationship between a number of corporate characteristics and specific type of social responsibility disclosures, based on an extensive sample of U.S. corporate annual reports. Corporate size and industry category were found to correlate with certain types of disclosures,

while the existence of a corporate social responsibility committee appeared to correlate with one particular type of disclosure.

Davis (2001) said, the corporations have scrambled to bring to market, products positioned and advertised as addressing the needs of the environmentally-conscious consumer. The vast majority of claims presented in support of these products were best described, however, as confused, misleading or outright illegal. Ethical considerations have not yet been integrated into environmental marketing, and as a result, long-term harm on both the individual and societal level may result. A framework for reversing this trend is presented. It identified the sequence of actions necessary for the development and communication of ethical environmental marketing claims. The sequence was based upon two aspects of ethical theory: moral style and normative behavior. Specific implications for marketers' actions at each stage in the sequence of framework development were also discussed.

Lyon and Maxwell (2011) have presented (what is to their knowledge) the first economic model of "greenwash," in which a firm strategically discloses environmental information and an activist may audit and penalize the firm for disclosing positive but not negative aspects of its environmental performance. They modeled this phenomenon using tools from the literature on financial disclosure. In their model, an activist can audit corporate environmental reports, and penalize firms caught engaging in green wash, that is presenting good environmental news while hiding bad news. Their model was relatively simple, yet produced some interesting positive implications. They showed that when faced with activist pressure, the types of firms most likely to engage in partial disclosure are those with an intermediate probability of producing positive environmental and social outcomes. For such firms, disclosing a success can produce a



significant improvement in public perception, and withholding information about a failure can prevent a significant negative public perception; thus, they were willing to risk public backlash by disclosing only partially. Their results rationalized conflicting results in the empirical literature because they showed that there existed a non monotonic relationship between a firm's expected environmental performance and its environmental disclosures. The reason was that high performers are more likely to have purely positive records to disclose, but if they end up with a mixed record, they are more likely to adopt a strategy of withholding information. In addition, they found that activist auditing of corporate disclosure behavior is more likely to induce a firm to become more open and transparent if the firm is likely to have socially or environmentally damaging impacts, and if the firm is relatively well informed about its environmental or social impacts. This description fits quite well with the broad types of firms typically singled out for scrutiny and outrage by activists.

The model also has interesting normative implications. If the activist's goal is to increase firm disclosures, then it needs to be very careful in targeting suspected green washers. There is a real possibility that the threat of public backlash for green wash will cause firms to “clam up” rather than become more open and transparent. In particular, such a response is likely from firms with a high probability of successful projects, yet who are not fully informed about the environmental impacts of their actions. For firms such as this, activist pressures designed to increase disclosure may backfire and produce exactly the opposite of the intended results. On the other hand, firms with a low probability of environmental success can be pressured into making more environmental disclosures, and thus make better targets for anti-green wash campaigns.

The likelihood that a firm responds to the threat of activist auditing by opting for nondisclosure is reduced if the firm has adopted an EMS, and the complementarity between EMSs and activist

auditing of green wash points to a benefit from public policies that mandate the adoption of EMSs. Indeed, their analysis pointed to a new rationale for encouraging firms to adopt EMSs. An EMS brings the market closer to a state of common knowledge, thereby increasing market efficiency. With an EMS in place, the manager is better informed about his firm's environmental impact, and the market knows that the manager is better informed. As a result the manager is unable to hide behind the veil of ignorance when he fails to fully disclose the impacts of his firm's actions, and is thereby pressured to fully disclose.

In the proposed research, we intend to examine the impact of individual attributes of customers towards marketing of green products. In the Indian context, green products are still consumed by a very small subset of customers and the consumption is largely dependent on individual attributes, i.e. demographic and psychographic characteristics (Harper and Makatouni, 2002; Ahmed and Juhdi, 2010). Impact of these characteristics is more evident for green food product segment (Davies *et al*, 1985; Lea and Worsley, 2005). In the following section, we summarize the findings by published literature on these issues followed by some interesting research gaps to explore.

### **3.6 Demographic Variables**

The demographic variables are related to the basic characteristics of a person such as age, gender, income etc. which affect the consumer buying behavior. With respect to green products, the various demographic variables which affect customer's attitude towards them are age, gender, household income, education, social class, etc. The age of the customers affected significantly the purchasing of organic food products (Davies *et al*, 1985). Similar observations were reported in some other papers (e.g. Lea and Worsley, 2005) where impact of age on

customer's belief about the organic products was established. Middle-aged persons have a strong positive belief about the effects of organic items which they consider as an alternative of conventional food products (Lea and Worsley, 2005). Household income also positively influences consumption and purchasing of organic foods and cosmetics as reported in several papers (Davies *et al*, 1995; Lea and Worsley 2005; Chinnici *et al*, 2002). Also it was examined that the composition of a family infer that households with children and specifically women members of those families prefer buying more green products than that of the household without children (Davies *et al*, 1985). The higher formal educational level also positively influences the purchasing behavior for organic products (Lockie *et al*, 2002; Ahmed and Juhdi, 2010). This is because more education makes the consumers more aware about the environment which will ultimately influence their purchasing behavior.

We have found from the above discussion that, green product consumption is being studied based upon some basic demographic variables. Since income of the consumer plays a pivotal role in green food product consumption, it can be further studied along with the effects of occupation. This aspect was examined on the consumers buying behavior but not on green food products (Cline *et al* , 2006). Also, no study has been made regarding the impact of cultural aspects (Razzaque, 1995) on green food product consumption. So, the study can be made in finding out the relationship between consumption of green products and occupation of the customers.

### **3.7 Psychographic Variables**

From the existing literature, psychographics is being defined as the study of personality, values, attitudes, interests, and lifestyles (Senise, 2007). This mainly focuses on interests, activities and

opinions (IAO) of the customers. Hence psychographic variables can be interpreted as combinations of demographic and psychological variables which impact customer's attitude in an overall manner.

It was observed that there is a general perception about organic products catering mainly for higher social classes (Harper and Makatouni, 2002). It is further stated in the same paper that people from those classes have an affordability as well as consciousness regarding organic products, thus resulting in green cosmetic and food product consumption. Few authors have also discussed about people's tendency towards safe and healthy organic products intake influencing positively the customers' intention to purchase them (Ahmed and Juhdi, 2010). Also, (Davies *et al*, 1995; Lea and Worsley 2005) in their paper referred that green consumers prefer buying organic products for their health concern. So, health is an important factor driving the customers for green food product consumption. Contradictory results are also published in a paper by Pickett-Baker and Ozaki (Pickett-Baker and Ozaki, 2008), where authors fail to conclude any positive correlation between positive environmental beliefs and propensity of the customers to go for buying more green products.

Environmental knowledge and attitude play a significant role in customers' tendency for green product purchasing as reported in several papers. Many authors stated that environmental consciousness generates more interest of the customers towards organic products (Schlegelmilch *et al*, 1996). Kaiser *et al* (1999) in their paper reported that environmental values and environmental knowledge are important factors which affect ecological behavior intention ultimately helping in building customer's attitude towards organic products. Also Ahmed and Juhdi (2010) referred that customers are positively inclined towards environment friendly

farming because of their environmental consciousness and it leads to positive customer intention to buy organic products. Lockie *et al* , (2002), said that the consumers' familiarity with the green products, generate more interest to consume them. This is common to conventional consumer's behavior. They also stated that the mood of the consumers, i.e., to keep him relax is positively correlated with organic product consumption. The customers believe that consuming organic products make customers stress-free.

Apart from health consciousness and environmental belief, several other psychographic variables are also tested in literature like customers belief towards information authenticity, political motivation, skepticism etc. Kozup *et al* (2003) said that more proper information from credible sources increase the consumption of organic products because of customers' environmental belief and authenticity of the information provided. Similar observation was reported by Schlegelmilch *et al* (1996), by inferring that more knowledge, i.e., detail factual information about the organic products improve the chance of customers' buying them. Also, it was said that the customers' previous experience of using some environmental brands i.e., the brands which produce the products in environment- friendly way have an impact on their chances of selecting those brands only for repeated usage (Pickett-Baker and Ozaki, 2008). In another paper, it is being stated that recycling activities positively influences pro-environmental purchasing behavior for those customers who can dedicate more time and effort (Schlegelmilch *et al*, 1996). Some papers also stated that politically motivated activities act positively only for those customers who are environmentally conscious. In the paper by Chang (Chang , 2011), it is being discussed that perceived higher price, lower quality and skepticism negatively and perceived emotional benefits acting positively will create more ambivalence attitudes of the customers towards buying green products.

From the above discussion we conclude that the relationship between environmental consciousness, beliefs and knowledge and green product usage had been studied, but not for green food products. So, we intend to investigate more the role of the above mentioned factors in creating customers attitude towards green food products. Also the effect of information level about the cosmetic and food items in forming green cosmetic and food product consumer behavior is also an interesting research area. No study had taken place to find out the impact of lifestyle, religiosity, social responsibility, risk taking characteristics (Razzaque, 1995) of the customers towards organic product consumption, although these variables are applied in other fields. So, this study can be further extended to find out the effect of the above mentioned variables on building customers behavior towards organic product consumption.

In addition to demographic and psychographic variables, different product specific variables affect the customers' attitude towards green products. The various variables discussed in the literature are environmental brands, brand name, product type (Green vs. non-green), preferences for green attributes for the products, green technology, energy savings .Whereas, with respect to green food products, Heart healthy claim on food products, nutritional information about the food products, nutritional content of the alternative products, price, product types (fresh fruit, fresh vegetables, meat, milk and dairy products, cereals and cereal products) were discussed in the literature.

In the paper by Pickett-Baker and Ozaki (2008), the author stated that environmental brands, i.e., the brands which produce the products in environmental-friendly manner will positively influence customers' green product purchase decision. In his paper, Mobley *et al* (1995) reported that only branded green products create positive impression in the minds of the customers. Lin

and Chang, (2012) had said that green or non-green products affect the environmental conscious customers' usage amount for the products. Olson (2012) stated that using green technology consumers use more products with energy efficiency. He also stated that energy savings characteristics of the products positively influences customers attitude towards green products.

Kozup *et al* (2003) stated in their paper that heart healthy claim, nutritional information on the food products partially affects consumer's evaluation of the packaged food products. Also, nutritional content of the alternative food items negatively influences consumer's evaluation of packaged food items. In other papers the authors discussed about the negative effect of price towards organic food consumption. So, price is a significant barrier for customer's attitude formation towards green food products consumption (Lockie *et al*, 2002).

From the above discussion, we find out that only environmental branded products impact customers' attitude. But the work can be extended by studying the role of environmental brands on green food product consumption and how unbranded green products impact customers' attitude towards green food products. Also from the exploratory survey we found out that if the organizations reduce the price of green food products, its popularity can increase. So, an interesting research area can be finding the role of price in green cosmetic and food product consumption.

### **3.8 External variables**

In addition to the demographic, psychographics and product specific variables, there are various external, i.e., environmental variables which leads to specific customer behavior. From the reviewed literature it was found that customer's attitude towards green food products is being

affected by information people have about organic products, food products taste, availability, expensive, food value, natural content, animal welfare, convenience, environmental protection, food production method, source of information, purchasing place(hypermarket, supermarket, organic stores, farms), purchasing difficulties(difficult to find, high prices, poor range of choice), word of mouth, marketing communications, information about green products, claim type.

Ahmed and Juhdi (2010) had discussed that information people have about organic food products negatively influences customer's purchase intention towards the products. But in another paper, the authors had reported that more information people have about the products, the more customers will be interested to consume them(Chinnici *et al*, 2002). Again, Lin and Chang (2012) stated that only the positive information about the products influences positively user's perception of the effectivity of the green products. Also, Pickett-Baker and Ozaki(2008) also stated that effective marketing communications, i.e., communicating all the desired information about the product influences positively consumers' green product purchase decision. He had also reported that word of mouth communication is the most effective tool to convince the customers about the positive aspects of green products. Chang (2011) had stated that the claims organizations make about the products have a positive impact towards ad believability only if they are from authorized sources. Lea and Worsley (2005) had reported that organic food products tastes better than conventional products and availability and expense customers have to bear for these acts as barriers towards creating consumers belief about organic food items. Harper and Makatouni (2002) have concluded that more environmentally friendly food production method generates positive customers' perception about the products. Again more food value creates more positive belief about the products. More natural content for the organic food items, concern for animal welfare and environmental protection creates more customers'



interest towards these products(Lockie *et al* , 2002). And the customers buying more organic food items from hypermarket, organic stores and farms where they are more motivated towards buying them by the overall environment.

From the above discussion, we can see that different papers have reported varied roles of information in creating customers attitude towards green products. So, this inconsistent relationship can be tested with respect to green food items. Also, the study can be further extended to find out the most effective way the organizations can use to convince the customers. Some papers and from the exploratory study, we can find out that taste sometimes positively and sometimes negatively influences green food product consumption.

### **3.9 Variables used in Green Products and Green Food Products (from Existing Literature)**

Following are the variables used in Green Products (except Food) and Green Food Products, as existing Management literature envisaged.

#### **3.9.1 Independent Product Specific Variable Classification:**

**Table 3.9.1.1 Identified Independent Variables**

<b>Green Products</b>	<b>Green Food Products</b>
1. Environmental brands	1. Heart healthy claim on food products
2. Brand name	2. Nutritional information about the food products
3. Product type (Green vs. non-green)	
4. Preferences for green attributes for the products	3. Nutritional content of the alternative products

5. Green technology	4. Price
6. Non-green attributes	5. Product types(fresh fruit, fresh vegetables, meat, milk and dairy products, cereals and cereal products)
7. Energy savings	

Source: Compiled from Existing Literature

The various independent product specific variables with respect to green products which can be obtained from existing literature are Environmental brands , Brand name , Product type (Green vs. non-green) , Preferences for green attributes for the products , Green technology , Non-green attributes , Energy savings .

The same way the different independent product specific variables with respect to green food products which can be obtained from existing literature are Heart healthy claim on food products, Nutritional information about the food products , Nutritional content of the alternative products, Price, Product types(fresh fruit, fresh vegetables, meat, milk and dairy products, cereals and cereal products)

### 3.9.2 Individual Variables

**Table 3.9.2.1 Identified Individual Variables**

<b>Green Products</b>	<b>Green Food Products</b>
1. Environmental beliefs	1. People's belief about organic products to be safe
2. General environmental behavior	2. People's belief about organic products to be healthy
3. Experience of using the brands	3. People's belief about organic product
4. Self-perception of knowledge	
5. Environmental consciousness	

6. Recycling behavior	farming to be environment friendly
7. Politically-motivated behavior	4. People's perception about the worth of
8. Environmental values	buying organic products
9. Ecological behavior intention	5. Health consciousness
10. Ideologically heterogeneous group	6. Taste
11. General attitude towards the environment	7. Sex of the consumers
12. Environmental concern	8. Age of the consumers
13. Situation specific beliefs	9. Household with or without children
14. Perceived higher price	10. Household income
15. Perceived lower quality	11. Self-transcendence                      personal
16. Perceived green product utility	values(equality, spirituality, forgiving)
17. Perceived consumer effectiveness	12. Environmental protection
18. Skepticism towards green marketing	13. Weight control
19. Perceived emotional benefits	14. Political values
20. Attitude    Ambivalence    Toward    Buying	15. Familiarity
Green Products	16. Mood
21. Environmental consciousness	17. Religion
	18. Education
	19. Social class
	20. Ethics
	21. Mistrust
	22. Number of senior citizens
	23. Qualification

	24. Purchasing difficulties(difficult to find, high prices, poor range of choice) 25. Percentage of food expenditure devoted to organic products 26. Perception of organic prices 27. Willingness to pay for organic products 28. Credibility of the source of information
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Source: Compiled from Existing Literature

The various independent individual variables with respect to green products which can be obtained from existing literature are Environmental beliefs, General environmental behavior, Experience of using the brands, Self-perception of knowledge, Environmental consciousness, Recycling behavior, Politically-motivated behavior, Environmental values, Ecological behavior intention, Ideologically heterogeneous group, General attitude towards the environment, Environmental concern, Situation specific beliefs, Perceived higher price, Perceived lower quality, Perceived green product utility, Perceived consumer effectiveness, Skepticism towards green marketing, Perceived emotional benefits, Attitude Ambivalence towards buying Green Products, Environmental Consciousness

The same way different independent individual variables with respect to green food products which can be obtained from existing literature are People's belief about organic products to be safe, People's belief about organic products to be healthy, People's belief about organic product farming to be environment friendly, People's perception about the worth of buying organic products, Health Consciousness, Taste, Sex of the consumers, Age of the consumers, Household

with or without children, Household income, Self-transcendence personal values(equality, spirituality, forgiving), Environmental protection, Weight control, Political values, Familiarity, Mood, Religion, Education, Social class, Ethics, Mistrust, Number of senior citizens, Qualification, Purchasing difficulties(difficult to find, high prices, poor range of choice), Percentage of food expenditure devoted to organic products, Perception of organic prices, Willingness to pay for organic products, Credibility of the source of information.

### 3.9.3 External Variables

**Table 3.9.3.1 Identified External Variables**

<b>Green Products</b>	<b>Green Food Products</b>
<ol style="list-style-type: none"> <li>1. Word of mouth</li> <li>2. Marketing communications</li> <li>3. Information about green products</li> <li>4. Claim Type</li> </ol>	<ol style="list-style-type: none"> <li>1. Information people have about organic products</li> <li>2. Availability</li> <li>3. Expensive</li> <li>4. Natural content</li> <li>5. Animal welfare</li> <li>6. Education</li> <li>7. Convenience</li> <li>8. Environmental protection</li> <li>9. Food production method</li> <li>10. Source of information</li> <li>11. Purchasing place(Hypermarket, supermarket, organic stores, farms)</li> </ol>

Source: Compiled from Existing Literature

The various independent external variables with respect to green products which can be obtained from existing literature are Word of mouth, Marketing communications, Information about green products, Claim Type. The same way the various independent external variables with respect to green food products which are available from existing literatures are Information people have about organic products are Availability, Expensive, Natural content, Animal welfare, Education, Convenience, Environmental protection, Food production method, Source of information, Purchasing place(Hypermarket, supermarket, organic stores, farms)

### 3.9.4 Dependent Variables

**Table 3.9.4.1 Identified Dependent Variables**

<b>Green Products</b>	<b>Green Food Products</b>
1. Consumer green product purchase decision	1. Intention to purchase organic products
2. Pro-environmental purchasing behavior	2. Consumers' Evaluations of Packaged Food Products and Restaurant Menu Items
3. Ecological behavior intention	3. Purchasing organic foods
4. Ecological behavior	4. Consumers beliefs about organic foods
5. Intention to acquire information	5. Consumption of organic foods
6. Green product acquisition behavior	6. Consumers perception about organic foods
7. Consumer attitude towards recyclable products	7. Purchase of free range products
8. Ambivalent Attitude towards buying green products	8. Consumption of organic products
9. Discomfort, Brand attitude, Ad Believability, Green Claims Believability	

10. Usage amount	
11. Perception of green products effectiveness	
12. Choosing green products	

Source: Compiled from Existing Literature

The various dependent variables with respect to green products which can be obtained from existing literature are Consumer green product purchase decision, Pro-environmental purchasing behavior, Ecological behavior intention, Ecological behavior, Intention to acquire information, Green product acquisition behavior, Consumer attitude towards recyclable products, Ambivalent Attitude towards buying green products, Discomfort, Brand attitude, Ad Believability, Green Claims Believability, Usage amount, Perception of green products effectiveness, Choosing green products

The same way the dependent variables for green food products from existing literatures are Intention to purchase organic products, Consumers' Evaluations of Packaged Food Products and Restaurant Menu Items, Purchasing organic foods, Consumers beliefs about organic foods, Consumption of organic foods, Consumers perception about organic foods, Purchase of free range products, Consumption of organic products.

### 3.9.5 List of Independent and Dependant Variable studied based on the Research Gaps

**Table 3.9.5.1 Dependent and Independent Variables Identified with respect to Research Gap**

<b>Green Cosmetic products</b>	
<b>Independent Variable</b>	<b>Dependant Variable</b>
1) Environmental Consciousness 2) Price Sensitivity 3) Innovativeness in buying products 4) Product involvement 5) Health Consciousness 6) Safety 7) Quality 8) Brand 9) Knowledge 10) Information 11) Availability 12) Age 13) Gender 14) Last grade of school(Education) 15) Occupation 16) Income 17) Number of members in the household	1) Preference towards Green Cosmetic products
<b>Green Food products</b>	
1) Environmental Consciousness 2) Price Sensitivity 3) Innovativeness in buying products 4) Product involvement 5) Health Consciousness	1) Preference towards Green Food products



6) Safety	
7) Nutritional value	
8) Taste	
9) Knowledge	
10) Information	
11) Brand	
12) Looks	
13) Availability	
14) Age	
15) Gender	
16) Last grade of school(Education)	
17) Occupation	
18) Income	
19) Number of members in the household	

Source: Compiled from Existing Literature

So based upon the research gaps as obtained from the existing literatures and the above tables the independent variables which are studied in the research project for green cosmetic products are Environmental Consciousness, Price Sensitivity, Innovativeness in buying products, Product involvement, Health Consciousness, Safety, Quality, Brand, Knowledge, Information, Availability, Age, Gender, Last grade of school, Occupation, Income, Number of members in the household.

The same way the independent variables which are studied in the research project for green food products are Environmental Consciousness, Price Sensitivity, Innovativeness in buying products, Product involvement, Health Consciousness, Safety, Nutritional value, Taste, Knowledge, Information, Brand, Looks, Availability , Age, Gender, Last grade of school, Occupation, Income, Number of members in the household

The dependent variable which is studied for both green cosmetic and food products for the research project is Preference for Green Cosmetic or Food products.

### **3.10 The Problem Statement**

Since the concept of environmental consciousness has become a necessity to save the mankind, promoting consumption of green products is the need of the hour, owing to the fact that green products are environment friendly or sustainable products and are organic in nature. Considering the feeling for the health of environment and consumers, the usage of green products is emerging at the cost of conventional products. However, the magnitude of usage of green products is much behind the ideal one to safeguard the consumers and environment at large. Thus stretching the incidence and depth of usage of green products is a must. In order to achieve the pious objective, it is necessary to know the factors which insisted the users to go for the green products and prioritize the factors so identified so that the same can be ventilated to the masses for extending the consumer base for the green products.

For the purpose, while existing literature reveals the research findings in either a foreign set-up or in Indian set-up with a few dimensions of the problem, Cities like Kolkata is deprived of such published findings. Moreover, few dimensions such as; product effectivity (for cosmetic) and Looks of the Product (for food) which apparently play a vital role have not been under the purview of any existing literature studied.

### **3.11 Summary**

This chapter has provided an overview of the various researches being conducted in the area of green products, green marketing and associated areas. Through the literature survey, we have

been able to understand the historical development which has taken place and the direction in which future research is being steered. This chapter also develops on these background and future direction of research to develop our conceptual framework which will guide the rest of our research. This chapter also identifies the various independent and dependant variables already studied with respect to the various categories of the green products leading to the concept of Research Gap and the Problem Statement.

## **4. Objectives and Hypotheses**

### **4.1 Research Objectives**

Research Objectives have evolved from research problem statements, research gaps and have been developed for this research, after an in-depth study of the domain and review of literature, detailed in chapter 3. In finalization of the research objectives, due consideration has been taken to critically examine factors of consumer behaviour and the concept of “Green”, while ensuring practicality of these objectives. The research objectives have been developed accordingly are as follows:

4.1.1 To identify the factors influencing preference for Green cosmetic and food products in and around Kolkata, West Bengal, India.

4.1.2 To study and analyze the demographic factors influencing preferences for Green cosmetic and food products in and around Kolkata, West Bengal, India.

4.1.3 To study and analyze the psychographic factors influencing preferences for Green cosmetic and food products in and around Kolkata, West Bengal, India.

4.1.4 To study and analyze the product-specific factors influencing preferences for Green cosmetic and food products in and around Kolkata, West Bengal, India

### **4.2 Research Hypotheses**

In order to achieve the above mentioned objectives, a set of 37 hypotheses have been formulated, which will be tested and conclusions will be drawn on the basis of the test results. The hypotheses are mentioned below:

#### **4.2.1 For Green Cosmetic Products**

H1: Environmental Consciousness will not influence preference for Green Cosmetic Products.

H2: Price Sensitivity will not influence preference for Green Cosmetic Products.

H3: Innovativeness in Buying Products will not influence preference for Green Cosmetic products

H4: Product Involvement will not influence preference for Green Cosmetic Products.

H5: Health Consciousness will not influence preference for Green Cosmetic Products.

H6: Safety perspective will not influence preference for Green Cosmetic products.

H7: Quality of the Green Cosmetic product will not influence preference for it.

H8: Product Effectivity will not influence preference for Green Cosmetic Products.

H9: Product Knowledge will not influence preference for Green Cosmetic Products.

H10: Information about the Product will not influence preference for Green Cosmetic Products.

H11: Brand of the Green Cosmetic Product will not influence preference for it.

H12: Availability of the Product will not influence preference for Green Cosmetic Products.

H13: Age-group will not influence preference for Green Cosmetic Products

H14: Income will not influence preference for Green Cosmetic Products.

H15: Gender will not influence preference for Green Cosmetic Products.

H16: Education (Last grade of School Completed) will not influence preference for Green Cosmetic Products.

H17: Occupation will not influence preference for Green Cosmetic Products.

H18: Number of Members in the Household will not influence preference for Green Cosmetic Products.

#### **4.2.2 For Green Food Products**

H1: Environmental Consciousness will not influence preference for Green Food Products.

H2: Price Sensitivity will not influence preference for Green Food Products.

H3: Innovativeness in Buying Products will not influence preference for Green Food Products

H4: Product Involvement will not influence preference for Green Food Products.

H5: Health Consciousness will not influence preference for Green Food Products.

H6: Safety Perspective will not influence preference for Green Food Products.

H7: Product Knowledge will not influence preference for Green Food Products.

H8: Information about the Product will not influence preference for Green Food Products.

H9: Brand of the Green Food product will not influence preference for it.

H10: Availability of the Product will not influence preference for Green Food Products.

H11: Taste of the Green Food Products will not influence preference for it.

H12: Nutritional Value of the Green Food Products will not influence preference for it.

H13: Looks of the Green Food Products will not influence preference for it.

H14: Age-Group will not influence preference for Green Food Products.

H15: Income will not influence preference for Green Food Products.

H16: Gender will not influence preference for Green Food Products.

H17: Education (Last Grade of School Completed) will not influence preference for Green Food Products.

H18: Occupation will not influence preference for Green Food Products

H19: Number of Members in the Household will not influence preference for Green Food Products.

### **4.3 Summary**

This chapter gives a brief idea about the research objectives sets based upon the research gaps and the problem statement identified in the last chapter. Also, the hypotheses formulated for the research project were detailed out in this chapter.

## **5. Research Methodology**

### **5.1 Overview**

Research Methodology adopted for this research is described in the following sub sections: the research design, the sources of data, sampling design which contains sampling techniques used and data collection instruments developed. Also, the different analytical tools which are being used for analysis of the collected data to derive at the conclusions are also being explained.

### **5.2 Research Design**

The purpose of this study is to analyze the factors influencing preferences for green cosmetic and food products. Therefore, descriptive research design was being used as it is deemed to be the most appropriate. Various authors recommend the use of descriptive design (Orodho, 2004; Dane, 2000) to produce information that is of interest to marketers. Jackson (1994) contends that all research is partly descriptive in nature, in so far as the descriptive aspect defines and describes the research's who, what, when, where, why, and how, which are some of the questions raised in the study.

### **5.3 Sources of Data**

Population refers to the entire group of people, events or things of interest that the researcher wishes to investigate and wants to make inferences based on sample statistics (Sekaran & Bougie, 2010).

The target population for the study is five sets of people as follows:

- (a) Users of Green Cosmetic Products in and around Kolkata.
- (b) Users of Green Food Products in and around Kolkata.



- (c) Organizations working on the concept of “Green”, i.e., distributing green cosmetic and food products
- (d) NGOs working on the concept of “Green”, i.e., making the general people aware on the advantages and characteristics of the Green products.
- (e) Non-users of Green Cosmetic and Food Products but aware about the concept of Green products.

The sample size considered for the Study is 400 who are the users of green cosmetic and food products. Besides, organizations and NGOs working on the concept of Green and located in and around Kolkata are also considered in the study. Also, 200 non-users and occasional users of Green Cosmetic and Food products, but having knowledge about Green products are surveyed.

### 5.3.1 Population and Sample size (For Users of Green Cosmetic and Food products)

**Table 5.3.1.1 Population Size (For Users of Green Cosmetic and Food products)**

<b>Districts</b>	<b>Population (No. of Green Products Users)</b>		
	<b>Organized Retail Outlets(Approx)</b>	<b>Unorganized Retail Outlets(Approx)</b>	<b>Total(Approx)</b>
Kolkata	2,09,000	1,01,500	3,10,500
Howrah	87,000	1,64,000	2,51,000
North 24 Parganas	47,500	76,500	1,24,000
South 24 Parganas	79,000	97,000	1,76,000
Hooghly	41,000	68,000	1,09,000
<b>Total</b>	<b>4,63,500</b>	<b>5,07,000</b>	<b>9,70,500</b>

Source: Compiled from Databases of Retail Outlets dealing with Green Products

These are being specified for the purpose of this study as follows:

Precision rate: 5% and Confidence level: 95%, which are considered adequate for the study.

The formula for determining the sample size (Kothari, 2004) is:

$$n = \frac{z^2 . p . q . N}{e^2 . ( N - 1 ) + z^2 . p . q}$$

where,

n = sample size

N = population size

z = standard variate at given confidence level. The value of z for confidence level of 95% is 1.96

e = precision or acceptable error. The value of 'e' is taken as .05 for this study.

p = sample proportion and q = p -1

The most conservative sample size can be obtained by maximising 'n', and the sample will result in the desired precision. This is achieved if we take the value of p = 0.5. Sample size, considering p = 0.5 and the other values given above, is thus determined as follows:

Determined Sample Size (95% confidence level): 366 (Rounded as 400).

The table 5.3.6 explains the details about the calculation of the sample size, determined for a normal distribution at 95% confidence level by using the above mentioned formula. The approximate population size is mentioned both for organized and un-organized retail outlets selling green cosmetic and food products for the five districts, such as Kolkata, North 24 Parganas, South 24 Parganas, Howrah and Hooghly. Using these population size, the sample size is calculated which is 366, and it is rounded off to 400 .This sample size is surveyed both by physical surveys and online surveys. The sample size collected from physical survey is 275 and

from online survey is 125. The details about the data collection is mentioned in the sub-section 5.6. The table 5.3.7 shows the distribution of samples among the five districts surveyed in and around Kolkata. Likewise the table 5.3.8 shows the distribution of the samples as collected from the non-users of Green Cosmetic and Food products, but they know about the Green products. The sampling technique which was used for collecting the samples from the population is Judgemental sampling technique.

### **5.3.2 Sample Units as collected from the different districts surveyed (Users of Green Cosmetic and Food products)**

**Table 5.3.2.1 Sample Units as collected from the different districts surveyed (Users of Green Cosmetic and Food products)**

<b>Districts covered</b>	<b>Sample Units Considered</b>
Kolkata	123
Howrah	92
North 24 Parganas	58
South 24 Parganas	79
Hooghly	48
<b>Total</b>	<b>400</b>

### **5.3.3 Sample Units as collected from the different districts surveyed (Non Users of Green Cosmetic and Food products, but aware about the concept of “Green”)**

**Table 5.3.3.1 Sample Units as collected from the different districts surveyed (Non Users of Green Cosmetic and Food products, but aware about the concept of “Green”)**

<b>Districts covered</b>	<b>Sample Units Considered</b>
Kolkata	78
Howrah	48
North 24 Parganas	23

South 24 Parganas	33
Hooghly	18
<b>Total</b>	<b>200</b>

## 5.4 Research Instrument

The research instrument used to collect primary data was a structured questionnaire prepared by the researcher and personally administered to respondents for proper responses. Questionnaire was the main research instrument, along with face to face interviews with the respondents, to clarify the questions and capture additional insights. Questionnaire was used as it is economical, structured and appropriate to capture primary data to test the hypotheses formed and to answer the research questions.

The other mode of data capture used was an online questionnaire generated using Google docs. and was sent to the respondents through e-mail.

Data on customer footfalls and the most suitable places to collect the data identified in the preceding section has been selected by interaction with the experienced and knowledgeable persons from the various organizations and NGOs survey who are working on the concept of “Green”.

Unstructured interview was conducted for the other two sets of population, i.e., organizations and NGOs working on the concept of “Green”.

### 5.4.1 Pilot Survey Questionnaire

The survey instrument used was a structured questionnaire prepared by the researcher. The questionnaire consisted of nine sub-parts.

The first part of the questionnaire gives a brief introduction of the project and also defines the meaning of “Green Product”. The other questions used in this section are the following

- Knowledge about green product – in two classes, namely Yes and No
- Whether the respondents buy green products – in two classes, namely Yes and No.
- Amount spent for buying green products (monthly) – open –ended question
- Whether the respondents bought green products in this shopping trip – in two classes, namely Yes and No.
- Types of green products, the respondents normally buy for two categories, i.e., cosmetic and food with two classes each for the two categories, namely yes and no.
- Green product which the respondent have bought in this shopping trio – two classes, namely Yes and No.
- The different green products he bought in this shopping trip – open-ended question
- Reasons for buying the above mentioned green products – open-ended question
- Spend for buying green products in this shopping trip – open-ended question
- Frequently of buying green products – four classes, namely Less than once a month , once a month , once a fortnight and more than once a fortnight

The second part of the questionnaire collects the respondents’ views on the various factors of Environmental Consciousness designed based upon existing literature from Sanchez, 2010. The various factors are measured on a seven point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The various factors selected for measuring Environmental Consciousness are –

- I support different measures to improve water management leading to water conservation

- I am aware about the issues and problems related to the environment
- I would be willing to pay higher prices for water
- It is very difficult for a person like me to do anything about the environment
- I believe that using recyclable materials for daily use will improve the environment

The third part of the questionnaire collects the respondents' views on the various factors of Price Sensitivity designed based upon existing literature from Goldsmith, 1991. The various factors are measured on a seven point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The various factors selected for measuring Price Sensitivity are –

- In general the price or cost of buying green products is important to me
- I know that a new kind of green product is likely to be more expensive than older ones , but that does not matter to me
- I am less willing to buy a green product if I think that it will be high in price
- I don't mind paying more to try out a new green product
- A really good green product is worth paying a lot of money
- I don't mind spending a lot of money to buy a green product

The fourth part of the questionnaire collects the respondents' views on the various factors on Innovativeness in buying products designed based upon existing literature from Grewal, 2000. The various factors are measured on a seven point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The various factors selected for measuring Innovativeness in buying products are –

- I like to take a chance in buying new products
- I like to try new and different products
- I am the first in my circle of friends to buy a new product when it appears in the market
- I am the first in my circle of friends to experiment with the brands of latest products

The fifth part of the questionnaire collects the respondents' views on the various factors on Product involvement designed based upon existing literature from Grewal, 2000. The various factors are measured on a seven point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The various factors selected for measuring Product Involvement are –

- I select the green products very carefully
- Using branded green products helps me express my personality
- You can tell a lot about a person from whether he/she buys green products
- I believe different brands of green products would give different amounts of satisfaction

The sixth part of the questionnaire collects the respondents' views on the various factors on Health Consciousness designed based upon existing literature from Grewal, 2000. The various factors are measured on a seven point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The various factors selected for measuring Health Consciousness are –

- I worry that there are chemicals in my food
- I worry that there are chemicals in my cosmetic products
- I'm concerned about my drinking water quality.

- I avoid foods containing preservatives.
- I read more health-related articles than I did 3 years ago
- I'm interested in information about my health.
- I'm concerned about my health all the time.
- Pollution in food and cosmetic products does not bother me.

The seventh part of the questionnaire collects the respondents' views on the various general characteristics about green cosmetic products designed based upon existing literatures from Ahmad,2010 ;Chang2011;Davies,1995;Bamberg,2006 and Lea2005. The various factors are measured on a seven point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The various factors selected for measuring general characteristics about green cosmetic products

- Green cosmetic products are safer to use than non-green cosmetic products
- Green cosmetic products are of better quality than non-green cosmetic products
- Green cosmetic products are more effective than non-green cosmetic products
- Branded green cosmetic products are better than non-branded green cosmetic products
- Less knowledge about green cosmetic products prevent people from buying them
- Less information about green cosmetic products prevent people from buying them
- Less availability about green cosmetic products prevent people from buying them
- Green cosmetic products are expensive than non-green cosmetic products

Also, the last question asked in this part is users' experience of using green cosmetic products?

The responses are being measured on a seven point Likert scale where, 1=Not at all satisfied and 7 = Extremely Satisfied.



The eighth part of the questionnaire collects the respondents' views on the various general characteristics about green food products designed based upon existing literatures from Ahmad, 2010; Kozup, 2003; Davies, 1995; Bamberg, 2006; Lin, 2012; Chang, 2011 and Lea, 2005. The various factors are measured on a seven point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The various factors selected for measuring general characteristics about green food products –

- Green food products are safer than non- green food products
- Green food products are healthier than non-green food products
- Green food products have more nutritional value than non-green food products
- Green food products are tastier than non-green food products
- Less knowledge about green food products prevent people from buying them
- Less information about green food products prevent people from buying them
- Branded green products are better than non-branded green food products
- Green food products do not look good in appearance
- Less availability about green food products prevent people from buying them
- Green food products are expensive

Also, the last question asked in this part is users' experience of using green food products.

The responses are being measured on a seven point Likert scale where, 1=Not at all satisfied and 7 = Extremely Satisfied.

The ninth part consists of all the general demographic features of the respondents and their identity as follows-

- Age – grouped into four classes, 18 – 25, 26 – 35, 36 – 50, > 50

- Gender – in two classes namely, male and female.
- Educational qualification – in three classes namely, high school, graduation and post graduation
- Occupation – in four classes namely, student, service, self-employed professional and self-employed business,
- Monthly income of the family – in five classes namely, <25,000, 25,000– 49,999, 50,000 – 74,999, 75,000 – 99,999, >=1, 00,000
- Number of members in the household – in three classes namely, < 2, 2 – 4, >= 5

Name of the respondent along with his contact no. and location was sought only to personalize identification of respondents and was not put to any further analysis. The contact no. was used as an optional field as many respondents want to avoid their contact details. The survey got 68% (approx) respondents' contact details.

The questionnaire is given in Appendix I.

#### **5.4.2 Final Survey Questionnaire for Respondents**

Based on the experience gathered during pilot survey and on analysis of data obtained from the pilot study, the questionnaire was improved in order to collect data during the final survey with maximum factual accuracy.

The changes made in the questionnaire are summarized below:

5.4.2.1 The overall length of the questionnaire was reduced by removing some questions to make the length optimal. It was observed during the pilot survey that many respondents, who initially expressed willingness to respond, withdrew the moment they saw the questionnaire, giving excuses. Many respondents displayed signs of fatigue, disinterest at some point time while responding to a lengthy questionnaire, Further as respondents were intercepted in the marketplace while they were involved in shopping and not in the comfort of their homes, they

wanted to get over with the task hurriedly. Such an adverse perceived situation is not expected to fetch correct, unbiased responses from sample elements. Hence the total numbers of questions were reduced to make the questionnaire appear as less bothersome to respondents. Certain dimensions of constructs were eliminated as they were overlapping with dimensions of other constructs and care was taken to ensure that validity of the construct was not sacrificed in the process.

5.4.2.2 Certain wordings were changed as a many respondents did not understand them. The questionnaire was thus modified to ensure usage of simple words, which are more commonly used and better understood.

5.4.2.3 The formats of questions to ascertain experience regarding usage of the green cosmetic and food products were changed from a five point Likert scale to a seven point Likert scale to match with the format of other items in the questionnaire. This was done as some respondents were unsure as to how their response needs to be marked in the questionnaire. This ensured that any such ambiguity was removed from the final questionnaire.

5.4.2.4 The constructs were reduced in all the different psychographic variables and the general characteristics of the green cosmetic and food products. For Environmental Consciousness, Price Sensitivity, Innovativeness in buying products, Product Involvement and Health consciousness, some constructs were deleted to make the questionnaire more acceptable to the respondents for answering. Also for the general characteristics about the green cosmetic and food products, some specific items were deleted as their responses were already collected from the initial part of psychographic variables to make the questionnaire short in size.

The questionnaire is given in Appendix II.

5.4.3 Final set of questions used for survey interview conducted for the “Organizations working on the concept of “Green”, i.e., distributing green cosmetic and food products”

- Q1. Briefly describe the profile of your organization?
- Q2. What is the marketing channel you normally use for selling the products?
- Q3. Do you face any challenges while selling the green products? If yes , briefly state about the challenges.
- Q4. How are you seeing the future growth prospect of the green products market in Kolkata?
- Q5. Is there any difference between Kolkata and its suburbs with respect to the popularity of the green products?
- 5.4.4 Final survey interview conducted for the NGOs working on the concept of “Green”, i.e., awaring and informing the general people on the advantages and characteristics of the Green products.

- Q1. What is the current state of market of green products in Kolkata?
- Q2. How the consumers are responding to the concept of green products?
- Q3. How are you helping to promote the concept of “green”?
- Q4. How the consumers of Kolkata and also its suburbs are responding with respect to the green products?
- Q5. Are you facing any challenges? If yes, briefly state about the challenges.

## **5.5 Reliability Analysis**

The factors that emerged in the questionnaire for collection of responses were tested for internal reliability using Cronbach’s alpha which indicates the average inter-item correlation within each of the factors. Those factors resulting in a Cronbach’s alpha of 0.7 or greater are generally considered to be reliable and therefore useful for further analysis as part of a specific variable. The Cronbach’s alpha results are shown in the below mentioned table. Since all the scores are

above the basic requirement of 0.7, the factors and their constructs were reliable to go for further analysis.

**Table 5.5.1 Cronbach's Alpha Score for the different constructs of the factors used in the Questionnaire**

<b><u>Factors</u></b>	<b><u>Constructs</u></b>	<b><u>Cronbach's</u> <u>Alpha</u> <u>score</u></b>
Environmental Consciousness	I support different measures to improve water management leading to water conservation	0.864
	I am aware about the issues and problems related to the environment	
	I would be willing to pay higher prices for water	
	It is very difficult for a person like me to do anything about the environment	
	I believe that using recyclable materials for daily use will improve the environment	
Price Sensitivity	In general the price or cost of buying green products is important to me	0.776
	I know that a new kind of green product is likely to be more expensive than older ones , but that does not matter to me	
	I am less willing to buy a green product if I think that it will be	

	high in price	
	I don't mind paying more to try out a new green product	
	A really good green product is worth paying a lot of money	
	I don't mind spending a lot of money to buy a green product	
Innovativeness in buying products	I like to take a chance in buying new products	0.795
	I like to try new and different products	
	I am the first in my circle of friends to buy a new product when it appears in the market	
	I am the first in my circle of friends to experiment with the brands of latest products	
Product Involvement	I select the green products very carefully	0.842
	Using branded green products helps me express my personality	
	You can tell a lot about a person from whether he/she buys green products	
	I believe different brands of green products would give different amounts of satisfaction	
Health Consciousness	I worry that there are chemicals in my food.	0.819
	I worry that there are chemicals in my cosmetic products	

	I'm concerned about my drinking water quality.	
	I avoid foods containing preservatives.	
	I read more health-related articles than I did 3 years ago.	
	I'm interested in information about my health.	
	I'm concerned about my health all the time.	
	Pollution in food and cosmetic products does not bother me.	
General characteristics about Green Cosmetic products	Green cosmetic products are safer to use than non-green cosmetic products	0.768
	Green cosmetic products are of better quality than non-green cosmetic products	
	Green cosmetic products are more effective than non-green cosmetic products	
	Branded green cosmetic products are better than non-branded green cosmetic products	
	Less knowledge about green cosmetic products prevent people from buying them	
	Less information about green cosmetic products prevent people from buying them	
	Less availability about green cosmetic products prevent people	

	from buying them	
	Green cosmetic products are expensive than non-green cosmetic products	
General characteristics about Green Food products	Green food products are safer than non- green food products	0.794
	Green food products are healthier than non-green food products	
	Green food products have more nutritional value than non-green food products	
	Green food products are tastier than non-green food products	
	Less knowledge about green food products prevent people from buying them	
	Less information about green food products prevent people from buying them	
	Branded green products are better than non-branded green food products	
	Green food products do not look good in appearance	
	Less availability about green food products prevent people from buying them	
	Green food products are expensive	

Source: SPSS Output



## 5.6 Details about Data Collection

The data with the help of the above described questionnaires had been collected using both online and offline questionnaires.

### 5.6.1 Offline Procedure

The hard copies of the questionnaires were distributed in the following areas for data collection:-

- Spencer's Hyper, Axis Mall , Rajarhat , Kolkata
- Spencer's Hyper , Mani Square , EM Bypass , Kolkata
- Spencer's Hyper , South City Mall , Anwar Shah Road , Kolkata
- Spencer's Hyper , Rashbehari , Gariahat , Kolkata
- Spencer's Hyper , Quest mall , Park circus , Kolkata
- Rainbow , Sarat Bose Road , Kolkata( Shops selling green products only)
- Living free , Gariahat Road , Kolkata( Shops selling green products only)
- Down to Earth , Alipore , Kolkata( Shops selling green products only)
- Areas covered by Aakash Farms ( Bongaon , Basirhat , Naihati , Shyamnagar , Sodepur , Hoogly , Tribeni , Bansberia etc.)
- Areas covered by Aromatic Herbals Ltd. (Diamond Harbour, Sonarpur, Baruipur , Mallikpur , Shyamnagar etc.)
- Customers of Sabuj Sathi ( North Kolkata)(NGO working on the concept of green)
- Customers of Indrakala ( South Kolkata , Bongaon , Madhyamgram ) )(NGO working on the concept of green)

### **5.6.2 Online Procedure**

The final survey questionnaire was formulated online using Google Docs to be distributed to the existing consumers of the green products. All the existing consumers' database was being collected from the Organizations and NGOs working on the concept of “Green” and some social and professional networking websites. Also some non-users and occasional users of the green products are surveyed.

### **5.7 Stores selling Green Cosmetic and Food Products**

- Spencers Hyper
- Arome chain of retail stores
- Rainbow
- Living Free
- Down to Earth
- Aakansha Farms
- Aromatic Herbals
- Local Vegetable and Fruit sellers(Un-organized)

### **5.8 Brands of the various Green Cosmetic and Food products**

- 24 Mantra
- Organic India
- Biotique
- Pristine
- Nourish Organic

- La Flora
- Lass Cosmetics
- Dear Earth
- Naturally Yours
- Organic Tattva
- Vision Fresh
- Abali
- Chamong
- Grenera
- Biobloom
- Fuschia
- Aaroyagam
- Ancient Living
- AXL
- Bio-bloom

## **5.9 Analysis of Results**

The data was first presented in tabular form representing the different responses' given by the respondents. Then analysis was done in five stages as follows:

### **5.9.1 Stage I**

The basic characteristics with respect to the nature of using green cosmetic and food products are being analyzed using descriptive statistics and graphical tools.

### **5.9.2 Stage II**

The five psychographic variables which were mentioned in the questionnaire consist of internal constructs. So, all together 27 constructs were grouped into factors using the Exploratory Factor Analysis (This is conducted to uncover the underlying structure of a relatively large set of variables and grouping them together)

### **5.9.3 Stage III**

Also, the constructs with respect to the five psychographic variables (Environmental Consciousness, Price Sensitivity, and Innovativeness in buying products, Product involvement and Health Consciousness) are being prioritized using Multiple Regression, to uncover the underlying structure of a relatively large set of variables.

### **5.9.4 Stage IV**

All the five psychographic variables (Environmental Consciousness, Price Sensitivity, Innovativeness in buying products, Product involvement and Health Consciousness) and the other characteristics with respect to the green cosmetic and food products are being tested with respect to the dependent variable, i.e., consumers' preference for the green cosmetic and food products. This is to find out how the various characteristics factors influence consumers' preference for the green cosmetic and food products. The above analysis was done using one-way ANOVA (Analysis of Variance) since the scales used in the questionnaire are rating scales.

### **5.9.5 Stage V**

Demographic profile of the respondents was tabulated in a self explanatory manner. Percentage analyses were performed to find out exact number of people giving response in similar manner. Demographic categories of age, income level, gender, educational qualification, occupation and number of members in the household were then analyzed using one way ANOVA (Analysis of Variance – the technique where the influence of one factor on another factor is checked). The researcher employed ANOVA for inspecting whether the responses of sample depend on demographic variables or not for the dependent variable, i.e., consumers' preference for the green cosmetic and food products to find out how the various demographic factors influence consumers' preference for the green cosmetic and food products.

### **5.9.6 Stage VII**

In order to outline why the non-users don't prefer the green cosmetic and food products, a sample size of 200 non-users have also been considered in this study. This section explains the perceptual impact of different psychographic and independent variables on the preference for green cosmetic and food products with respect to the non-users of the products. Although the respondents considered for this section are non-users of green cosmetic products, they are aware of and have knowledge about green cosmetic and food products. This section reveals the responses captured on the basis "Had the respondents been the users of green cosmetic products, what would have been their responses" and in line with the questionnaire administered on the users of green cosmetic products. By doing so, it helps substantiating the findings from the users. All the above analysis was done using IBM SPSS (Version 19).

### 5.10 Naming of the variables used in the study with respect to the factors used in the Questionnaire

**Table 5.10.1 List of Variables Considered**

<b>Variables(used in the study) contributing for the popularity of Green products</b>	
<b>Environmental Consciousness</b>	
<b>Variable</b>	<b>Description</b>
v1	I support different measures to improve water management leading to water conservation
v2	I am aware about the issues and problems related to the environment
v3	I would be willing to pay higher prices for water
v4	It is very difficult for a person like me to do anything about the environment
v5	I believe that using recyclable materials for daily use will improve the environment
<b>Price Sensitivity</b>	
v1	In general the price or cost of buying green products is important to me
v2	I know that a new kind of green product is likely to be more expensive than older ones , but that does not matter to me
v3	I am less willing to buy a green product if I think that it will be high in price
v4	I don't mind paying more to try out a new green product
v5	A really good green product is worth paying a lot of money

v6	I don't mind spending a lot of money to buy a green product
<b>Innovativeness in buying Products</b>	
v1	I like to take a chance in buying new products
v2	I like to try new and different products
v3	I am the first in my circle of friends to buy a new product when it appears in the market
v4	I am the first in my circle of friends to experiment with the brands of latest products
<b>Product Involvement</b>	
v1	I select the green products very carefully
v2	Using branded green products helps me express my personality
v3	You can tell a lot about a person from whether he/she buys green products
v4	I believe different brands of green products would give different amounts of satisfaction
<b>Health Consciousness</b>	
v1	I worry that there are chemicals in my food.
v2	I worry that there are chemicals in my cosmetic products
v3	I'm concerned about my drinking water quality.
v4	I avoid foods containing preservatives.

v5	I read more health-related articles than I did 3 years ago.
v6	I'm interested in information about my health.
v7	I'm concerned about my health all the time.
v8	Pollution in food and cosmetic products does not bother me.
<b>General characteristics about Green Cosmetic Products</b>	
v1	Green cosmetic products are safer to use than non-green cosmetic products
v2	Green cosmetic products are of better quality than non-green cosmetic products
v3	Green cosmetic products are more effective than non-green cosmetic products
v4	Branded green cosmetic products are better than non-branded green cosmetic products
v5	Less knowledge about green cosmetic products prevent people from buying them
v6	Less information about green cosmetic products prevent people from buying them
v7	Less availability about green cosmetic products prevent people from buying them
v8	Green cosmetic products are expensive than non-green cosmetic products
<b>General characteristics about Green Food Products</b>	
v1	Green food products are safer than non- green food products
v2	Green food products are healthier than non-green food products



v3	Green food products have more nutritional value than non-green food products
v4	Green food products are tastier than non-green food products
v5	Less knowledge about green food products prevent people from buying them
v6	Less information about green food products prevent people from buying them
v7	Branded green products are better than non-branded green food products
v8	Green food products do not look good in appearance
v9	Less availability about green food products prevent people from buying them
v10	Green food products are expensive

Source: Compiled from Literature Reviewed

## 5.11 Summary

This chapter provided a detailed explanation of the research design and the methods employed to enable collection and analysis of data capable of answering the research questions. An overview of the mixed methods approach was provided, along with detailed explanations of each of the phases within the study. Pilot study was conducted initially before finalizing with the research design and also questionnaire design. The quantitative phase is also explained, identifying the survey questionnaire development and analysis process. Integral to the discussion was consideration of the ethical elements of the study as well as issues of reliability and validity.

## 6. Data Analysis and Findings

### 6.1 Results of the Factor Analysis for Identification of the Factors

#### 6.1.1 Environmental Consciousness

**Table 6.1.1.1 Factor Analysis for Environmental Consciousness**

**Rotated Component Matrix**

	Component	
	1	2
v4	.692	
v5	.662	
v1		.761
v3		.792
v2		.771

**Table 6.1.1.2 List of variables and components**

Variable	Description	Components
v1	I support different measures to improve water management leading to water conservation	Environmental Sense(v1 , v2 and v3)  Environmental Callousness (v4 and v5)
v2	I am aware about the issues and problems related to the environment	
v3	I would be willing to pay higher prices for water	
v4	It is very difficult for a person like me to do anything about the environment	
v5	I believe that using recyclable materials for daily use will improve the environment	

**Source: SPSS Output**

From the table 6.1.1.1, it is found that the variables v1, v2, v3 had more loadings on component 2, thus making it a Component which can be named as Environmental Sense. Likewise, variables v4 and v5 have more loadings on component 1 and making it a part of component named as Environmental Callousness.

## 6.1.2 Price Sensitivity

**Table 6.1.2.1 Factor Analysis for Price Sensitivity**

**Rotated Component Matrix**

	Component		
	1	2	3
v4	.855		
v6	.823		
v2		.704	
v1		.650	
v5			.812
v3		.440	.667

**Table 6.1.2.2 List of variables and components**

Variable	Description	Components
v1	In general the price or cost of buying green products is important to me	Higher Price(v4 and v6)  Price Sensitivity(v1 and v2)  Price Barrier(v3 and v5)
v2	I know that a new kind of green product is likely to be more expensive than older ones , but that does not matter to me	
v3	I am less willing to buy a green product if I think that it will be high in price	
v4	I don't mind paying more to try out a new green product	
v5	A really good green product is worth paying a lot of money	
v6	I don't mind spending a lot of money to buy a green product	

**Source: SPSS output**

From the table 6.1.2.1, it can be stated that the variables v4 and v5 can be combined to be a part of component 1, named as Higher Price. The variables v1 and v2 can be combined to be part of

component 2 named as Price Sensitivity. Likewise the variables v3 and v5 can be combined to form component 3 named as Price Barrier.

### 6.1.3 Innovativeness

**Table 6.1.3.1 Factor Analysis for Innovativeness**

**Rotated Component Matrix**

	Component	
	1	2
v1	.868	
v2	.803	
v3	.399	.386
v4		.935

**Table 6.1.3.2 List of variables and components**

Variable	Description	Components
v1	I like to take a chance in buying new products	New Product Initiative(v1 , v2 and v3) Experimental Attitude(v4)
v2	I like to try new and different products	
v3	I am the first in my circle of friends to buy a new product when it appears in the market	
v4	I am the first in my circle of friends to experiment with the brands of latest products	

**Source: SPSS Output**

For the case of Innovativeness, it is evident from Table 6.1.3.1 that the variables v1, v2 and v3 can be combined to form a component 1 named as New Product Initiative. The variable 4 alone will be forming component 2 named as Experimental Attitude.

#### 6.1.4 Involvement

**Table 6.1.4.1 Factor Analysis for Involvement**

**Rotated Component Matrix**

	Component	
	1	2
v1	.868	
v4	.803	
v2	.399	.435
v3		.935

**Table 6.1.4.2 List of variables and components**

Variable	Description	Components
v1	I select the green products very carefully	Satisfaction from Branded Green products (v1 and v4) Branded green products reveal personality(v2 and v3)
v2	Using branded green products helps me express my personality	
v3	You can tell a lot about a person from whether he/she buys green products	
v4	I believe different brands of green products would give different amounts of satisfaction	

**Source: SPSS Output**

From the table 6.1.4.1, it is inferred that the variables v1 and v4 can be combined to form a part of Component 1 , named as Satisfaction from Branded Green products . Likewise, the variables v2 and v3 are combined to form component 2, named as Branded green products reveal personality.

### 6.1.5 Health Consciousness

**Table 6.1.5.1 Factor Analysis for Health Consciousness**

#### **Rotated Component Matrix**

	Component			
	1	2	3	4
v2	.793			
v5	-.686			
v7		.758		
v1		.629		
v4			.837	
v6		.785		
v8	-.313		.378	.487
v3		.375	-.436	.447

**Table 6.1.5.2 List of variables and components**

Variable	Description	Components
v1	I worry that there are chemicals in my food.	Health Sensitivity(v2 and v5)
v2	I worry that there are chemicals in my cosmetic products	
v3	I'm concerned about my drinking water quality.	Health Concern(v1, v6 and v7)  Avoid preservative food(v4) Food pollution(v3 and v8)
v4	I avoid foods containing preservatives.	
v5	I read more health-related articles than I did 3 years ago.	
v6	I'm interested in information about my health.	
v7	I'm concerned about my health all the time.	
v8	Pollution in food and cosmetic products does not bother me.	

**Source: SPSS Output**

In case of health consciousness of the respondents, the variables 2 and 5 can be combined to form component 1, named as Health Sensitivity. The variables v1, v6 and v7 can be combined to

form component 2 named as Health Concern. Likewise the variable v4 alone will form component 3 named as Avoid Preservative Food. Lastly, the variables v3 and v8 are combined to form a part of component 4 named as Food Pollution.

#### 6.1.6 Characteristics of Green Cosmetic Products

**Table 6.1.6.1 Factor Analysis for Characteristics of Green Cosmetic Products**

**Rotated Component Matrix**

	Component			
	1	2	3	4
v6	.890			
v5	.859			
v4		.757		
v3		.683		
v1			.745	-.337
v2			.612	.437
v7			.434	
v8				-.432

**Table 6.1.6.2 List of variables and components**

Variable	Description	Components
v1	Green cosmetic products are safer to use than non-green cosmetic products	Green Product Knowledge(v5 and v6)  Branded Green Cosmetic Products(v4 and v3)  Reliability of Green Cosmetic Product (v7 , v1 and v2) Green Products expensive(v8)
v2	Green cosmetic products are of better quality than non-green cosmetic products	
v3	Green cosmetic products are more effective than non-green cosmetic products	
v4	Branded green cosmetic products are better than non-branded green cosmetic products	
v5	Less knowledge about green cosmetic products prevent people from buying them	
v6	Less information about green cosmetic products prevent people from buying them	

v7	Less availability about green cosmetic products prevent people from buying them	
v8	Green cosmetic products are expensive than non-green cosmetic products	

**Source: SPSS Output**

As exhibited in table 6.1.6.1, in case of the Green Cosmetic products, the variables v5 and v6 can be combined to form component 1 which is named as Green Product Knowledge. The variables v3 and v4 are combined to form component 2, which is named as Branded Green Cosmetic Products. The third component 3, component 3 is formed by combining the variables v1, v2 and v7 and named as Reliability of Green Cosmetic Product. The remaining variable v8 forms the 4<sup>th</sup> component, named as Green Products Expensive.

### 6.1.7 Characteristics of Green Food Products

**Table 6.1.7.1 Factor Analysis for Characteristics of Green Food Products**

**Rotated Component Matrix<sup>a</sup>**

	Component				
	1	2	3	4	5
v3	.712				
v4	.696				
v2		.696			
v5		-.575	.309		
v6			.749		
v9	.306	.320	.527		
v1				-.770	
v10				.699	
v7					-.764
v8					.727



**Table 6.1.7.2 List of variables and components**

Variable	Description	Components
v1	Green food products are safer than non- green food products	Green Food Products Nutritional Taste(v3 and v4)  Green Food Products are Healthier(v2)  Lack of information and availability of green Food Products(v5 , v6 and v9)  Green Food Products are safe and expensive(v1 and v10)  Branded Green Food Products' Look and quality(v7 and v8)
v2	Green food products are healthier than non-green food products	
v3	Green food products have more nutritional value than non-green food products	
v4	Green food products are tastier than non-green food products	
v5	Less knowledge about green food products prevent people from buying them	
v6	Less information about green food products prevent people from buying them	
v7	Branded green products are better than non-branded green food products	
v8	Green food products do not look good in appearance	
v9	Less availability about green food products prevent people from buying them	
v10	Green food products are expensive	

**Source: SPSS Output**

Table 6.1.7.1 reveals that in case of the Green Food products, the variables v3 and v4 are combined to form component 1, named as Green Food Products Nutritional Taste. The variable v2 forms component 2, which is named as Green Food Products are Healthier. The variables v5, v6 and v9 are combined to form component 3 which is named as Lack of information and availability of green Food Products. Likewise the variables v1 and v10 are combined to form component 4 named as Green Food Products are safe and expensive. Lastly the variables v7 and

v8 are combined to form component 5, which is named as Branded Green Food Products' Look and quality.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy test result obtained was greater than 0.50 indicating that the sample is reasonably adequate and the data supports application of factor analysis.

## **6.2 Prioritization of the Factors using Standardized Regression Coefficients – Green Cosmetic Products**

### **6.2.1 Environmental Consciousness**

In this Section of the present Study, the Criterion Variable is the Preference for Green Cosmetic Products for which five predictor variables related to Environmental Consciousness in buying Green Cosmetic Products identified and on which the data has been collected are;

- $V_1$  : Users of Green Cosmetic Products supports different measures to improve water management leading to water conservation
- $V_2$  : Users of Green Cosmetic Products is aware about the issues and problems related to the environment
- $V_3$  : Users of Green Cosmetic Products would be willing to pay higher prices for water
- $V_4$  : It is very difficult for the User of Green Cosmetic Products to do anything about the environment
- $V_5$  : Users of Green Cosmetic Products believes that using recyclable materials for daily use will improve the environment

As stated earlier, the objective of this Section of the Study is to prioritize the factor/s that influences the consumer's preference for green cosmetic products in the context of Environmental Consciousness in buying Green Cosmetic Products. For the purpose, standardized regression coefficients (Beta values) have been considered.

**Table 6.2.1.1 Regression Analysis for Environmental Consciousness regarding Green Cosmetic Products**

Coefficients <sup>a</sup>				
Model		Un-standardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	4.284	.652	
	v <sub>1</sub>	-.055	.083	-.034
	v <sub>2</sub>	.015	.063	.012
	v <sub>3</sub>	.004	.056	.004
	v <sub>4</sub>	.035	.060	.029
	v <sub>5</sub>	.014	.049	.015
a. Dependent Variable : v <sub>6</sub>				

**Source: SPSS Output**

We know that the standardized regression coefficients (Beta) is a measure of how strongly each predictor variable influences the criterion variable and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

Table 6.2.1.1 reveals that  $\beta$  value for V<sub>4</sub> is the highest, i.e., 0.029. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the variable, i.e., ‘user of green cosmetic products to do anything about the environment’ has high level of impact on preferring green cosmetic products. Similarly, the  $\beta$  value for V<sub>3</sub> is the lowest, i.e., 0.004. It means, the variable – ‘willing to pay higher prices for water’ has the least level of impact on preferring green cosmetic products.

On the contrary,  $\beta$  value for V<sub>1</sub> is the highest with negative sign, i.e., -0.055. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative

direction. It means, users' support for different measures to improve water management leading to water conservation has high level of impact on not preferring green cosmetic products, which seems to be bit unusual. In fact, it may be inferred that this variable is not apt for ascertaining consumers' preference for green cosmetic products. Thus, out of the five variables identified, on the basis of degree of influencing positively consumers' preference for the green cosmetic products, the priority list is as follows;  $V_4$ ,  $V_5$ ,  $V_2$  and  $V_3$ .

### **6.2.2 Price Sensitivity**

In this section of the present study, the Criterion Variable is the Preference for Green Cosmetic Products for which six predictor variables identified and on which the data has been collected are;

- $V_1$  : The price of buying Green Cosmetic Products is important to users of Green Cosmetic Products
- $V_2$  : Users of Green Cosmetic Products know that a new kind of green cosmetic product is likely to be more expensive than older ones, but that does not matter to them
- $V_3$  : Users of Green Cosmetic Products are less willing to buy a green product if they think that it will be high in price
- $V_4$  : Users of Green Cosmetic Products don't mind paying more to try out a new green cosmetic product
- $V_5$  : Users of Green Cosmetic Products think that really good Green Cosmetic product is worth paying a lot of money
- $V_6$  : Users of Green Cosmetic Products don't mind spending a lot of money to buy a Green Cosmetic product

The objective of this section of the study is to prioritize the factor/s that influences the consumers' preference for green cosmetic products in the context of Price Sensitivity.

**Table 6.2.2.1 Regression Analysis for Price Sensitivity regarding Green Cosmetic Products**

Coefficients <sup>a</sup>				
Model		Un-standardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	4.612	.556	
	v1	-.032	.055	-.029
	v2	.029	.055	.027
	v3	-.093	.052	-.092
	v4	-.100	.051	-.101
	v5	.063	.057	.055
	v6	.066	.054	.062
a. Dependent Variable: v7				

**Source: SPSS Output**

Table 6.2.2.1 reveals that  $\beta$  value for  $V_6$  is the highest, i.e., .062. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the said variable, i.e., ‘Users of Green Cosmetic Products don’t mind spending a lot of money to buy a Green Cosmetic product’ has high level of impact on preferring green cosmetic products. Similarly, the  $\beta$  value for  $V_2$  is the lowest, i.e., 0.027. It means, the variable – ‘Users of Green Cosmetic Products know that a new kind of green cosmetic product is likely to be more expensive than older ones, but that does not matter to them’.

On the contrary,  $\beta$  value for  $V_3$  is the highest with negative sign, i.e., -0.092. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means, Users of Green Cosmetic Products are less willing to buy a green product if they think that it will be high in price has high level of impact on not preferring green cosmetic products. In fact, it may be inferred that this variable is not apt for ascertaining consumers’ preference for green cosmetic products. Thus, out of the six variables identified, on

the basis of degree of influencing positively consumers' preference for the green cosmetic products, the priority list is as follows;  $V_6$ ,  $V_5$  and  $V_2$ .

### 6.2.3 Innovativeness in buying products

In this section, the Criterion Variable is the Preference for Green Cosmetic Products for which five predictor variables related to Consumer's Innovativeness in buying Green Cosmetic Products identified and on which the data has been collected are;

$V_1$  : Users of Green Cosmetic Products like to take a chance in buying new products

$V_2$  : Users of Green Cosmetic Products like to try new and different products

$V_3$  : Users of Green Cosmetic Products is the first in his circle of friends to buy a new product when it appears in the market

$V_4$  : Users of Green Cosmetic Products is the first in his circle of friends to experiment with the brands of latest products

As stated earlier, the objective of this Section of the Study is to prioritize the factor/s that influences the consumer's preference for green cosmetic products in the context of Consumer's Innovativeness in buying Green Cosmetic Products.

**Table 6.2.3.1 Regression Analysis for Innovativeness in buying products regarding Green Cosmetic Products**

Coefficients <sup>a</sup>				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	4.553	.397	
	v1	.033	.049	.036
	v2	.026	.056	.025
	v3	-.077	.056	-.069

	v4	-.038	.048	-.040
a. Dependent Variable : v5				

**Source: SPSS Output**

Table 6.2.3.1 reveals that  $\beta$  value for  $V_1$  is the highest, i.e., 0.036. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the variable, i.e., ‘Users of Green Cosmetic Products like to take a chance in buying new products’ has high level of impact on preferring green cosmetic products. Similarly, the  $\beta$  value for  $V_2$  is the lowest, i.e., 0.025. It means, the variable – ‘Users of Green Cosmetic Products like to try new and different products’ has the least level of impact on preferring green cosmetic products.

On the contrary, the  $\beta$  value for  $V_3$  is the highest with negative sign, i.e., -0.069. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means, ‘Users of Green Cosmetic Products is the first in his circle of friends to buy a new product when it appears in the market’ has high level of impact on not preferring green cosmetic products, which seems to be bit unusual. In fact, it may be inferred that this variable is not apt for ascertaining consumers’ preference for green cosmetic products. Thus, out of the two variables identified, on the basis of degree of influencing positively consumers’ preference for the green cosmetic products, the priority list is as follows;  $V_1$ , and  $V_2$ .

#### **6.2.4 Product Involvement**

Here also, the Criterion Variable is the Preference for Green Cosmetic Products for which five predictor variables related to Consumers Involvement in Buying Green Cosmetic Products are identified and on which the data has been collected are;

$V_1$  : Users of Green Cosmetic Products select the green products very carefully

$V_2$  : Using branded green products help Users of Green Cosmetic Products express their personality

$V_3$  : One can tell a lot about a person from whether they buy Green Cosmetic Products

$V_4$  : Users of Green Cosmetic Products believe different brands of green products would give different amounts of satisfaction

**Table 6.2.4.1 Regression Analysis for Product Involvement regarding Green Cosmetic Products**

Coefficients <sup>a</sup>				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	4.196	.403	
	v1	.052	.051	.051
	v2	-.022	.046	-.024
	v3	.015	.048	.016
	v4	-.018	.052	-.018
a. Dependent Variable : v5				

**Source: SPSS Output**

As stated earlier, the objective of this Section of the Study is to prioritize the factor/s that influences the consumer's preference for green cosmetic products in the context of Consumers Involvement in Buying Green Cosmetic Products.

Table 6.2.4.1 reveals that  $\beta$  value for  $V_1$  is the highest, i.e., 0.051. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the variable, i.e., 'Users of Green Cosmetic Products select the green products very carefully' has high level of impact on preferring green cosmetic products. Similarly, the  $\beta$  value for  $V_3$  is the lowest, i.e., 0.016. It means, the variable – 'One can tell a lot about a person from whether they buy Green Cosmetic Products' has the least level of impact on preferring green cosmetic products.

On the contrary, the  $\beta$  value for  $V_2$  is the highest with negative sign, i.e., -0.024. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means, 'Using branded green products help Users of Green Cosmetic Products express their personality' has high level of impact on not preferring green cosmetic products, which seems to be bit unusual. In fact, it may be inferred that this variable is



not apt for ascertaining consumers' preference for green cosmetic products. Thus, out of the two variables identified, on the basis of degree of influencing positively consumers' preference for the green cosmetic products, the priority list is as follows;  $V_1$  and  $V_3$ .

### 6.2.5 Health Consciousness

Here the Criterion Variable is the Preference for Green Cosmetic Products for which eight predictor variables related to Health Consciousness in buying Green Cosmetic Products are identified and on which the data has been collected are;

- $V_1$  : Users of Green Cosmetic Products worry that there are chemicals in their food products
- $V_2$  : Users of Green Cosmetic Products worry that there are chemicals in their cosmetic products
- $V_3$  : Users of Green Cosmetic Products are concerned about their drinking water quality
- $V_4$  : Users of Green Cosmetic Products avoid food containing preservatives
- $V_5$  : Users of Green Cosmetic Products read more health-related articles than I did 3 years ago
- $V_6$  : Users of Green Cosmetic Products are interested in information about their health
- $V_7$  : Users of Green Cosmetic Products are concerned about their health all the time
- $V_8$  : Pollution in Cosmetic products does not bother users of Green Cosmetic Products

**Table 6.2.5.1 Regression Analysis for Health Consciousness regarding Green Cosmetic Products**

Coefficients <sup>a</sup>			
Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta

1	(Constant)	4.431	.540	
	v1	-.104	.055	-.098
	v2	-.054	.055	-.051
	v3	.138	.048	.147
	v4	.023	.048	.024
	v5	-.013	.047	-.014
	v6	.020	.046	.021
	v7	.020	.046	.022
	v8	-.058	.051	-.057
a. Dependent Variable: v9				

**Source: SPSS Output**

As stated earlier, the objective of this Section is to prioritize the factor/s that influences the consumer's preference for green cosmetic products in the context of Health Consciousness in buying Green Cosmetic Products.

We know that the standardised regression coefficients (Beta) is a measure of how strongly each predictor variable influences the criterion variable and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

Table 6.2.5.1 reveals that  $\beta$  value for  $V_3$  is the highest, i.e., 0.147. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the variable, i.e., 'Users of Green Cosmetic Products are concerned about their drinking water quality' has high level of impact on preferring green cosmetic products. Similarly, the  $\beta$  value for  $V_6$  is the lowest, i.e., 0.021. It means, the variable – 'Users of Green Cosmetic Products are interested in information about their health'.

On the contrary,  $\beta$  value for  $V_1$  is the highest with negative sign, i.e., -0.098. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means, 'Users of Green Cosmetic Products worry that there are chemicals

in their food products' has high level of impact on not preferring green cosmetic products. In fact, it may be inferred that this variable is not apt for ascertaining consumers' preference for green cosmetic products. Thus, out of the four variables identified, on the basis of degree of influencing positively consumers' preference for the green cosmetic products, the priority list is as follows; V<sub>3</sub>, V<sub>4</sub>, V<sub>7</sub> and V<sub>6</sub>.

### **6.3 Prioritization of the Factors using Standardized Regression Coefficients – Green Food Products**

#### **6.3.1 Environmental Consciousness**

In this section of the present Study, the Criterion Variable is the Preference for Green Food Products for which five predictor variables related to Environmental Consciousness identified and on which the data has been collected are;

- V1 : Users of Green Food Products supports different measures to improve water management leading to water conservation
- V2 : Users of Green Food Products is aware about the issues and problems related to the environment
- V3 : Users of Green Food Products would be willing to pay higher prices for water
- V4 : It is very difficult for the Users of Green Food Products to do anything about the environment
- V5 : User of Green Food Products believes that using recyclable materials for daily use will improve the environment

As stated earlier, the objective of this Section of the Study is to prioritize the factor/s that influences the consumer's preference for green Food products in the context of environmental consciousness. For the purpose, 400 consumers are studied and their responses have been analyzed on the basis of Beta values, the relevant output obtained through SPSS is presented in table 6.3.1.1.

**Table 6.3.1.1. Environmental Consciousness for Green Food Products**

Coefficients				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	3.914	.652	
	v1	-.046	.083	-.028
	v2	.048	.063	.039
	v3	.050	.056	.046
	v4	.048	.060	.040
	v5	-.007	.049	-.008
a. Dependent Variable: v6				

**Source: SPSS Output**

We know that the standardized regression coefficients (Beta) is a measure of how strongly each predictor variable influences the criterion variable and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

Table 6.3.1.1. reveals that  $\beta$  value for V3 is the highest, i.e., 0.046. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the variable, i.e., ‘Users of Green Food Products would be willing to pay higher prices for water’ has high level of impact on preferring Green Food products. Similarly, the  $\beta$  value for V2 is the lowest, i.e., 0.039. It means, the variable – ‘Users of Green Food Products is aware about the issues and problems related to the environment.’

On the contrary,  $\beta$  value for V1 is the highest with negative sign, i.e., -0.028. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means, Users of Green Food Products supports different measures to improve water management leading to water conservation has high level of impact on not

preferring green Food products, which seems to be bit unusual. In fact, it may be inferred that this variable is not apt for ascertaining consumers' preference for green Food products. Thus, out of the three variables identified, on the basis of degree of influencing positively consumers' preference for the green Food products, the priority list is as follows; V3 , V4 and v2.

### **6.3.2 Price Sensitivity**

In this section of the present study, the Criterion Variable is the Preference for Green Food Products for which six predictor variables identified and on which the data has been collected are;

- V1 : The price of buying Green Food Products is important to users of Green Food Products
- V2 : Users of Green Food Products know that a new kind of Green Food product is likely to be more expensive than older ones, but that does not matter to them
- V3 : Users of Green Food Products are less willing to buy a green product if they think that it will be high in price
- V4 : Users of Green Food Products don't mind paying more to try out a new green Food product
- V5 : Users of Green Food Products think that really good Green Food product is worth paying a lot of money
- V6 : Users of Green Food Products don't mind spending a lot of money to buy a Green Food product

The objective of this Section of the Study is to prioritize the factor/s that influences the consumers' preference for green Food products in the context of Price Sensitivity.

**Table 6.3.2.1. Price Sensitivity for Green Food Products**

Coefficients				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	4.585	.558	
	v1	.007	.055	.006
	v2	.010	.055	.009
	v3	-.122	.052	-.121
	v4	-.035	.051	-.035
	v5	-.030	.057	-.026
	v6	.112	.055	.104
a. Dependent Variable: v7				

**Source: SPSS Output**

Table 6.3.2.1. The Model reveals that  $\beta$  value for V6 is the highest, i.e., 0.104. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the said variable, i.e., ‘Users of Green Food Products don’t mind spending a lot of money to buy a Green Food product’ has high level of impact on preferring green Food products. Similarly, the  $\beta$  value for V1 is the lowest, i.e., 0.006. It means , the variable – ‘The price of buying Green Food Products is important to users of Green Food Products’ has less impact on preferring green Food products.

On the contrary,  $\beta$  value for V3 is the highest with negative sign, i.e., -0.121. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means Users of Green Food Products are less willing to buy a green product if they think that it will be high in price’ has high level of impact on not preferring green Food products. In fact, it may be inferred that this variable is not apt for ascertaining consumers’ preference for green Food products. Thus, out of the variables identified, on the basis of degree

of influencing positively consumers' preference for the green Food products, the priority list is as follows; V6 ,V2 and V1.

### 6.3.3 Innovativeness in buying products

In this section, the Criterion Variable is the Preference for Green Food Products for which five predictor variables related to Innovativeness in buying products identified and on which the data has been collected are;

V1 : Users of Green Food Products like to take a chance in buying new products

V2 : Users of Green Food Products like to try new and different products

V3 : Users of Green Food Products is the first in his circle of friends to buy a new product when it appears in the market

V4 : Users of Green Food Products is the first in his circle of friends to experiment with the brands of latest products

As stated earlier, the objective of this section of the Study is to prioritize the factor/s that influences the consumer's preference for green Food products in the context of Innovativeness in buying products. For the purpose, 400 consumers are studied and their responses have been analyzed through Standardized Regression Coefficients, the relevant output obtained through SPSS is presented in table 6.3.3.1.

**Table 6.3.3.1. Innovativeness in buying Green Food Products**

Coefficients				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	5.180	.394	
	v1	.047	.049	.051
	v2	-.010	.056	-.009
	v3	-.130	.056	-.117
	v4	-.104	.048	-.110

Coefficients				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	5.180	.394	
	v1	.047	.049	.051
	v2	-.010	.056	-.009
	v3	-.130	.056	-.117
	v4	-.104	.048	-.110
a. Dependent Variable: v5				

**Source: SPSS Output**

Table 6.3.3.1. reveals that  $\beta$  value for V1 is the highest, i.e., 0.051. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the variable, i.e., ‘Users of Green Food Products like to take a chance in buying new products’ has high level of impact on preferring Green Food products.

On the contrary, the  $\beta$  value for V3 is the highest with negative sign, i.e., -0.117. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means, ‘Users of Green Food Products is the first in his circle of friends to buy a new product when it appears in the market’ has high level of impact on not preferring green Food products, which seems to be bit unusual. In fact, it may be inferred that this variable is not apt for ascertaining consumers’ preference for Green Food products. Thus, the variable ‘Users of Green Food Products like to take a chance in buying new products’ influence consumers’ preference for the green Food products positively.



### 6.3.4 Product Involvement

In this Section, the Criterion Variable is the Preference for Green Food Products for which five predictor variables related to Consumers Involvement in Buying Green Food Products are identified and on which the data has been collected are;

V1 : Users of Green Food Products select the green products very carefully

V2 : Using branded green products help Users of Green Food Products express their personality

V3 : One can tell a lot about a person from whether they buy Green Food Products

V4 : Users of Green Food Products believe different brands of green products would give different amounts of satisfaction

As stated earlier, the objective of this section of the study is to prioritize the factor/s that influences the consumer's preference for Green Food products in the context of Consumers Involvement in Buying Green Food Products. For the purpose, 400 consumers are studied and their responses have been analyzed through Standardized Regression Coefficients, the relevant output obtained through SPSS is presented in table 6.3.4.1.

**Table 6.3.4.1. Product Involvement on Green Food Products**

Coefficients				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	4.209	.403	
	v1	.093	.051	.091
	v2	-.035	.046	-.039
	v3	.011	.048	.011
	v4	-.046	.052	-.045
a. Dependent Variable : v5				

**Source: SPSS Output**

Table 6.3.4.1. reveals that  $\beta$  value for V1 is the highest, i.e., 0.091. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the variable, i.e., ‘Users of Green Food Products select the green products very carefully’ has high level of impact on preferring green Food products. Similarly, the  $\beta$  value for V3 is the lowest, i.e., 0.011. It means, the variable – ‘One can tell a lot about a person from whether they buy Green Food Products’ has the least level of impact on preferring Green Food products.

On the contrary, the  $\beta$  value for V4 is the highest with negative sign, i.e., -0.045. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means, ‘Using branded green products help Users of Green Food Products express their personality’ has high level of impact on not preferring green Food products. In fact, it may be inferred that this variable is not apt for ascertaining consumers’ preference for green Food products. Thus, out of the two variables identified, on the basis of degree of influencing positively consumers’ preference for the green Food products, the priority list is as follows; V1 and V3.

### **6.3.5 Health Consciousness**

Here also, the Criterion Variable is the Preference for Green Food Products for which five predictor variables related to Health Consciousness in buying Green Food Products are identified and on which the data has been collected are;

- V1 : Users of Green Food Products worry that there are chemicals in their food products
- V2 : Users of Green Food Products worry that there are chemicals in their Food products
- V3 : Users of Green Food Products are concerned about their drinking water quality
- V4 : Users of Green Food Products avoid food containing preservatives
- V5 : Users of Green Food Products read more health-related articles than I did 3 years ago

V6 : Users of Green Food Products are interested in information about their health

V7 : Users of Green Food Products are concerned about their health all the time

V8 : Pollution in Food products does not bother users of Green Food Products

As stated earlier, the objective of this section of the study is to prioritize the factor/s that influence the consumer's preference for Green Food products in the context of Health Consciousness in buying Green Food Products. For the purpose, 400 consumers are studied and their responses have been analyzed through Standardized Regression Coefficients, the relevant output obtained through SPSS is presented in table 6.3.5.1.

**Table 6.3.5.1. Health Consciousness for Green Food Products**

Coefficients				
Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	4.328	.546	
	v1	-.020	.056	-.019
	v2	.048	.055	.044
	v3	.098	.048	.105
	v4	-.052	.049	-.055
	v5	-.020	.047	-.021
	v6	-.042	.047	-.045
	v7	-.043	.046	-.047
	v8	.044	.052	.042
a. Dependent Variable: v9				

**Source: SPSS Output**

We know that the standardized regression coefficients (Beta) is a measure of how strongly each predictor variable influences the criterion variable and the higher the beta value the greater the impact of the predictor variable on the criterion variable.

Table 6.3.5.1. reveals that  $\beta$  value for V3 is the highest, i.e., 0.105. It exhibits that the said predictor variable has highest level of impact on the criterion variable. In fact, the variable, i.e., ‘Users of Green Food Products are concerned about their drinking water quality’ has high level of impact on preferring Green Food products. Similarly, the  $\beta$  value for V8 is the least, i.e., 0.042. It means, the variable – ‘Pollution in Food products does not bother users of Green Food Products’ has less impact on preferring Green Food products.

On the contrary, the  $\beta$  value for V4 is the highest with negative sign, i.e., -0.055. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means, ‘Users of Green Food Products avoid food containing preservatives’ has high level of impact on not preferring Green Food products. In fact, it may be inferred that this variable is not apt for ascertaining consumers’ preference for Green Food products. Thus, out of the three variables identified, on the basis of degree of influencing positively consumers’ preference for the Green Food products, the priority list is as follows; V3, V2 and V8.

## **6.4 Respondents Demographic Profile**

This section presents an analysis of the demographic characteristics, as exhibited in the below mentioned table, of the samples as well as their relationship with consumer’s behavior about green cosmetic products. In order to visualize a better understanding of the basic profile of the sample surveyed and to obtain a description of distribution of responses, percentage to each variable were taken into consideration.

**Table 6.4.1 (Demographic Profile of Consumers)**

<b>Characteristics</b>	<b>Profile</b>	<b>Frequency</b>	<b>Percent</b>
Age group	18 – 25	30	7.5
	26 – 35	126	31.5
	36– 50	136	34
	>50	103	25.8
Gender	Male	215	53.8
	Female	185	46.3
Last grade of school completed	High School	96	24
	Graduation	167	41.8
	Post-Graduation	137	34.3
Occupation	Student	51	12.8
	Business	123	30.8
	Service	125	31.3
	Housewife	101	25.3
Income	<25,000	39	9.8
	25,000– 49,999	75	18.8

	50,000 – 74,999	113	28.3
	75,000 – 99,999	135	33.8
	>=1,00,000	38	9.3
Number of members in the household	< 2	106	26.5
	2 – 4	163	40.8
	>= 5	130	32.5

**Source: Primary Data**

The majority (65.5%) of the sample was falling in the age group of 26 - 50 years. Only 7.5% of the samples are young and 25.8 % of the sample was above 50 years of age. So, most of the respondents surveyed as a part of the samples are adult. Regarding the gender of the respondents, 53.8% of the respondents were male, whereas 46.3 % of the respondents are female. For the study only educated people were considered. The findings revealed that 24% had completed high-school, 41.8% had completed graduation and 34.3% had completed post-graduation. About the occupation, 12.8 were students, about 62% were professionals, out of which 30.8% were into business and 31.3 % were into service. Only, 25.3% respondents were housewife. Majority of the respondents had monthly income between 50,000 and 99,999. Only 9.8 % respondents were earning below 25,000 and 18.8% respondents earning between 25,000 to 49,999. Whereas, 9.3% of the respondents earn above 1, 00,000. Majority of the respondents (40.8%) were having a household between 2 to 4 members. 32.5% of the respondents were having a household of greater than or equal to 5 members.

## 6.5 Impact of Demographic Profile on Preference for Green Cosmetic Products (ANOVA)

### 6.5.1 Age-Group

One-Way ANOVA is applied in order to know whether the age-group, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into four categories; a) 18yrs – 25 yrs. B) 26 yrs – 35 yrs, c) 36 yrs – 50 yrs and d) > 50 yrs and these age-groups are denoted respectively as 0, 1, 2 and 3 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of age-group on the preference of green cosmetic products.

**Table 6.5.1.1 ANOVA Output for Age-Group**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.942	3	.981	.375	.771
Within Groups	1036.098	396	2.616		
Total	1039.040	399			

**Source: SPSS Output**

#### 6.5.1.1 Hypothesis on Age-Group:

H: Age-group does not influence consumers' preference towards green cosmetic products. In other words, there is no significant difference among different age-groups concerning their impact on preference, i.e., 18-25 = 26-35 = 36-50 = >50.

The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.5.1.1.

The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of

similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.771$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, the age-group does not significantly impact the consumers' preference towards green cosmetic products.

### 6.5.2 Gender

Like age-group, for gender also, One-Way ANOVA is done in order to know whether the gender, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into two categories; a) Female B) Male and these categories are denoted respectively as 0 and 1 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of gender on the preference of green cosmetic products.

**Table 6.5.2.1 ANOVA Output for Gender**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.387	1	.387	.148	.701
Within Groups	1038.653	398	2.610		
Total	1039.040	399			

**Source: SPSS Output**

#### 6.5.2.1 Hypothesis on Gender

H: Gender does not influence consumers' preference towards green cosmetic products. In other words, there is no significant difference between two genders concerning their impact on preference, i.e., Male = Female.



The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.5.2.1. The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.701$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, gender does not significantly impact the consumers' preference towards green cosmetic products.

### 6.5.3 Level of Education

Like the other demographic variables, for level of education also, One-Way ANOVA is done in order to know whether the level of education, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into three categories; a) High School b) Graduation and c) Post – Graduation. These categories are denoted respectively as 0, 1 and 2 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green cosmetic products.

**Table 6.5.3.1 ANOVA output for Level of Education**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.905	2	4.452	1.716	.181
Within Groups	1030.135	397	2.595		
Total	1039.040	399			

**Source: SPSS Output**

### 6.5.3.1 Hypothesis on Level of Education:

H: Level of Education does not influence consumers' preference towards green cosmetic products. In other words, there is no significant difference between three levels of education concerning their impact on preference, i.e., High School = Graduation = Post - Graduation.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.5.3.1. The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.181$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, level of education does not significantly impact the consumers' preference towards green cosmetic products.

### 6.5.4 Occupation

Like the other demographic variables, for different types of occupation also, One-Way ANOVA is done in order to know whether the different types of occupation, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into four categories; a) Student b) Business c) Service and d) Housewife. These categories are denoted respectively as 0, 1, 2 and 3 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green cosmetic products.

**Table 6.5.4.1 ANOVA Output for Occupation**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.972	3	.991	.379	.768
Within Groups	1030.216	394	2.615		
Total	1033.188	397			

**Source: SPSS Output**

#### **6.5.4.1 Hypothesis on Occupation:**

H: Occupation does not influence consumers' preference towards green cosmetic products.

In other words, there is no significant difference between four levels of occupation concerning their impact on preference, i.e., Student = Business = Service = Housewife.

The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.5.4.1.

The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.768$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means Occupation does not significantly impact the consumers' preference towards green cosmetic products.

#### **6.5.5 Income**

Like other characteristics of demographic profile as analyzed above, income of the consumers has also been considered for One-Way ANOVA in order to know whether the income level of the consumers, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into five categories on the basis of monthly income in Rupees; a) <25,000 b) 25001-49999 c) 50000-74999 d) 75000-99999 and e)  $\geq 100000$  and these categories are denoted respectively as 0, 1, 2, 3 and 4 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of income level of the consumers on the preference of green cosmetic products.

**Table 6.5.5.1 ANOVA Output on Income Level of the Consumers**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13.133	4	3.283	1.264	.041
Within Groups	1025.907	395	2.597		
Total	1039.040	399			

**Source: SPSS Output**

#### **6.5.5.1 Hypothesis on Income Level**

H: Income level does not influence consumers' preference towards green cosmetic products.

In other words, there is no significant difference between five income levels concerning their impact on preference, i.e.,  $<25,000 = 25001-49999 = 50000-74999 = 75000-99999 = \geq 100000$ .

The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.5.5.1.

The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.041$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted and established. That means, income level significantly impacts the consumers' preference towards green cosmetic products.

#### **6.5.6 Number of Members in Household**

The last demographic variable which is studied in this paper is the number of members in the household of the consumer, for different number of members in the household also, One-Way ANOVA is done in order to know whether different number of members in the household, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into three categories; a)  $<2$  b)  $2 - 4$  and c)  $\geq 5$ . These

categories are denoted respectively as 0, 1 and 2 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green cosmetic products.

**Table 6.5.6.1 ANOVA Output on Income Level of the Consumers**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5.040	2	2.520	.968	.381
Within Groups	1034.000	397	2.605		
Total	1039.040	399			

**Source: SPSS Output**

#### **6.5.6.1 Hypothesis on Occupation:**

H: Number of members in the household does not influence consumers' preference towards green cosmetic products. In other words, there is no significant difference between four levels of occupation concerning their impact on preference, i.e.,  $<2 = 2-4 = \geq 5$ .

The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.5.6.1. The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.381$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, Occupation does not significantly impact the consumers' preference towards green cosmetic products.

## 6.6 Impact of Demographic Profile on Preference for Green Food Products (ANOVA)

### 6.6.1 Age Group

One-Way ANOVA is done in order to know whether the age-group, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into four categories; a) 18yrs – 25 yrs. b) 26 yrs – 35 yrs, c) 36 yrs – 50 yrs and d) > 50 yrs and these age-groups are denoted respectively as 0, 1, 2 and 3 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of age-group on the preference of green food products.

**Table 6.6.1.1 ANOVA Output for Age-Group**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.247	3	1.416	.538	.656
Within Groups	1041.190	396	2.629		
Total	1045.437	399			

Source: SPSS Output

#### 6.6.1.1 Hypothesis on Age-Group:

H: Age-group does not influence consumers' preference towards green food products. In other words, there is no significant difference among different age-groups concerning their impact on preference, i.e., 18-25 = 26-35 = 36-50 = >50.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.6.1.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.656$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, the age-group does not significantly impact the consumers' preference towards green food products.

## 6.6.2 Gender

Like age-group, for gender also, One-Way ANOVA is done in order to know whether the gender, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into two categories; a) Female B) Male and these categories are denoted respectively as 0 and 1 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of gender on the preference of green food products.

**Table 6.6.2.1 ANOVA Output for Gender**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.119	1	.119	.045	.832
Within Groups	1045.319	398	2.626		
Total	1045.438	399			

Source: SPSS Output

### **6.6.2.1 Hypothesis on Gender**

H: Gender does not influence consumers' preference towards green food products. In other words, there is no significant difference between two genders concerning their impact on preference, i.e., Male = Female.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.6.2.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.832$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, gender does not significantly impact the consumers' preference towards green food products.

### **6.6.3 Level of Education**

Like the other demographic variables, for level of education also, One-Way ANOVA is done in order to know whether the level of education, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into three categories; a) High School b) Graduation and c) Post – Graduation. These categories are denoted respectively as 0, 1 and 2 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green food products.



**Table 6.6.3.1 ANOVA Output for Education**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.904	2	.452	.171	.843
Within Groups	1043.652	395	2.642		
Total	1044.555	397			

**Source: SPSS Output**

#### **6.6.3.1 Hypothesis on Education**

H: Level of Education does not influence consumers' preference towards green food products. In other words, there is no significant difference between three levels of education concerning their impact on preference, i.e., High School = Graduation = Post - Graduation.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.6.3.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.843$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, level of education does not significantly impact the consumers' preference towards green food products.

#### **6.6.4 Occupation**

Like the other demographic variables, for different types of occupation also, One-Way ANOVA is done in order to know whether the different types of occupation, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into four categories; a) Student b) Business c) Service and d) Housewife. These categories are denoted respectively as 0, 1, 2 and 3 for analysis purpose in SPSS.

Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green food products.

**Table 6.6.4.1 ANOVA output for Occupation**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	9.146	3	3.049	1.165	.323
Within Groups	1036.292	396	2.617		
Total	1045.438	399			

**Source: SPSS Output**

#### **6.6.4.1 Hypothesis on Occupation:**

H: Occupation does not influence consumers' preference towards green food products. In other words, there is no significant difference between four levels of occupation concerning their impact on preference, i.e., Student = Business = Service = Housewife.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.6.4.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.323$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, Occupation does not significantly impact the consumers' preference towards green food products.

#### **6.6.5 Income**

Like other characteristics of demographic profile as analyzed above, income of the consumers has also been considered for One-Way ANOVA in order to know whether the income level of

the consumers, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into five categories on the basis of monthly income in Rupees; a) <25,000 b) 25001-49999 c) 50000-74999 d) 75000-99999 and e)  $\geq 100000$  and these categories are denoted respectively as 0, 1, 2, 3 and 4 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of income level of the consumers on the preference of green food products.

**Table 6.6.5.1 ANOVA output for Income Level**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.791	4	1.198	.455	.039
Within Groups	1040.646	395	2.635		
Total	1045.438	399			

**Source: SPSS Output**

#### **6.6.5.1 Hypothesis on Income Level**

H: Income level does not influence consumers' preference towards green food products. In other words, there is no significant difference between five income levels concerning their impact on preference, i.e.,  $<25,000 = 25001-49999 = 50000-74999 = 75000-99999 = \geq 100000$ .

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.6.5.1 is .039. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.039$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is

accepted and established. That means, income level significantly impacts the consumers' preference towards green food products.

#### 6.6.6 Number of Members in Household

The last demographic variable which is studied is the number of members in the household of the consumer, for different number of members in the household also, One-Way ANOVA is done in order to know whether different number of members in the household, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into three categories; a)  $<2$  b)  $2 - 4$  and c)  $\geq 5$ . These categories are denoted respectively as 0, 1 and 2 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green food products.

**Table 6.6.6.1 ANOVA output for Number of members in the household**

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.261	2	1.131	.430	.651
Within Groups	1043.176	397	2.628		
Total	1045.437	399			

**Source: SPSS Output**

#### 6.6.6.1 Hypothesis on Number of members in the Household

H: Number of members in the household does not influence consumers' preference towards green food products. In other words, there is no significant difference between four levels of occupation concerning their impact on preference, i.e.,  $<2 = 2-4 = \geq 5$ .

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.6.6.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.651$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, Occupation does not significantly impact the consumers' preference towards green food products.

### 6.7 Respondents' General Behaviour regarding buying Green Products

**Table 6.7.1 Respondents' General Behaviour regarding buying Green Products**

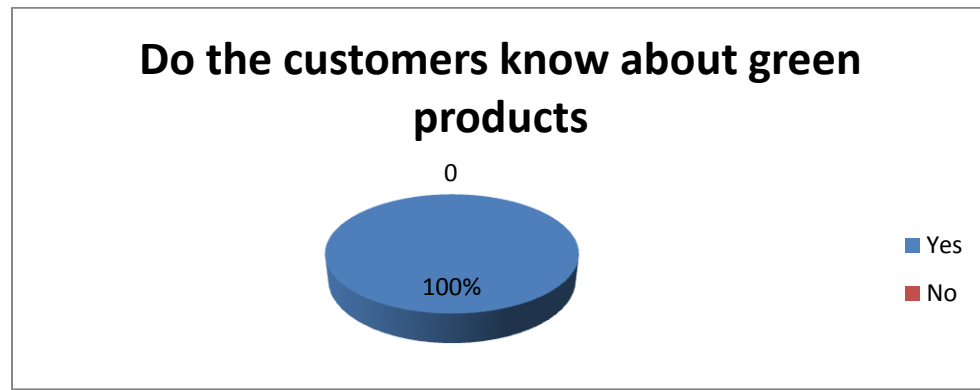
Characteristics	Profile	Frequency	Percent
Do the customers know about green products?	Yes	400	100
	No	0	0
Do the customers buy green products	Yes	400	100
	No	0	0
Do the customers buy green products in this shopping	Yes	199	49.8
	No	201	50.3

trip?				
What all green products did you buy in this shopping trip?	Green	Yes	97	24.3
	Cosmetic Products	No	303	75.8
	Green	Yes	126	31.5
	Food Products	No	274	68.5
How frequently do you buy green products?		Less than once a month	119	29.8
		Once a month	131	32.8
		Once a fortnight	79	19.8
		More than once a fortnight	71	17.8

**Source: Primary Data**

### 6.7.1 Respondents' knowledge about green products

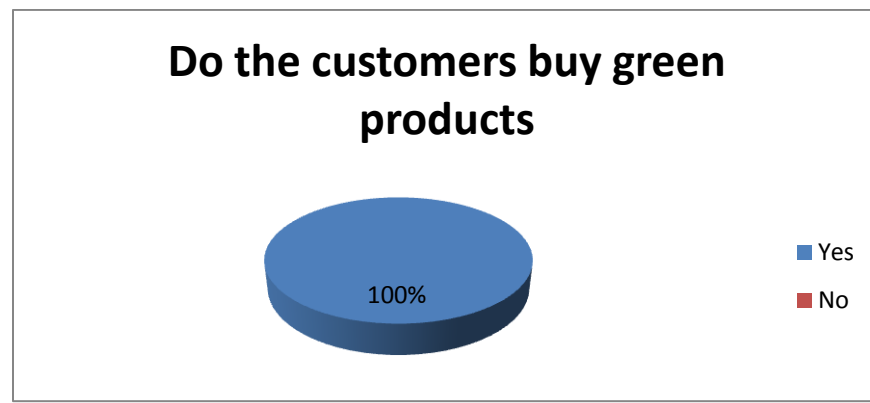
**Figure 6.7.1: Respondents' knowledge about green products**



From the above figure, it can be stated that all the respondents' surveyed know about the either green cosmetic or green food products. So, their responses will be relevant to the research.

### 6.7.2 Respondents' buying pattern for Green Products

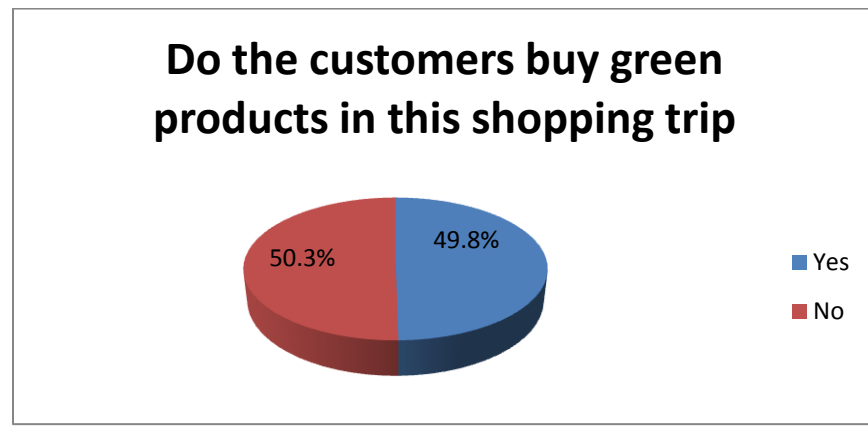
**Figure 6.7.2: Respondents' buying pattern for green products**



All the respondents surveyed buy green products. Some of them buy frequently and others buy as and when needed. Since all the respondents have experience of using either green cosmetic or food products, the responses from them will be relevant with respect to the objectives of the research.

### 6.7.3 Respondents' buying pattern for Green Products in this Shopping Trip

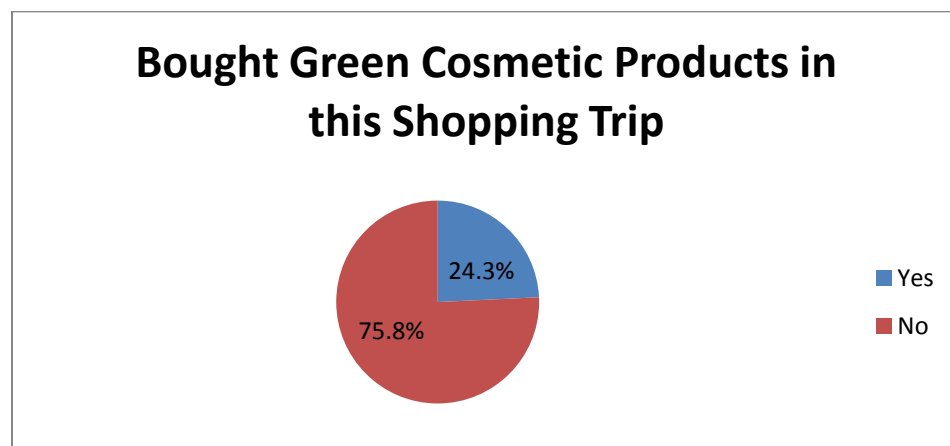
**Figure 6.7.3: Respondents' buying pattern for green products in this shopping trip**



From the above chart, it can be stated that 50.3%, i.e., 201 respondents bought either green cosmetic or food products in the shopping trip where they had been surveyed. On the other hand, 49.8% respondents, i.e., 199 respondents have not bought neither green cosmetic nor food products in the shopping trip where they had been surveyed. Among the respondents who have bought green cosmetic or food products, the specific number of respondents for the green cosmetic and food products are explained in the corresponding charts.

### 6.7.4 Respondents' buying pattern for Green Cosmetic Products in this Shopping Trip

**Figure 6.7.4: Respondents' buying pattern for green cosmetic products in this shopping trip**

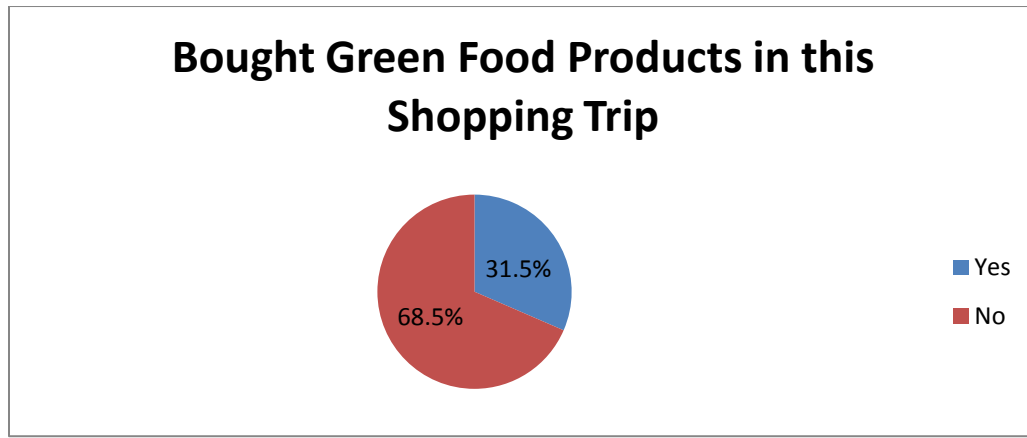




From the above chart, it can be stated that 24.3 % respondents', i.e., 97 respondents bought green cosmetic products in the shopping trip when they had been surveyed. On the other hand, 75.8%, i.e., 303 respondents' have not bought green cosmetic products in the shopping trips when they had been surveyed. So, it can be stated that the respondents' who had bought green cosmetic products, their responses will be related to their point of purchase.

#### **6.7.5 Respondents' buying pattern for Green Food Products in this Shopping Trip**

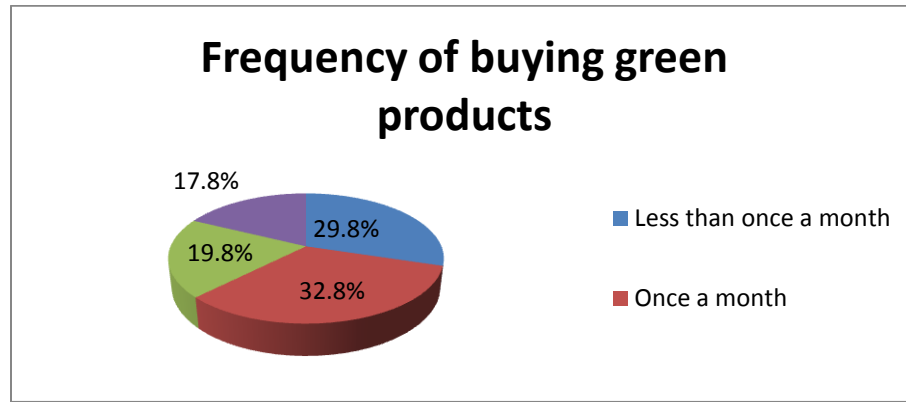
**Figure 6.7.5: Respondents' buying pattern for green food products in this shopping trip**



From the above chart, it can be stated that 31.5 % respondents', i.e., 126 respondents bought green food products in the shopping trip when they had been surveyed. On the other hand, 68.5% , i.e., 274 respondents' have not bought green food products in the shopping trips when they had been surveyed. So, it can be stated that the respondents' who had bought green food products, their responses will be related to their point of purchase.

### 6.7.6 Respondents Frequency for buying Green products

Figure 6.7.6: Respondents' frequency for buying green products



From the above chart about the frequency of purchase of either green cosmetic or food products, 29.8% respondents' , i.e., 119 respondents used to buy green products less than once a month. 32.8%, i.e., 131 respondents buy green products once in a month. 19.8%, i.e., only 79 respondents buy green products once a fortnight and 17.8% , i.e.,71 respondents buy green products more than once a fortnight. This means that last group, i.e., 71 respondents is regular buyers of either green cosmetic or food products.

## **6.8 Impact of Psychographic variables on Preference for Green Cosmetic Products (ANOVA)**

### **6.8.1 Environmental Consciousness**

The first psychographic variable which is studied is the Environmental Consciousness. One-Way ANOVA is done in order to know whether Environmental Consciousness has significant impact on the use of Green Cosmetic products.

The five predictor variables related to Environmental Consciousness identified and on which the data has been collected are;

V1: Users of Green Cosmetic Products supports different measures to improve water management leading to water conservation

V2: Users of Green Cosmetic Products is aware about the issues and problems related to the environment

V3: Users of Green Cosmetic Products would be willing to pay higher prices for water

V4: It is very difficult for the Users of Green Cosmetic Products to do anything about the environment

V5: Users of Green Cosmetic Products believes that using recyclable materials for daily use will improve the environment

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as

V6. For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA).

The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Environmental Consciousness on the preference of Green Cosmetic products.

**Table 6.8.1.1 ANOVA output for Environmental Consciousness**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.527	5	.505	.192	.036
	Residual	1036.513	394	2.631		
	Total	1039.040	399			

**Source: SPSS Output**

#### **6.8.1.1 Hypothesis on Environmental Consciousness**

H: Environmental consciousness will not influence consumers' preference for green cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.036$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, Environmental Consciousness significantly impact the consumers' preference towards green cosmetic products.

#### **6.8.2 Price Sensitivity**

The second psychographic variable which is studied is the Price Sensitivity. One-Way ANOVA is done in order to know whether Price Sensitivity has significant impact on the use of green

cosmetic products. The six predictor variables identified and on which the data has been collected are;

V1: The price of buying Green Cosmetic Products is important to users of Green Cosmetic Products

V2: Users of Green Cosmetic Products know that a new kind of green cosmetic product is likely to be more expensive than older ones, but that does not matter to them

V3: Users of Green Cosmetic Products are less willing to buy a green product if they think that it will be high in price

V4: Users of Green Cosmetic Products don't mind paying more to try out a new green cosmetic product

V5: Users of Green Cosmetic Products think that really good Green Cosmetic product is worth paying a lot of money

V6: Users of Green Cosmetic Products don't mind spending a lot of money to buy a Green Cosmetic product

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as

V7. For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Price Sensitivity on the preference of green cosmetic products.

**Table 6.8.2.1 ANOVA output for Price Sensitivity**

Model	Sum of Squares	Df	Mean Square	F	Sig.
-------	----------------	----	-------------	---	------

1	Regression	25.470	6	4.245	1.646	.013 <sup>a</sup>
	Residual	1013.570	393	2.579		
	Total	1039.040	399			

a. Predictors: (Constant), v6, v5, v3, v1, v4, v2

b. Dependent Variable: v7

**Source: SPSS Output**

### 6.8.2.1 Hypothesis on Price Sensitivity:

H: Price Sensitivity will not influence consumers' preference for green cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.013$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and alternative hypothesis is accepted. That means, Price Sensitivity significantly impact the consumers' preference towards green cosmetic products.

### 6.8.3 Innovativeness in buying products

The third psychographic variable which is studied is Innovativeness in buying products. One-Way ANOVA is done in order to know whether Innovativeness in buying products has significant impact on the use of green cosmetic products.

The four predictor variables related to Innovativeness in buying Green Cosmetic Products identified and on which the data has been collected are;

V1: Users of Green Cosmetic Products like to take a chance in buying new products

V2: Users of Green Cosmetic Products like to try new and different products

V3: Users of Green Cosmetic Products is the first in his circle of friends to buy a new product when it appears in the market

V4: Users of Green Cosmetic Products is the first in his circle of friends to experiment with the brands of latest products

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as V7. For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Innovativeness in buying products on the preference of Green Cosmetic products.

**Table 6.8.3.1 ANOVA output for Innovativeness in buying products**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.831	4	2.208	.846	.046 <sup>a</sup>
	Residual	1030.209	395	2.608		
	Total	1039.040	399			

a. Predictors: (Constant), v4, v3, v1, v2

b. Dependent Variable: v5

**Source: SPSS Output**

### **6.8.3.1 Hypothesis on Innovativeness in buying products**

H: Innovativeness in buying products will not influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing

researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.046$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, Innovativeness in buying products significantly impact the consumers' preference towards green cosmetic products.

#### **6.8.4 Product Involvement**

The fourth psychographic variable which is studied is Product Involvement. One-Way ANOVA is done in order to know whether Product Involvement has significant impact on the use of green cosmetic products.

The five predictor variables related to Product Involvement in Buying Green Cosmetic Products are identified and on which the data has been collected are;

V1: Users of Green Cosmetic Products select the green products very carefully

V2: Using branded green products help Users of Green Cosmetic Products express their personality

V3: One can tell a lot about a person from whether they buy Green Cosmetic Products

V4: Users of Green Cosmetic Products believe different brands of green products would give different amounts of satisfaction

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as V7.

For the purpose, the respondents studied have been segregated into seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Product Involvement on the preference of green cosmetic products.



**Table 6.8.4.1 ANOVA output for Product Involvement**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.567	4	.892	.340	.851 <sup>a</sup>
	Residual	1035.473	395	2.621		
	Total	1039.040	399			

a. Predictors: (Constant), v4, v3, v1, v2

b. Dependent Variable: v5

**Source: SPSS Output**

#### **6.8.4.1 Hypothesis on Product Involvement**

H: Product involvement will not influence consumers' preference for green cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.851$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted. That means, Product involvement will not significantly impact the consumers' preference towards green cosmetic products.

#### **6.8.5 Health Consciousness**

The fifth psychographic variable which is studied is Health Consciousness. One-Way ANOVA is done in order to know whether Health Consciousness has significant impact on the use of green cosmetic products.

The eight predictor variables related to Health Consciousness in buying Green Cosmetic Products are identified and on which the data has been collected are;

V1: Users of Green Cosmetic Products worry that there are chemicals in their Cosmetic products

V2: Users of Green Cosmetic Products worry that there are chemicals in their cosmetic products

V3: Users of Green Cosmetic Products are concerned about their drinking water quality

V4: Users of Green Cosmetic Products avoid food containing preservatives

V5: Users of Green Cosmetic Products read more health-related articles than I did 3 years ago

V6: Users of Green Cosmetic Products are interested in information about their health

V7: Users of Green Cosmetic Products are concerned about their health all the time

V8: Pollution in Cosmetic products does not bother users of Green Cosmetic Products

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as

V9. For the purpose, the respondents studied have been segregated into seven categories; 1 =

Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree

Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA).

The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Health Consciousness on the preference of green cosmetic products.

**Table 6.8.5.1 ANOVA output for Health Consciousness in buying products**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	37.403	8	4.675	1.825	.015 <sup>a</sup>
	Residual	1001.637	391	2.562		
	Total	1039.040	399			

**Source : SPSS Output**

#### **6.8.5.1 Hypothesis on Health Consciousness**

H: Health consciousness will not influence consumers' preference for green cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.015$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, Health Consciousness will significantly impact the consumers' preference towards green cosmetic products.

## **6.9 Impact of Psychographic variables on Preference for Green Food Products (ANOVA)**

### **6.9.1 Environmental Consciousness**

The first psychographic variable which is studied is the Environmental Consciousness. One-Way ANOVA is done in order to know whether Environmental Consciousness has significant impact on the use of Green Food products.

The five predictor variables related to Environmental Consciousness identified and on which the data has been collected are;

V1: Users of Green Food Products supports different measures to improve water management leading to water conservation

V2: Users of Green Food Products is aware about the issues and problems related to the environment

V3: Users of Green Food Products would be willing to pay higher prices for water

V4: It is very difficult for the Users of Green Food Products to do anything about the environment

V5: Users of Green Food Products believes that using recyclable materials for daily use will improve the environment

Preference for green food products is the dependent variable and in analysis, it is denoted as V6. For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Environmental Consciousness on the preference of Green Food products.

**Table 6.9.1.1 ANOVA output for Environmental Consciousness**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.442	5	1.488	.565	.027 <sup>a</sup>
	Residual	1037.996	394	2.635		
	Total	1045.437	399			

a. Predictors: (Constant), v5, v1, v4, v2, v3

b. Dependent Variable: v6

**Source : SPSS Output**

#### **6.9.1.1 Hypothesis on Environmental Consciousness**

H: Environmental consciousness will not influence consumers' preference for green food products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.027$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative

hypothesis is accepted. That means, Environmental consciousness significantly impact the consumers' preference towards green food products.

### **6.9.2 Price Sensitivity**

In this section of the present study, the Criterion Variable is the Preference for Green Food Products for which six predictor variables identified and on which the data has been collected are;

V<sub>1</sub>: The price of buying Green Food Products is important to users of Green Food Products

V<sub>2</sub>: Users of Green Food Products know that a new kind of green food product is likely to be more expensive than older ones, but that does not matter to them

V<sub>3</sub>: Users of Green Food Products are less willing to buy a green product if they think that it will be high in price

V<sub>4</sub>: Users of Green Food Products don't mind paying more to try out a new green food product

V<sub>5</sub>: Users of Green Food Products think that really good Green Food product is worth paying a lot of money

V<sub>6</sub>: Users of Green Food Products don't mind spending a lot of money to buy a Green Food product

Preference for green food products is the dependent variable and in analysis, it is denoted as V6.

For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA).

The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Price Sensitivity on the preference of Green Food products.

**Table 6.9.2.1 ANOVA Output for Price Sensitivity**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	26.955	6	4.492	1.733	.019 <sup>a</sup>
	Residual	1018.483	393	2.592		
	Total	1045.437	399			

a. Predictors: (Constant), v6, v5, v3, v1, v4, v2

b. Dependent Variable: v7

**Source: SPSS Output**

#### **6.9.2.1 Hypothesis on Price Sensitivity**

H: Price Sensitivity will not influence consumers' preference for green food products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.019$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, Price Sensitivity significantly impact the consumers' preference towards green food products.

#### **6.9.3 Innovativeness in buying products**

The third psychographic variable which is studied is Innovativeness in buying products. One-Way ANOVA is done in order to know whether Innovativeness in buying products has significant impact on the use of green food products.

The four predictor variables related to Innovativeness in buying Green Food Products identified and on which the data has been collected are;

V1: Users of Green Food Products like to take a chance in buying new products

V2: Users of Green Food Products like to try new and different products

V3: Users of Green Food Products is the first in his circle of friends to buy a new product when it appears in the market

V4: Users of Green Food Products is the first in his circle of friends to experiment with the brands of latest products

Preference for green food products is the dependent variable and in analysis, it is denoted as V7.

For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Innovativeness in buying products on the preference of Green Food products.

**Table 6.9.3.1. ANOVA Output for Innovativeness in buying products**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31.503	4	7.876	3.068	.017 <sup>a</sup>
	Residual	1013.934	395	2.567		
	Total	1045.437	399			

a. Predictors: (Constant), v4, v3, v1, v2

b. Dependent Variable: v5

**Source: SPSS Output**

#### **6.9.3.1 Hypothesis on Innovativeness in buying products**

H: Innovativeness in buying products will not influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 4.10. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.017$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, Innovativeness in buying products significantly impact the consumers' preference towards green food products.

#### **6.9.4 Involvement**

The fourth psychographic variable which is studied is Product Involvement. One-Way ANOVA is done in order to know whether Product Involvement has significant impact on the use of green food products.

The five predictor variables related to Product Involvement in Buying Green Food Products are identified and on which the data has been collected are;

V1: Users of Green Food Products select the green products very carefully

V2: Using branded green products help Users of Green Food Products express their personality

V3: One can tell a lot about a person from whether they buy Green Food Products

V4: Users of Green Food Products believe different brands of green products would give different amounts of satisfaction

Preference for green food products is the dependent variable and in analysis, it is denoted as V7. For the purpose, the respondents studied have been segregated into seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD), 3 = Disagree(D), 4 = Neither Agree Nor Disagree(NAD), 5 = Agree(A), 6 = Strongly Agree(SA), 7 = Very Strongly Agree(VSA).

The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Product Involvement on the preference of green food products.



**Table 6.9.4.1. ANOVA output for Product Involvement in buying products**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.209	4	2.802	1.070	.371 <sup>a</sup>
	Residual	1034.229	395	2.618		
	Total	1045.437	399			

a. Predictors: (Constant), v4, v3, v1, v2

b. Dependent Variable: v5

Source: SPSS Output

#### **6.9.4.1 Hypothesis on Product involvement**

H: Product involvement will not influence consumers' preference for green food products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.371$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, Innovativeness in buying products will not significantly impact the consumers' preference towards green food products.

#### **6.9.4 Health Consciousness**

The fifth psychographic variable which is studied is Health Consciousness. One-Way ANOVA is done in order to know whether Health Consciousness has significant impact on the use of green food products.

The eight predictor variables related to Health Consciousness in buying Green Food Products are identified and on which the data has been collected are;

V1: Users of Green Food Products worry that there are chemicals in their food products

V2: Users of Green Food Products worry that there are chemicals in their food products

V3: Users of Green Food Products are concerned about their drinking water quality

V4: Users of Green Food Products avoid food containing preservatives

V5: Users of Green Food Products read more health-related articles than I did 3 years ago

V6: Users of Green Food Products are interested in information about their health

V7: Users of Green Food Products are concerned about their health all the time

V8: Pollution in Food products does not bother users of Green Food Products

Preference for green food products is the dependent variable and in analysis, it is denoted as

V9. For the purpose, the respondents studied have been segregated into seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA).

The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Health Consciousness on the preference of green food products.

**Table 6.9.5.1. ANOVA output for Health Consciousness**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.813	8	2.602	.993	.041 <sup>a</sup>
	Residual	1024.625	391	2.621		
	Total	1045.437	399			

a. Predictors: (Constant), v8, v5, v6, v1, v7, v4, v3, v2

b. Dependent Variable: v9

**Source: SPSS Output**

#### **6.9.5.1 Hypothesis on Health Consciousness**

H: Health Consciousness will not influence consumers' preference for green food products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.041$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, Health Consciousness will significantly impact the consumers' preference towards green food products.

## 6.10 Impact of different independent variables on the preference for Green Cosmetic Products (ANOVA)

### 6.10.1 Safety

Here safety perspective of the consumers is studied. One-Way ANOVA is done in order to know whether Safety perspective of the consumer, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Safety perspective on the preference of green cosmetic products.

**Table 6.10.1.1 ANOVA for Safety of Green Cosmetic Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	18.856	6	3.143	1.211	.023

Within Groups	1020.184	393	2.596		
Total	1039.040	399			

Source: SPSS Output

#### 6.10.1.1 Hypothesis on Safety

H: Safety will not influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.023$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the safety perspective of the consumers significantly impact the consumers' preference towards green cosmetic products.

#### 6.10.2 Quality

Here quality perspective of the consumers is studied. One-Way ANOVA is done in order to know whether quality perspective of the consumer, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of quality perspective on the preference of green cosmetic products.

**Table 6.10.2.1 ANOVA output for Quality of Green Cosmetic Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	22.822	6	3.804	1.471	.018
Within Groups	1016.218	393	2.586		
Total	1039.040	399			

**Source: SPSS Output**

#### **6.10.2.1 Hypothesis on Quality**

H: Quality will not influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.018$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the quality perspective of the consumers significantly impact the consumers' preference towards green cosmetic products.

#### **6.10.3 Product Effectivity**

Here product effectivity is studied. One-Way ANOVA is done in order to know whether product effectivity, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA).

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of product effectivity on the preference of green cosmetic products.

**Table 6.10.3.1 ANOVA output for Product Effectivity of Green Cosmetic Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	30.873	6	5.145	2.006	.064
Within Groups	1008.167	393	2.565		
Total	1039.040	399			

**Source: SPSS Output**

### 6.10.3.1 Hypothesis on Product Effectivity

H: Product effectivity will not significantly influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  ( on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.064$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, the product effectivity will not significantly impact the consumers' preference towards green cosmetic products.

#### 6.10.4 Brands

Here impact of brand on preference for green cosmetic products is studied. One-Way ANOVA is done in order to know whether brand, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of brand on the preference of green cosmetic products.

**Table 6.10.4.1 ANOVA output for Brand of Green Cosmetic Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	28.574	6	4.762	1.852	.008
Within Groups	1010.466	393	2.571		
Total	1039.040	399			

Source: SPSS Output

##### 6.10.4.1 Hypothesis on Brand

H: Brand will not significantly influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing

researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.008$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the branded green cosmetic products significantly impact the consumers' preference towards green cosmetic products.

#### 6.10.5 Product Knowledge

Here product knowledge of green cosmetic products is studied. One-Way ANOVA is done in order to know whether product knowledge, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA).Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of product knowledge on the preference of green cosmetic products.

**Table 6.10.5.1 ANOVA output for Product Knowledge of Green Cosmetic Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	51.489	6	8.581	3.415	.003
Within Groups	987.551	393	2.513		
Total	1039.040	399			



### **Source: SPSS Output**

#### **6.10.5.1 Hypothesis on Product Knowledge**

H: Product knowledge will not significantly influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  ( on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.003$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the product knowledge significantly impact the consumers' preference towards green cosmetic products.

#### **6.10.6 Information about the product**

Here information about green cosmetic products is studied. One-Way ANOVA is done in order to know whether information about green cosmetic products, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of information about green cosmetic products on the preference of green cosmetic products.

**Table 6.10.6.1 ANOVA for Information about the Green Food Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	52.971	6	8.828	3.519	.002
Within Groups	986.069	393	2.509		
Total	1039.040	399			

**Source: SPSS Output**

#### **6.10.6.1 Hypothesis on Information about the product**

H: Information about the product will not significantly influence consumers' preference for green cosmetic and food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.002$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the information about the products significantly impact the consumers' preference towards green cosmetic products.

#### **6.10.7 Availability**

Here availability of green cosmetic products is studied. One-Way ANOVA is done in order to know whether availability of green cosmetic products, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 =

Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of availability of green cosmetic products on the preference of green cosmetic products.

**Table 6.10.7.1 ANOVA for Availability of Green Food Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	25.861	6	4.310	1.672	.027
Within Groups	1013.179	393	2.578		
Total	1039.040	399			

**Source: SPSS Output**

#### **6.10.7.1 Hypothesis on Availability of the product**

H: Availability of the cosmetic products will not significantly influence consumers' preference for Green Cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.027$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the availability of the products significantly impact the consumers' preference towards green cosmetic products.

## 6.11 Impact of different independent variables on the preference for Green Food Products (ANOVA)

### 6.11.1 Safety

Here safety perspective of the consumers is studied. One-Way ANOVA is done in order to know whether Safety perspective of the consumer, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Safety perspective on the preference of green food products.

**Table 6.11.1.1 ANOVA for Safety of Green Food Products**

v2					
	Sum Squares	of Df	Mean Square	F	Sig.
Between Groups	23.563	6	3.927	1.510	.017
Within Groups	1021.874	393	2.600		
Total	1045.438	399			

**Source: SPSS Output**

#### 6.11.1.1 Hypothesis on Safety

H: Safety will not influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.017$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative

hypothesis is accepted. That means, the safety perspective of the consumers significantly impact the consumers' preference towards green food products.

### 6.11.2 Nutritional Value

Here nutritional value of the consumers is studied. One-Way ANOVA is done in order to know whether nutritional value of the consumer, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of nutritional value on the preference of green food products.

**Table 6.11.2.1 ANOVA for Nutritional Value of Green Food Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	16.314	6	2.719	1.038	.040
Within Groups	1029.123	393	2.619		
Total	1045.438	399			

Source: SPSS Output

#### 6.11.2.1 Hypothesis on Nutritional Value

H: Nutritional value of the products will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.040$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the nutritional value of the products significantly influence the consumers' preference towards green food products.

### 6.11.3 Taste

Here taste of the green food products is studied. One-Way ANOVA is done in order to know whether taste of the green food products, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of taste of the green food products on the preference of green food products.

**Table 6.11.3.1 ANOVA for Taste of Green Food Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	21.483	6	3.580	1.374	.002

Within Groups	1023.955	393	2.605		
Total	1045.438	399			

Source: SPSS Output

#### 6.11.3.1 Hypothesis on Taste

H: Taste of the products will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.002$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the taste of the products significantly influence the consumers' preference towards green food products.

#### 6.11.4 Product Knowledge

Here product knowledge of green food products is studied. One-Way ANOVA is done in order to know whether product knowledge, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of product knowledge on the preference of green food products.

**Table 6.11.4.1 ANOVA for Product Knowledge of Green Food Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	18.569	6	3.095	1.184	.015
Within Groups	1026.868	393	2.613		
Total	1045.438	399			

**Source: SPSS Output**

#### **6.11.4.1 Hypothesis on Product Knowledge**

H: Product knowledge will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 4.2. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.015$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means the product knowledge significantly impact the consumers' preference towards green food products.

#### **6.11.5 Information about Green Food products**

Here information about green food products is studied. One-Way ANOVA is done in order to know whether information about green food products, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4



= Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of information about green food products on the preference of green food products.

**Table 6.11.5.1: ANOVA for Information about Green Food products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5.577	6	.930	.351	.041
Within Groups	1039.860	393	2.646		
Total	1045.438	399			

**Source: SPSS Output**

#### **6.11.5.1 Hypothesis on Information about the product**

H: Information about the product will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.041$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the information about the products significantly impact the consumers' preference towards green food products.

### 6.11.6 Brands

Here impact of brand on preference for green food products is studied. One-Way ANOVA is done in order to know whether brand, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of brand on the preference of green food products.

**Table 6.11.6.1: ANOVA for Brand of Green Food Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	36.634	6	6.106	2.379	.029
Within Groups	1008.804	393	2.567		
Total	1045.438	399			

**Source: SPSS Output**

#### 6.11.6.1 Hypothesis on Brand

H: Brand will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact,

since  $p = 0.029$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the branded green food products significantly impact the consumers' preference towards green food products.

#### 6.11.7 Looks of the Green Food Products

Here looks of the green food products impact on preference for green food products is studied. One-Way ANOVA is done in order to know whether looks of the green food products, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD), 3 = Disagree(D), 4 = Neither Agree Nor Disagree(NAD), 5 = Agree(A), 6 = Strongly Agree(SA), 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of looks of the green food products on the preference of green food products

**Table 6.11.7.1 ANOVA for Looks of the Green Food Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5.828	6	.971	.367	.009
Within Groups	1039.609	393	2.645		
Total	1045.438	399			

Source: SPSS Output

#### **6.11.7.1 Hypothesis on Looks**

H: Looks of the green food products will not significantly influence consumers' preference for them

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the above mentioned table. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.009$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, looks of the green food products significantly impact the consumers' preference towards green food products.

#### **6.11.8 Availability**

Here availability of green food products is studied. One-Way ANOVA is done in order to know whether availability of green food products, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of availability of green food products on the preference of green food products.

**Table 6.11.8.1: ANOVA for Availability of Green Food Products**

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.228	6	.705	.266	.012
Within Groups	1041.210	393	2.649		
Total	1045.438	399			

**Source: SPSS Output**

**6.11.8.1 Hypothesis on Availability of the Product:**

H: Availability of the food products will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.11.8.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.012$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the availability of the food products significantly impact the consumers' preference towards green food products.

## 6.12 Comparison of the Findings between Green Cosmetic and Food Products

**Table 6.12.1: Comparison of Findings between Green Cosmetic and Food Products**

Sl. No.	Hypothesis	Findings for Green Cosmetic products	Findings for Green Food products
1	Environmental consciousness will not influence consumers' preference for Green products.	Hypothesis not accepted	Hypothesis not accepted
2	Price Sensitivity of the consumers will not influence preference for Green products.	Hypothesis not accepted	Hypothesis not accepted
3	Innovativeness in buying products will not influence preference for Green products	Hypothesis not accepted	Hypothesis not accepted
4	Product involvement will not influence preference for Green products	Hypothesis accepted	Hypothesis accepted
5	Health consciousness will not influence preference for Green products	Hypothesis not accepted	Hypothesis not accepted
6	Safety perspective will not influence their preference for Green products	Hypothesis not accepted	Hypothesis not accepted
7	Quality of the product will not influence preference for it	Hypothesis not accepted	N/A
8	Product Effectivity will not influence preference for green products	Hypothesis accepted	N/A
9	Product Knowledge will not influence preference for Green products	Hypothesis not accepted	Hypothesis not accepted
10	Information about the product will not influence consumers' preference for Green products	Hypothesis not accepted	Hypothesis not accepted
11	Brand of the Green product will influence preference for it	Hypothesis not accepted	Hypothesis not accepted
12	Availability of the product will not influence preference for Green products	Hypothesis not accepted	Hypothesis not accepted
13	Age-Group will not influence preference for Green Products	Hypothesis accepted	Hypothesis accepted
14	Income will not influence preference for Green Products	Hypothesis not accepted	Hypothesis not accepted
15	Gender will not influence preference for Green Products	Hypothesis accepted	Hypothesis accepted

16	Education(Last grade of school completed) will not influence preference for Green Products	Hypothesis accepted	Hypothesis accepted
17	Occupation will not influence preference for Green Products	Hypothesis accepted	Hypothesis accepted
18	Number of members in the household will not influence preference for Green Cosmetic Products	Hypothesis accepted	Hypothesis accepted
19	Taste of the Green Food products will not influence preference for it	N/A	Hypothesis not accepted
20	Nutritional value of the Green Food products will influence consumers' preference for it	N/A	Hypothesis not accepted
21	Looks of the Green Food products will influence consumers' preference for it	N/A	Hypothesis not accepted

**Source: Existing Literature and Primary Data (Survey Findings)**

From the table 6.12.1, it is found that the findings of green cosmetic products resemble with that of green food products. This is because of the fact that the sets of respondents surveyed are same for both the products and moreover, people motivated for green products value the importance of green products more over the conventional products irrespective of product categories.

For Green Cosmetic Products, two additional attributes, Product effectivity and Quality, are studied based on the existing literatures, which are not relevant for Green Food products. For this two product type, product effectivity does not influence and product quality does influence preference for Green cosmetic products.

Likewise, for Green Food Products, three additional attributes, Taste, Looks and Nutritional Value, are studied on the basis of existing literature, which are not relevant for Green Cosmetic Products. Here also, taste, Looks and nutritional value of the green food products influence preference for it.

### **6.13 Impact of Psychographic Variables on Preference for Green Cosmetic Products (ANOVA) for the Non-Users of Green Cosmetic Products**

This section explains the perceptual impact of different psychographic and independent variables on the preference for green cosmetic and food products with respect to the non-users of the products. Although the respondents considered for this section are non-users of green cosmetic products, they are aware of and have knowledge about green cosmetic and food products. This section reveals the responses captured on the basis “Had the respondents been the users of green cosmetic products, what would have been their responses” and in line with the questionnaire administered on the users of green cosmetic products. By doing so, it helps substantiating the findings from the users.

#### **6.13.1 Environmental Consciousness**

The first psychographic variable which is studied is the Environmental Consciousness. One-Way ANOVA is done in order to know the perception whether Environmental Consciousness has significant impact on the preference for Green Cosmetic products.

The five predictor variables related to Environmental Consciousness identified and on which the data has been collected are;

V1: Users of Green Cosmetic Products support different measures to improve water management leading to water conservation

V2: Users of Green Cosmetic Products is aware about the issues and problems related to the environment

V3: Users of Green Cosmetic Products would be willing to pay higher prices for water

V4: It is very difficult for the Users of Green Cosmetic Products to do anything about the environment



V5: User of Green Cosmetic Products believes that using recyclable materials for daily use will improve the environment

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as

V6. For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA).

The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Environmental Consciousness on the preference of Green Cosmetic products.

**Table 6.13.1.1 ANOVA output for Environmental Consciousness in buying products**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.926	5	3.585	1.272	.043 <sup>a</sup>
	Residual	546.954	194	2.819		
	Total	564.880	199			

a. Predictors: (Constant), v5, v2, v1, v4, v3

b. Dependent Variable: v6

**Source: SPSS Output**

### 6.13.1.1 Hypothesis on Environmental Consciousness

H: Environmental Consciousness will not influence preference for green cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.13.1.1.

The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.043$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, Environmental Consciousness significantly impact the preference towards Green Cosmetic products.

### 6.13.2 Price Sensitivity

The second psychographic variable which is studied is the Price Sensitivity. One-Way ANOVA is done in order to know whether Price Sensitivity has significant impact on the preference for green cosmetic products. The six predictor variables identified and on which the data has been collected are;

V1: The price of buying Green Cosmetic Products is important to users of Green Cosmetic Products

V2: Users of Green Cosmetic Products know that a new kind of green cosmetic product is likely to be more expensive than older ones, but that does not matter to them

V3: Users of Green Cosmetic Products are less willing to buy a green product if they think that it will be high in price

V4: Users of Green Cosmetic Products don't mind paying more to try out a new green cosmetic product

V5: Users of Green Cosmetic Products think that really good Green Cosmetic product is worth paying a lot of money

V6: Users of Green Cosmetic Products don't mind spending a lot of money to buy a Green Cosmetic product

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as

V7. For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Price Sensitivity on the preference of Green Cosmetic products.

**Table 6.13.2.1 ANOVA output for Price Sensitivity in buying green cosmetic products**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.047	6	.841	.290	.039 <sup>a</sup>
	Residual	559.833	193	2.901		
	Total	564.880	199			

a. Predictors: (Constant), v6, v3, v2, v5, v1, v4

b. Dependent Variable: v7

**Source: SPSS Output**

#### **6.13.2.1. Hypothesis on Price Sensitivity:**

H: Price Sensitivity will not influence preference for green cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.13.2.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.039$  is less than  $\alpha = 0.05$ , the null hypothesis is not and the alternative hypothesis is accepted. That means, Price Sensitivity significantly impact the preference towards green cosmetic products.

#### **6.13.3 Innovativeness in buying products**

The third psychographic variable which is studied is Innovativeness in buying products. One-Way ANOVA is done in order to know whether Innovativeness in buying products has significant impact on the preference for green cosmetic products.

The four predictor variables related to Innovativeness in buying Green Cosmetic Products identified and on which the data has been collected are;

V1: Users of Green Cosmetic Products like to take a chance in buying new products

V2: Users of Green Cosmetic Products like to try new and different products

V3: Users of Green Cosmetic Products is the first in his circle of friends to buy a new product when it appears in the market

V4: Users of Green Cosmetic Products is the first in his circle of friends to experiment with the brands of latest products

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as

V7. For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Innovativeness in buying products on the preference of Green Cosmetic products.

**Table 6.13.3.1 ANOVA output for Innovativeness in buying products**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	15.347	4	3.837	1.361	.079 <sup>a</sup>
	Residual	549.533	195	2.818		
	Total	564.880	199			

a. Predictors: (Constant), v4, v3, v2, v1

b. Dependent Variable: v7

**Source: SPSS Output**

#### **6.13.3.1 Hypothesis on Innovativeness in buying products**

H: Innovativeness in buying products will not influence preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.13.3.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.079$  is more than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That

means, Innovativeness in buying products does not significantly impact the preference towards green cosmetic products.

#### **6.13.4 Product Involvement**

The fourth psychographic variable which is studied is Product Involvement. One-Way ANOVA is done in order to know whether Product Involvement has significant impact on the preference for green cosmetic products.

The five predictor variables related to Product Involvement in Buying Green Cosmetic Products are identified and on which the data has been collected are;

V1: Users of Green Cosmetic Products select the green products very carefully

V2: Using branded green products help Users of Green Cosmetic Products express their personality

V3: One can tell a lot about a person from whether they buy Green Cosmetic Products

V4: Users of Green Cosmetic Products believe different brands of green products would give different amounts of satisfaction

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as V7.

For the purpose, the respondents studied have been segregated into seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Product Involvement on the preference of green cosmetic products.

**Table 6.13.4.1 ANOVA output for Product Involvement in buying products**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.828	4	.707	.245	.091 <sup>a</sup>
	Residual	562.052	195	2.882		
	Total	564.880	199			

a. Predictors: (Constant), v4, v3, v1, v2

b. Dependent Variable: v7

**Source: SPSS Output**

#### **6.13.4.1 Hypothesis on Product Involvement**

H: Product involvement will not influence preference for green cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.13.4.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.091$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means - Product involvement will not significantly impact the preference towards green cosmetic products.

#### **6.13.5 Health Consciousness**

The fifth psychographic variable which is studied is Health Consciousness. One-Way ANOVA is done in order to know whether Health Consciousness has significant impact on the preference for green cosmetic products.

The eight predictor variables related to Health Consciousness in buying Green Cosmetic Products are identified and on which the data has been collected are;

V1: Users of Green Cosmetic Products worry that there are chemicals in their food products

V2: Users of Green Cosmetic Products worry that there are chemicals in their cosmetic products

V3: Users of Green Cosmetic Products are concerned about their drinking water quality

V4: Users of Green Cosmetic Products avoid food containing preservatives

V5: Users of Green Cosmetic Products read more health-related articles than I did 3 years ago

V6: Users of Green Cosmetic Products are interested in information about their health

V7: Users of Green Cosmetic Products are concerned about their health all the time

V8: Pollution in Cosmetic products does not bother users of Green Cosmetic Products

Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as

V9. For the purpose, the respondents studied have been segregated into seven categories; 1 =

Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD), 3 = Disagree(D), 4 = Neither Agree

Nor Disagree(NAD), 5 = Agree(A), 6 = Strongly Agree(SA), 7 = Very Strongly Agree(VSA).

The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Health Consciousness on the preference of green cosmetic products.

**Table 6.13.5.1 ANOVA output for Health Consciousness in buying products**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	29.155	8	3.644	1.299	.036 <sup>a</sup>
	Residual	535.725	191	2.805		
	Total	564.880	199			

a. Predictors: (Constant), v8, v1, v5, v6, v7, v4, v3, v2

b. Dependent Variable: v9

**Source: SPSS Output**

#### **6.13.5.1 Hypothesis on Health Consciousness**

H: Health consciousness will not influence preference for green cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.13.5.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.036$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative

hypothesis is accepted. That means, Health Consciousness will significantly impact the preference towards green cosmetic products.

## **6.14 Impact of Psychographic variables on Preference for Green Food Products (ANOVA) for the Non-Users of Green Food Products**

### **6.14.1 Environmental Consciousness**

The first psychographic variable which is studied is the Environmental Consciousness. One-Way ANOVA is done in order to know whether Environmental Consciousness has significant impact on the preference for Green Food products.

The five predictor variables related to Environmental Consciousness identified and on which the data has been collected are;

V1: Users of Green Food Products supports different measures to improve water management leading to water conservation

V2: Users of Green Food Products is aware about the issues and problems related to the environment

V3: Users of Green Food Products would be willing to pay higher prices for water

V4: It is very difficult for the Users of Green Food Products to do anything about the environment

V5: Users of Green Food Products believes that using recyclable materials for daily use will improve the environment

Preference for green food products is the dependent variable and in analysis, it is denoted as V6.

For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA).



The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Environmental Consciousness on the preference of Green Food products.

**Table 6.14.1.1 ANOVA output for Environmental Consciousness**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.585	5	.517	.182	.012 <sup>a</sup>
	Residual	551.410	194	2.842		
	Total	553.995	199			

a. Predictors: (Constant), v5, v2, v1, v4, v3

b. Dependent Variable: v6

**Source: SPSS Output**

#### **6.14.1.1 Hypothesis on Environmental Consciousness**

H: Environmental consciousness will not influence preference for green food products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.14.1.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.012$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means Environmental consciousness significantly impact the preference towards green food products.

#### **6.14.2 Price Sensitivity**

The second psychographic variable which is studied is the Price Sensitivity. One-Way ANOVA is done in order to know whether Price Sensitivity has significant impact on the preference for green food products. The six predictor variables identified and on which the data has been collected are;

V1: The price of buying Green Food Products is important to users of Green Food Products

V2: Users of Green Food Products know that a new kind of green food product is likely to be more expensive than older ones, but that does not matter to them

V3: Users of Green Food Products are less willing to buy a green product if they think that it will be high in price

V4: Users of Green Food Products don't mind paying more to try out a new green food products

V5: Users of Green Food Products think that really good Green Food product is worth paying a lot of money

V6: Users of Green Food Products don't mind spending a lot of money to buy a Green Food product

Preference for green food products is the dependent variable and in analysis, it is denoted as V7.

For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Price Sensitivity on the preference of Green Food products.

**Table 6.14.2.1 ANOVA output for Price Sensitivity**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.284	6	2.214	.790	.028 <sup>a</sup>
	Residual	540.711	193	2.802		
	Total	553.995	199			
a. Predictors: (Constant), v6, v3, v2, v5, v1, v4						
b. Dependent Variable: v7						
<b>Source: SPSS Output</b>						

#### **6.14.2.1 Hypothesis on Price Sensitivity**

H: Price Sensitivity will not influence preference for green food products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.14.2.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.028$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, Price Sensitivity significantly impact the preference towards green food products.

#### **6.14.3 Innovativeness in buying products**

The third psychographic variable which is studied is Innovativeness in buying products. One-Way ANOVA is done in order to know whether Innovativeness in buying products has significant impact on the preference for green food products.

The four predictor variables related to Innovativeness in buying Green Food Products identified and on which the data has been collected are;

V1: Users of Green Food Products like to take a chance in buying new products

V2: Users of Green Food Products like to try new and different products

V3: Users of Green Food Products is the first in his circle of friends to buy a new product when it appears in the market

V4: Users of Green Food Products is the first in his circle of friends to experiment with the brands of latest products

Preference for green food products is the dependent variable and in analysis, it is denoted as V7.

For the purpose, the responses were collected using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor

Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Innovativeness in buying products on the preference of Green Food products.

**Table 6.14.3.1 ANOVA output for Innovativeness in buying products**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	15.198	4	3.799	1.375	.064 <sup>a</sup>
	Residual	538.797	195	2.763		
	Total	553.995	199			

a. Predictors: (Constant), v4, v3, v2, v1

b. Dependent Variable: v7

**Source: SPSS Output**

#### **6.14.3.1 Hypothesis on Innovativeness in buying products**

H: Innovativeness in buying products will not influence preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.14.3.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is greater than the ' $\alpha$ ' value. In fact, since  $p = 0.064$  is more than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, Innovativeness in buying products will not significantly impact the preference towards green food products.

#### **6.14.4 Product Involvement**

The fourth psychographic variable which is studied is Product Involvement. One-Way ANOVA is done in order to know whether Product Involvement has significant impact on the preference for green food products.

The five predictor variables related to Product Involvement in Buying Green Food Products are identified and on which the data has been collected are;

V1: Users of Green Food Products select the green products very carefully

V2: Using branded green products help Users of Green Food Products express their personality

V3: One can tell a lot about a person from whether they buy Green Food Products

V4: Users of Green Food Products believe different brands of green products would give different amounts of satisfaction

Preference for green food products is the dependent variable and in analysis, it is denoted as V7.

For the purpose, the respondents studied have been segregated into seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Product Involvement on the preference of green food products.

**Table 6.14.4.1 ANOVA output for Product Involvement**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.588	4	2.647	.950	.436 <sup>a</sup>
	Residual	543.407	195	2.787		
	Total	553.995	199			

a. Predictors: (Constant), v4, v3, v1, v2

b. Dependent Variable: v7

**Source: SPSS Output**

#### **6.14.4.1 Hypothesis on Product involvement**

H: Product involvement will not influence preference for green food products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.14.4.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.436$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That

means, Innovativeness in buying products will not significantly impact the preference towards green food products.

#### **6.14.5 Health Consciousness**

The fifth psychographic variable which is studied is Health Consciousness. One-Way ANOVA is done in order to know whether Health Consciousness has significant impact on the preference for green food products.

The eight predictor variables related to Health Consciousness in buying Green Food Products are identified and on which the data has been collected are;

V1: Users of Green Food Products worry that there are chemicals in their food products

V2: Users of Green Food Products worry that there are chemicals in their food products

V3: Users of Green Food Products are concerned about their drinking water quality

V4: Users of Green Food Products avoid food containing preservatives

V5: Users of Green Food Products read more health-related articles than I did 3 years ago

V6: Users of Green Food Products are interested in information about their health

V7: Users of Green Food Products are concerned about their health all the time

V8: Pollution in Food products does not bother users of Green Food Products

Preference for green food products is the dependent variable and in analysis, it is denoted as

V9. For the purpose, the respondents studied have been segregated into seven categories; 1 =

Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA).

The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Health Consciousness on the preference of green food products.

**Table 6.14.5.1 ANOVA output for Health Consciousness**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	23.625	8	2.953	1.063	.039 <sup>a</sup>
	Residual	530.370	191	2.777		
	Total	553.995	199			

a. Predictors: (Constant), v8, v1, v5, v6, v7, v4, v3, v2

b. Dependent Variable: v9

**Source: SPSS Output**

#### **6.14.5.1 Hypothesis on Health Consciousness**

H: Health Consciousness will not influence preference for green food products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.14.5.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.039$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, Health Consciousness will significantly impact the preference towards green food products.

### **6.15 Impact of different independent variables on the preference for Green Cosmetic Products (ANOVA) for the Non-Users of Green Cosmetic Products**

#### **6.15.1 Safety**

Here safety perspective is studied. One-Way ANOVA is done in order to know whether Safety perspective, denoted as v1, has significant impact on the preference for green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as

v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Safety perspective on the preference of green cosmetic products.

**Table 6.15.1.1 ANOVA output for Safety**

ANOVA					
v2	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	21.306	6	3.551	1.261	.027
Within Groups	543.574	193	2.816		
Total	564.880	199			

**Source: SPSS Output**

### 6.15.1.1 Hypothesis on Safety

H: Safety will not influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.15.1.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.027$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the safety perspective will significantly impact the consumers' preference towards green cosmetic products.

### 6.15.2 Quality

Here quality perspective is studied. One-Way ANOVA is done in order to know whether quality perspective, denoted as v1, has significant impact on the preference for green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted



as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of quality perspective on the preference of green cosmetic products.

**Table 6.15.2.1 ANOVA output for Quality**

ANOVA					
v2	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.650	6	3.942	1.406	.021
Within Groups	541.230	193	2.804		
Total	564.880	199			

**Source: SPSS Output**

#### **6.15.2.1 Hypothesis on Quality**

H: Quality will not influence preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.15.2.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.021$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the quality perspective of the consumers significantly impact the consumers' preference towards green cosmetic products.

#### **6.15.3 Product Effectivity**

Here product effectivity, which is defined as the utility which is expected from a product, is studied. One-Way ANOVA is done in order to know whether product effectivity, denoted as v1, has significant impact on the preference for green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green

cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of product effectivity on the preference of green cosmetic products.

**Table 6.15.3.1 ANOVA output for Product Effectivity**

ANOVA					
v2	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.208	6	1.535	.533	.078
Within Groups	555.672	193	2.879		
Total	564.880	199			

**Source: SPSS Output**

#### **6.15.3.1 Hypothesis on Product Effectivity**

H: Product effectivity will not significantly influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.15.3.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.078$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, the product effectivity will not significantly impact the consumers' preference towards green cosmetic products.

#### **6.15.4 Brands**

Here impact of brand on preference for green cosmetic products is studied. One-Way ANOVA is done in order to know whether brand, denoted as v1, has significant impact on the preference for green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4

= Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of brand on the preference of green cosmetic products.

**Table 6.15.4.1 ANOVA output for Brand**

ANOVA					
v2					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.062	6	2.010	.702	.048
Within Groups	552.818	193	2.864		
Total	564.880	199			

**Source: SPSS Output**

#### **6.15.4.1 Hypothesis on Brand**

H: Brand will not significantly influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.15.4.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.048$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the branded green cosmetic products significantly impact the consumers' preference towards green cosmetic products.

#### **6.15.5 Product Knowledge**

Here product knowledge of green cosmetic products is studied. One-Way ANOVA is done in order to know whether product knowledge, denoted as v1, has significant impact on the preference for green cosmetic products. For the purpose, the respondents studied have been

segregated into seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). These categories are denoted respectively as 0, 1, 2, 3, 4, 5 and 6 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of product knowledge on the preference of green cosmetic products.

**Table 6.15.5.1 ANOVA output for Product Knowledge**

ANOVA					
v2	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	39.143	6	6.524	2.395	.030
Within Groups	525.737	193	2.724		
Total	564.880	199			

**Source: SPSS Output**

#### **6.15.5.1 Hypothesis on Product Knowledge**

H: Product knowledge will not significantly influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.15.5.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.030$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means the product knowledge significantly impact the consumers' preference towards green cosmetic products.

### 6.15.6 Information about the product

Here information about green cosmetic products is studied. One-Way ANOVA is done in order to know whether information about green cosmetic products, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of information about green cosmetic products on the preference of green cosmetic products.

**Table 6.15.6.1 ANOVA output for Product Information**

ANOVA					
v2					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	26.649	6	4.442	1.593	.015
Within Groups	538.231	193	2.789		
Total	564.880	199			

**Source: SPSS Output**

#### 6.15.6.1 Hypothesis on Information about the product

H: Information about the product will not significantly influence consumers' preference for green cosmetic products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.15.61. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.015$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative

hypothesis is accepted. That means, the information about the products significantly impact the consumers' preference towards green cosmetic products.

### 6.15.7 Availability

Here availability of green cosmetic products is studied. One-Way ANOVA is done in order to know whether availability of green cosmetic products, denoted as v1, has significant impact on the preference for green cosmetic products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of availability of green cosmetic products on the preference of green cosmetic products.

**Table 6.15.7.1 ANOVA output for Availability**

ANOVA					
v2	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	15.847	6	2.641	.928	.047
Within Groups	549.033	193	2.845		
Total	564.880	199			

**Source: SPSS Output**

#### 6.15.7.1 Hypothesis on Availability of the product

H: Availability of the cosmetic products will not significantly influence preference for Green Cosmetic products.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.15.7.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing

researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.047$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the availability of the products significantly impact the consumers' preference towards green cosmetic products.

## 6.16 Impact of different independent variables on the preference for Green Food Products (ANOVA) for the Non-Users of Green Food Products

### 6.16.1 Safety

Here safety perspective studied. One-Way ANOVA is done in order to know whether Safety perspective, denoted as v1, has significant impact on the preference for green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of Safety perspective on the preference of green food products.

**Table 6.16.1.1 ANOVA output for Safety**

ANOVA					
v2					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	11.585	6	1.931	.687	.006
Within Groups	542.410	193	2.810		
Total	553.995	199			

**Source: SPSS Output**

### 6.16.1.1 Hypothesis on Safety

H: Safety will not influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.16.1.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.006$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the safety perspective of the consumers significantly impact the consumers' preference towards green food products.

### 6.16.2 Nutritional Value

Here nutritional value is studied. One-Way ANOVA is done in order to know whether nutritional value, denoted as v1, has significant impact on the preference for green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of nutritional value on the preference of green food products.

**Table 6.16.2.1 ANOVA output for Nutritional Value**

ANOVA					
v2					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.142	5	1.228	.435	.024
Within Groups	547.853	194	2.824		
Total	553.995	199			

**Source: SPSS Output**



### 6.16.2.1 Hypothesis on Nutritional Value

H: Nutritional value of the products will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.16.2.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.024$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the nutritional value of the products significantly influence the consumers' preference towards green food products.

### 6.16.3 Taste

Here taste of the green food products is studied. One-Way ANOVA is done in order to know whether taste of the green food products, denoted as v1, has significant impact on the preference for green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of taste of the green food products on the preference of green food products.

**Table 6.16.3.1 ANOVA output for Taste**

ANOVA					
v2	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	21.182	6	3.530	1.395	.021
Within Groups	488.573	193	2.531		

#### ANOVA

v2

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	21.182	6	3.530	1.395	.021
Within Groups	488.573	193	2.531		
Total	509.755	199			

Source: SPSS Output

##### 6.16.3.1 Hypothesis on Taste

H: Taste of the products will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.16.3.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.021$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the taste of the products significantly influence the consumers' preference towards green food products.

##### 6.16.4 Product Knowledge

Here product knowledge of green food products is studied. One-Way ANOVA is done in order to know whether product knowledge, denoted as v1, has significant impact on the preference for green food products. For the purpose, the respondents studied have been segregated into seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented

below to infer whether there is any significant effect of product knowledge on the preference of green food products.

**Table 6.16.4.1 ANOVA output for Product Knowledge**

ANOVA					
v2					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	19.350	6	3.225	1.164	.032
Within Groups	534.645	193	2.770		
Total	553.995	199			

**Source: SPSS Output**

#### **6.16.4.1 Hypothesis on Product Knowledge**

H: Product knowledge will not significantly influence preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.16.4.1.

The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.032$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means the product knowledge significantly impact the consumers' preference towards green food products.

#### **6.16.5 Information about Green Food products**

Here information about green food products is studied. One-Way ANOVA is done in order to know whether information about green food products, denoted as v1, has significant impact on the preference for green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 =

Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of information about green food products on the preference of green food products.

**Table 6.16.5.1 ANOVA output for Information about the product**

ANOVA					
v2	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.023	6	1.004	.354	.047
Within Groups	547.972	193	2.839		
Total	553.995	199			

**Source: SPSS Output**

#### **6.16.5.1 Hypothesis on Information about the product**

H: Information about the product will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.16.5.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.047$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the information about the products significantly impact the consumers' preference towards green food products.

#### **6.16.6 Brands**

Here impact of brand on preference for green food products is studied. One-Way ANOVA is done in order to know whether brand, denoted as v1, has significant impact on the preference for

green food products. For the purpose, the respondents studied have been segregated into seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of brand on the preference of green food products.

**Table 6.16.6.1 ANOVA output for Brand**

ANOVA					
v2	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.701	6	1.950	.694	.048
Within Groups	542.294	193	2.810		
Total	553.995	199			

**Source: SPSS Output**

#### **6.16.6.1 Hypothesis on Brand**

H: Brand will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.16.6.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.048$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, the branded green food products significantly impact the consumers' preference towards green food products.

#### **6.16.7 Looks of the Green Food Products**

Here looks of the green food products impact on preference for green food products is studied. One-Way ANOVA is done in order to know whether looks of the green food products, denoted

as v1, has significant impact on the preference for green food products. For the purpose, the respondents studied have been segregated into seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of looks of the green food products on the preference of green food products

**Table 6.16.7.1 ANOVA output for Looks of the Green food products**  
**ANOVA**

v2					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	9.689	6	1.615	.573	.025
Within Groups	544.306	193	2.820		
Total	553.995	199			

**Source: SPSS Output**

#### **6.16.7.1 Hypothesis on Looks of the Green food products**

H: Looks of the green food products will not significantly influence consumers' preference for them

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.16.7.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.025$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted. That means, looks of the green food products significantly impact the consumers' preference towards green food products.

### 6.16.8 Availability

Here availability of green food products is studied. One-Way ANOVA is done in order to know whether availability of green food products, denoted as v1, has significant impact on the preference for green food products. For the purpose, the respondents have been studied using seven categories; 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of availability of green food products on the preference of green food products.

**Table 6.16.8.1: ANOVA for Availability of Green Food Products**  
**ANOVA**

v2					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.637	6	1.106	.390	.085
Within Groups	547.358	193	2.836		
Total	553.995	199			

**Source: SPSS Output**

#### 6.16.8.1 Hypothesis on Availability of the Product:

H: Availability of the food products will not significantly influence consumers' preference for green food products

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of the table 6.16.8.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.085$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, the availability of the food products will not significantly impact the consumers' preference towards green food products.

## 6.17 Impact of Demographic Profile on Preference for Green Cosmetic Products (ANOVA) for the Non-users of Green Cosmetic products

### 6.17.1 Age-Group

One-Way ANOVA is applied in order to know whether the age-group, denoted as v1, has significant impact on the preference for green cosmetic products. For the purpose, the respondents studied have been segregated into four categories; a) 18yrs – 25 yrs. B) 26 yrs – 35 yrs, c) 36 yrs – 50 yrs and d) > 50 yrs and these age-groups are denoted respectively as 0, 1, 2 and 3 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of age-group on the preference of green cosmetic products.

**Table 6.17.1.1 ANOVA Output for Age-Group**  
ANOVA  
v2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.163	3	1.054	.368	.076
Within Groups	561.717	196	2.866		
Total	564.880	199			

**Source: SPSS Output**

#### 6.17.1.1 Hypothesis on Age-Group:

H: Age-group does not influence preference towards green cosmetic products. In other words, there is no significant difference among different age-groups concerning their impact on preference, i.e., 18-25 = 26-35 = 36-50 = >50.

The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.17.1.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.076$



is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, the age-group does not significantly impact the consumers' preference towards green cosmetic products.

### 6.17.2 Gender

Like age-group, for gender also, One-Way ANOVA is done in order to know whether the gender, denoted as v1, has significant impact on the preference for green cosmetic products. For the purpose, the respondents studied have been segregated into two categories; a) Female B) Male and these categories are denoted respectively as 0 and 1 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of gender on the preference of green cosmetic products.

**Table 6.17.2.1 ANOVA Output for Gender**

ANOVA					
v2	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.110	1	.110	.038	.045
Within Groups	564.770	198	2.852		
Total	564.880	199			

**Source: SPSS Output**

#### 6.17.2.1 Hypothesis on Gender

H: Gender does not influence consumers' preference towards green cosmetic products. In other words, there is no significant difference between two genders concerning their impact on preference, i.e., Male = Female.

The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.17.2.1. The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.045$  is greater than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted and

established. That means, gender does not significantly impact the preference towards green cosmetic products.

### 6.17.3 Level of Education

Like the other demographic variables, for level of education also, One-Way ANOVA is done in order to know whether the level of education, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into three categories; a) High School b) Graduation and c) Post – Graduation. These categories are denoted respectively as 0, 1 and 2 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green cosmetic products.

**Table 6.17.3.1 ANOVA output for Level of Education**

ANOVA					
v2	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.172	2	2.586	.910	.040
Within Groups	559.708	197	2.841		
Total	564.880	199			

**Source: SPSS Output**

#### 6.17.3.1 Hypothesis on Level of Education:

H: Level of Education does not influence consumers' preference towards green cosmetic products. In other words, there is no significant difference between three levels of education concerning their impact on preference, i.e., High School = Graduation = Post - Graduation.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.17.3.1.

The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.040$  is greater than

$\alpha = 0.05$ , the null hypothesis is accepted and established. That means, level of education does not significantly impact the preference towards green cosmetic products.

#### 6.17.4 Occupation

Like the other demographic variables, for different types of occupation also, One-Way ANOVA is done in order to know whether the different types of occupation, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into four categories; a) Student b) Business c) Service and d) Housewife. These categories are denoted respectively as 0, 1, 2 and 3 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green cosmetic products.

**Table 6.17.4.1 ANOVA Output for Occupation**

ANOVA					
v2	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.724	3	.908	.317	.081
Within Groups	562.156	196	2.868		
Total	564.880	199			

Source: SPSS Output

##### 6.17.4.1 Hypothesis on Occupation:

H: Occupation does not influence consumers' preference towards green cosmetic products.

In other words, there is no significant difference between four levels of occupation concerning their impact on preference, i.e., Student = Business = Service = Housewife.

The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.17.4.1.

The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.081$  is greater than

$\alpha = 0.05$ , the null hypothesis is accepted and established. That means Occupation does not significantly impact the preference towards green cosmetic products.

### 6.17.5 Income

Like other characteristics of demographic profile as analyzed above, income of the consumers has also been considered for One-Way ANOVA in order to know whether the income level of the consumers, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into five categories on the basis of monthly income in Rupees; a) <25,000 b) 25001-49999 c) 50000-74999 d) 75000-99999 and e)  $\geq 100000$  and these categories are denoted respectively as 0, 1, 2, 3 and 4 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of income level of the consumers on the preference of green cosmetic products.

**Table 6.17.5.1 ANOVA Output on Income Level of the Consumers**

ANOVA					
v2					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5.085	4	1.271	.443	.008
Within Groups	559.795	195	2.871		
Total	564.880	199			

Source: SPSS Output

#### 6.17.5.1 Hypothesis on Income Level

H: Income level does not influence consumers' preference towards green cosmetic products.

In other words, there is no significant difference between five income levels concerning their impact on preference, i.e., <25,000 = 25001-49999 = 50000-74999 = 75000-99999 =  $\geq 100000$ .

The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.17.5.1. The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.008$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted and established. That means, income level significantly impacts the preference towards green cosmetic products.

#### 6.17.6 Number of Members in Household

The last demographic variable which is studied in this paper is the number of members in the household of the consumer, for different number of members in the household also, One-Way ANOVA is done in order to know whether different number of members in the household, denoted as v1, has significant impact on the use of green cosmetic products. For the purpose, the respondents studied have been segregated into three categories; a)  $<2$  b)  $2 - 4$  and c)  $\geq 5$ . These categories are denoted respectively as 0, 1 and 2 for analysis purpose in SPSS. Preference for green cosmetic products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green cosmetic products.

**Table 6.17.6.1 ANOVA Output on Number of members in the household**

ANOVA					
v2	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	12.891	2	6.446	2.300	.103
Within Groups	551.989	197	2.802		
Total	564.880	199			

**Source: SPSS Output**

#### **6.17.6.1 Hypothesis on Number of members in the household:**

H: Number of members in the household does not influence consumers' preference towards green cosmetic products. In other words, there is no significant difference between four levels of occupation concerning their impact on preference, i.e.,  $<2 = 2-4 = \geq 5$ .

The exact significant level (p value) of ANOVA is exhibited in 6th Col. (Sig.) of table 6.17.6.1.

The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.103$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, Number of members in the household does not significantly impact the preference towards green cosmetic products.

### **6.18 Impact of Demographic Profile on Preference for Green Food Products (ANOVA) for the Non-users**

#### **6.18.1 Age Group**

One-Way ANOVA is done in order to know whether the age-group, denoted as v1, has significant impact on the preference for green food products. For the purpose, the respondents studied have been segregated into four categories; a) 18yrs – 25 yrs. b) 26 yrs – 35 yrs, c) 36 yrs – 50 yrs and d) > 50 yrs and these age-groups are denoted respectively as 0, 1, 2 and 3 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of age-group on the preference of green food products.

**Table 6.18.1.1 ANOVA Output for Age-Group**

ANOVA					
	v2				
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.165	3	1.388	.495	.086
Within Groups	549.830	196	2.805		
Total	553.995	199			

**Source: SPSS Output**

#### **6.18.1.1 Hypothesis on Age-Group:**

H: Age-group does not influence consumers' preference towards green food products. In other words, there is no significant difference among different age-groups concerning their impact on preference, i.e.,  $18-25 = 26-35 = 36-50 = >50$ .

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.18.1.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.086$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, the age-group does not significantly impact the consumers' preference towards green food products.

#### **6.18.2 Gender**

Like age-group, for gender also, One-Way ANOVA is done in order to know whether the gender, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into two categories; a) Female B) Male and these categories are denoted respectively as 0 and 1 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of gender on the preference of green food products.

**Table 6.18.2.1 ANOVA Output for Gender**

ANOVA					
v2					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.080	1	.080	.029	.066
Within Groups	553.915	198	2.798		
Total	553.995	199			

**Source: SPSS Output**

### **6.18.2.1 Hypothesis on Gender**

H: Gender does not influence consumers' preference towards green food products. In other words, there is no significant difference between two genders concerning their impact on preference, i.e., Male = Female.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.18.2.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.066$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, gender does not significantly impact the consumers' preference towards green food products.

### **6.18.3 Level of Education**

Like the other demographic variables, for level of education also, One-Way ANOVA is done in order to know whether the level of education, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into three categories; a) High School b) Graduation and c) Post – Graduation. These categories are denoted respectively as 0, 1 and 2 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output



sheet is presented below to infer whether there is any significant effect of level of education on the preference of green food products.

**Table 6.18.3.1 ANOVA Output for Education**

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	9.169	2	4.584	1.658	.093
Within Groups	544.826	197	2.766		
Total	553.995	199			

Source: SPSS Output

### 6.18.3.1 Hypothesis on Education

H: Level of Education does not influence consumers' preference towards green food products. In other words, there is no significant difference between three levels of education concerning their impact on preference, i.e., High School = Graduation = Post - Graduation.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.18.3.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.093$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, level of education does not significantly impact the consumers' preference towards green food products.

### 6.18.4 Occupation

Like the other demographic variables, for different types of occupation also, One-Way ANOVA is done in order to know whether the different types of occupation, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into four categories; a) Student b) Business c) Service and d) Housewife. These categories are denoted respectively as 0, 1, 2 and 3 for analysis purpose in SPSS.

Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green food products.

**Table 6.18.4.1 ANOVA output for Occupation**

**ANOVA**

v2					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.153	3	.718	.255	.058
Within Groups	551.842	196	2.816		
Total	553.995	199			

**Source: SPSS Output**

**6.18.4.1 Hypothesis on Occupation:**

H: Occupation does not influence consumers' preference towards green food products. In other words, there is no significant difference between four levels of occupation concerning their impact on preference, i.e., Student = Business = Service = Housewife.

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.18.4.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.058$  is greater than  $\alpha = 0.05$ , the null hypothesis is accepted and established. That means, Occupation does not significantly impact the consumers' preference towards green food products.

**6.18.5 Income**

Like other characteristics of demographic profile as analyzed above, income of the consumers has also been considered for One-Way ANOVA in order to know whether the income level of the consumers, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into five categories on the basis of

monthly income in Rupees; a) <25,000 b) 25001-49999 c) 50000-74999 d) 75000-99999 and e)  $\geq 100000$  and these categories are denoted respectively as 0, 1, 2, 3 and 4 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of income level of the consumers on the preference of green food products.

**Table 6.18.5.1 ANOVA output for Income Level**

ANOVA					
v2	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.177	4	2.044	.730	.047
Within Groups	543.571	194	2.802		
Total	551.749	198			

Source: SPSS Output

#### 6.18.5.1 Hypothesis on Income Level

H: Income level does not influence consumers' preference towards green food products. In other words, there is no significant difference between five income levels concerning their impact on preference, i.e.,  $<25,000 = 25001-49999 = 50000-74999 = 75000-99999 = \geq 100000$ .

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.18.5.1 is .047. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is less than the ' $\alpha$ ' value. In fact, since  $p = 0.039$  is less than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is accepted and established. That means, income level significantly impacts the consumers' preference towards green food products.

### 6.18.6 Number of Members in Household

The last demographic variable which is studied is the number of members in the household of the consumer, for different number of members in the household also, One-Way ANOVA is done in order to know whether different number of members in the household, denoted as v1, has significant impact on the use of green food products. For the purpose, the respondents studied have been segregated into three categories; a)  $<2$  b)  $2 - 4$  and c)  $\geq 5$ . These categories are denoted respectively as 0, 1 and 2 for analysis purpose in SPSS. Preference for green food products is the dependent variable and in analysis, it is denoted as v2. The relevant portion of SPSS output sheet is presented below to infer whether there is any significant effect of level of education on the preference of green food products.

**Table 6.18.6.1 ANOVA output for Number of members in the household**

ANOVA					
v2					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.781	2	.390	.139	.036
Within Groups	553.214	197	2.808		
Total	553.995	199			

**Source: SPSS Output**

#### 6.18.6.1 Hypothesis on Number of members in the Household

H: Number of members in the household does not influence consumers' preference towards green food products. In other words, there is no significant difference between four levels of occupation concerning their impact on preference, i.e.,  $<2 = 2-4 = \geq 5$ .

The exact significant level (p value) of ANOVA is exhibited in 6<sup>th</sup> Col. (Sig.) of table 6.18.6.1. The level of significance set by us is 5%, i.e.,  $\alpha = 0.05$  (on the basis of existing researches of similar type). The table reveals that 'p' value is more than the ' $\alpha$ ' value. In fact, since  $p = 0.036$  is greater than  $\alpha = 0.05$ , the null hypothesis is not accepted and the alternative hypothesis is

accepted and established. That means, number of members in the household significantly impact the preference towards green food products.

### **6.19 Reasons for not buying Green Cosmetic or Food products**

- 1) Still now, the price of the green products for both the cosmetic and food products is the most significant barrier. Although, the environment is changing and the awareness among the masses are improving, still the price is acting as a barrier. For the cosmetic products, the price difference is at least three times as compared to non-green products.
- 2) Green food products are healthier compared to non-green conventional food products. But this awareness is not so much among the masses. This may be due to the reason that for green food products, unbranded products are more dominant than that of branded products. They are not promoting so much to aware the consumers about the positive effects of the green products. Also, for the branded products, the promotional investments are not so much which actually can make the customers aware about the positive features about the green products.
- 3) Availability is also a very important barrier with respect to mainly food products and more so in the semi-urban and rural areas. Once a consumer likes a product, as s/he again goes to buy the product, the products' unavailability lead to a negative mind-set. This actually prevents the customer from becoming a regular customer.
- 4) Looks for green food products is also an obstacle since they are not so attractive in looks as compared to conventional food products. For example, Green Haldi will not be so much yellowish in nature as it will be for conventional haldi packets.
- 5) Family size – Bigger family size leads to non-regular usage for the green food products. This is due to bulk expenditure for the products as the quantity of the products to be

demand is reasonably high owing to bigger family size. But, if the family size is small, then in spite of high price, consumers used to buy the green products as the total expenditure is not so much.

- 6) Improper promotion and communication from the green product organizations towards the prospective buyers. Still now, except the educated part of the society, people do not know about the positive effects of the green products. Some online retailers are selling the products specifically to the computer-literate groups of the society only leaving aside the computer illiterate group of the society.
- 7) Product effectivity/product performance is an important barrier. Consumers of green products presume that the effectivity of these products will be better than that of conventional products. This mindset is generated due to the concept of paying higher price. But this is not always true practically. It basically depends on the product category whether it will be needed less or more in quantity. For example, in case of some beauty products, this may be applicable. But for many types of food products this concept is not applicable which actually makes product effectivity an important barrier towards preference for green products.
- 8) There is a gap between the consumers' belief and their behavior for buying green products. This may be due to the fact of the role of the influencers around them and presence of barriers for buying green products. Also, less involved in the buying green products and less innovative behavior in buying the products can lead to the above mentioned situation.
- 9) Skepticism about the certification boards and organic food labels. Many educated consumers do not believe on the certification boards certifying the green cosmetic and

food products. Better acceptability among the consumers about this agencies will help the organizations to increase the market share.

## **6.20 Comparison of Findings of this Study with that of the Existing Literature**

### **6.20.1 Green Cosmetic Products**

The findings of the study with that of the existing literatures are explained over here. Since no study had taken place in the area selected for this study, so this comparison will help to identify whether there are any deviations from the existing research findings and the reason behind that. With respect to the Environmental Consciousness, Price Sensitivity, Innovativeness in buying products, Product involvement , Health Consciousness, Safety perspective of the consumer, Quality of the Green Cosmetic product, Product Effectivity, Product Knowledge, Information about the product, Brand of the Green Cosmetic product, Availability of the product, Income , the findings of the study matches with that of the existing literatures. But, for the Age, Gender, Education and Occupation of the consumers, the finding of the study does not match with that of the existing literature. For Age and gender, the market of green cosmetic products in Indian market is different from the other parts of the world. Here, due to glamour-driven mind set, males are becoming equally conscious about the cosmetic products as compared to the females. For studying occupation of the respondents', the sample units considered in this Study are customers both from the sophisticated organized retail outlets like Spencer's and local brands like Aromatic Herbals which directly sell to the customers. Since the local brand users, mainly from the areas in and around Kolkata, such as Howrah, North and South 24 Parganas are not that well placed with respect to their occupation but are happy with the green cosmetic products, the Hypothesis is not accepted. Studying product involvement with respect to the consumers'

preference for Green Cosmetic products was a new task as it was not tested for green cosmetic products, but was tested for other categories of products, specifically non-green cosmetic products. The findings state that Product involvement does not influence consumers' preference for Green Cosmetic products. Similarly, Product Effectivity with respect to consumers' preference for green cosmetic products was also not studied, but was studied for other categories of products, specifically, non-green cosmetic products. The findings state that Product effectivity does not influence consumers' preference for Green Cosmetic products. The same way, the number of members in the household, which was not, tested earlier state that it will not influence consumers' preference for Green Cosmetic products.

#### **6.20.2 Green Food Products**

Here the findings of the study about green food products with that of the existing literatures. Since no study had taken place in the area selected for this study, so this comparison will help to identify whether there are any deviations and the reason behind that. With respect to the Environmental Consciousness, Price Sensitivity, Innovativeness in buying products, Product involvement, Health Consciousness, Safety perspective of the consumer, Quality of the Green Food products, Product Effectivity, Product Knowledge, Information about the product, Brand of the Green Food product, Availability of the product, Nutritional value, Income, the findings of the study matches with that of the existing literatures. But, for the Age, Gender, Education and Occupation of the consumers, the findings of the study do not match with that of the existing literature. For Age and gender, the market of green food products in Indian market is different from the other parts of the world. Here, due to glamour-driven mind set, males are becoming equally conscious about the food products as compared to the females.



For studying occupation of the respondents', the sample units considered in this Study are customers both from the sophisticated organized retail outlets like Spencer's and local brands like Aromatic Herbals which directly sell to the customers. Since the local brand users, mainly from the areas in and around Kolkata, such as Howrah, North and South 24 Parganas are not that well placed with respect to their occupation but are happy with the green food products, the Hypothesis is not accepted. Studying product involvement with respect to the consumers' preference for Green Food products was a new task as it was not tested for green food products, but was tested for other categories of products, specifically non-green food products. The findings state that Product involvement does not influence consumers' preference for Green Food products. Similarly, Product Effectivity with respect to consumers' preference for green food products was also not studied, but was studied for other categories of products, specifically, non-green food products. The findings state that Product effectivity does not influence consumers' preference for Green Food products. The same way, the number of members in the household, which was not, tested earlier state that it will not influence consumers' preference for Green Food products.

## **6.20 Summary**

In this chapter a detailed description about the analysis of the data collected using the questionnaires is presented. At first, minimization of factors with respect to the various independent variables by Factor analysis was done. After that among the factors, prioritization was done using Multiple Regression technique. Also, the hypotheses formulated were tested using ANOVA to arrive at the results. A comparison between the preference for Green Cosmetic and Food product was made. After that, the same variables were tested for the non-users of Green Cosmetic and Food products. The chapter ends with identifying the barriers for buying Green Cosmetic and Food products.

## **7. Conclusion**

### **7.1 Overview**

While details about the findings with respect to factors influencing consumer preferences for Green Cosmetic and Food products have been discussed in previous sections, the most significant findings and comparison of those with that of the existing literatures are highlighted in this section.

### **7.2 Summary of Research Findings**

In order to meet the purpose of the study as envisaged in the earlier sections, factor analysis is used to know important factors which insist buyers to go for both green cosmetic and food products and also find out the impact of psychographic variables on the popularity of them.

On the basis of analysis done using Exploratory Factor Analysis, huge number of variables used in the study, to be specific forty five variables, had been scaled down to twenty variables. Concerning the facet - impact of Environmental consciousness towards popularity of Green products, factors such as; Environmental Sense and Environmental Callousness are the most important. Relating to relevance of price towards popularity of green products, factors such as; Higher Price, Price Sensitivity and Price Barrier plays the most important role. In the pretext of studying the innovation of the respondents' about buying green products, it has been found that New Product Initiative and Experimental Attitude are two important factors. Regarding involvement in buying process while buying green products, factors such as; Satisfaction from Branded Green products and Branded Green products reveal personality are the key contributors. About health consciousness of the respondents in buying green products, factors such as; Health

Sensitivity, Health Concern, Avoid preservative food and Food pollution play the most important role.

Regarding general factors contributing for the popularity of green cosmetic products, important factors are; Green Product Knowledge, Branded Green Cosmetic Products, Reliability of Green Cosmetic Product and Green Products expensive.

Pertaining to general factors impacting green food products, factors such as; Green Food Products' Nutritional Taste, Green Food Products are Healthier, Lack of information and availability of Green Food Products, Green Food Products are safe and expensive and Branded Green Food Products' Look and Quality impact the respondents' decision for buying green food products.

After identifying the factors using Exploratory Factor analysis, Multiple Regression is used to know the important factors which insist buyers to go for green cosmetic products and also find out the impact of psychographic variables on the popularity of green cosmetic products.

Concerning the facet – 'impact of Environmental consciousness towards popularity of Green cosmetic products', the factor - 'users of green cosmetic products to do anything about the environment' has highest level of impact on preferring green cosmetic products. On the other hand, the factor – 'willing to pay higher prices for water' has the least level of impact on preferring green cosmetic products. Relating to relevance of price towards popularity of green cosmetic products, factors such as, 'Users of Green Cosmetic Products don't mind spending a lot of money to buy a Green Cosmetic product' has highest level of impact on preferring green cosmetic products. The factor – 'Users of Green Cosmetic Products know that a new kind of

green cosmetic product is likely to be more expensive than older ones, but that does not matter to them' has least level of impact on preferring green cosmetic products.

In the pretext of studying the innovation of the consumers about buying green cosmetic products, it has been found that 'Users of Green Cosmetic Products like to take a chance in buying new products' has highest level of impact on preferring green cosmetic products. But, the factor 'Users of Green Cosmetic Products like to try new and different products' has the least level of impact on preferring green cosmetic products. Regarding involvement in buying process while buying green cosmetic products, the factor 'Users of Green Cosmetic Products select the green cosmetic products very carefully' has highest level of impact on preferring green cosmetic products. Similarly the variable – 'One can tell a lot about a person from whether they buy Green Cosmetic Products' has the least level of impact on preferring green cosmetic products.

About health consciousness of the respondents in buying green products, 'Users of Green Cosmetic Products are concerned about their drinking water quality' has highest level of impact on preferring green cosmetic products. Similarly, the factor – 'Users of Green Cosmetic Products are interested in information about their health' has the least level of impact on preferring green cosmetic products.

After identifying the factors, like green cosmetic products, Multiple Regression is used to know important factors which insist buyers to go for Green Food products and also find out the impact of psychographic variables on the popularity of green Food products.

Concerning the facet – ‘impact of Environmental consciousness towards popularity of Green Food products’, the factor - ‘Users of Green Food Products would be willing to pay higher prices for water’ has highest level of impact on preferring green Food products. On the other hand, the factor – ‘Users of Green Food Products is aware about the issues and problems related to the environment’ has the least level of impact on preferring green Food products. Relating to relevance of price towards popularity of green Food products, factors such as, ‘Users of Green Food Products don’t mind spending a lot of money to buy a Green Food product’ has highest level of impact on preferring green Food products. The factor – ‘The price of buying Green Food Products is important to users of Green Food Products’ has least level of impact on preferring green Food products.

In the pretext of studying the innovation of the consumers about buying green Food products, it has been found that ‘Users of Green Food Products like to take a chance in buying new products’ has highest level of impact on preferring green Food products. In case of involvement in buying process while buying green Food products, the factor ‘Users of Green Food Products select the green products very carefully’ has highest level of impact on preferring green Food products. Similarly the variable – ‘One can tell a lot about a person from whether they buy Green Food Products’ has the least level of impact on preferring green Food products.

About health consciousness of the respondents in buying green products, ‘Users of Green Food Products are concerned about their drinking water quality’ has highest level of impact on preferring green Food products. Similarly, the factor – ‘Pollution in Food products does not bother users of Green Food Products’ has the least level of impact on preferring green Food products.

After identifying the factors with respect to green cosmetic and food products and finding the most significant among them, One-Way ANOVA is used to know whether any facet of demographic profile of the consumers has significant impact on the preference of the green cosmetic products. Out of six facets of demographic profile considered, only one, i.e., income level of the consumers has significant impact on preference for green cosmetic products. Participatory observation method followed in uncovering the logic behind our findings reveals that owing to comparatively highly priced, the preference for green cosmetic products is a direct function of the income level of the consumers. Although all the respondents are the users of green cosmetic products, consumers in relatively lower income basket don't afford to all the green cosmetic products available in the market and prefer to conventional cosmetic products for reasonability of prices. Some goes for occasional buying but not for regular buying. Other five facets of demographic profile such as age, gender, education, occupation and family size don't significantly impact the preference for green cosmetic product. On observation, it is found that those who are users, they know very well the utility of the green cosmetic products vis-à-vis their conventional counterparts. Thus irrespective of gender, education, occupation and family size, the preference gets intact. However, in-depth study on facet-wise demographic profile on preference may bring forth some exceptional result which may be considered for future research. On the basis of the research findings, it is inferred that, in order to popularize the use of green cosmetic products, the producers need to focus on either of the following two points; a) keep the prices of the green cosmetic products in reasonable range to make it affordable to a wider base of consumers and b) to market the same amongst the consumers of higher income-group basket exhaustively.

Like green cosmetic products, for green food products also, One-Way ANOVA is applied to know whether any facet of demographic profile of the consumers has significant impact on the preference of the green food products. Out of six facets of demographic profile considered, only one, i.e., income level of the consumers has significant impact on preference for green food products. Participatory observation method followed in uncovering the logic behind our findings reveals that owing to comparatively highly priced, the preference for green food products is a direct function of the income level of the consumers. Although all the respondents are the users of green food products, consumers in relatively lower income basket don't afford to all the green food products available in the market and prefer to conventional food products for reasonability of prices. Other five facets of demographic profile such as age, gender, education, occupation and family size don't significantly impact the preference for green food product. On observation, it is found that those who are users, they know very well the utility of the green food products vis-à-vis their conventional counterparts. Thus irrespective of gender, education, occupation and family size, the preference gets intact. However, in-depth study on facet-wise demographic profile on preference may bring forth some exceptional result which may be considered for future research.

On the basis of the research findings, it is inferred that, in order to popularize the use of green food products, the producers need to focus on either of the following two points; a) keep the prices of the green food products in reasonable range to make it affordable to a wider base of consumers and b) to market the same amongst the consumers of higher income-group basket exhaustively.

After analysing the impact of the various demographic variables with respect to consumers' preference for Green cosmetic and food products, it is very important to analyse the role of various psychographic and independent variables and their impact on consumers' preference for Green cosmetic and food products. Regarding the various psychographic variables studied, Environmental Consciousness, Price Sensitivity, Innovativeness in buying products, Product Involvement and Health Consciousness, significantly impact consumers' preference for Green Cosmetic and Food products.

Regarding the other independent variables, Safety perspective of the consumer, Product effectivity, Product knowledge, Information about the products, Brand of the green product, Availability of the green product significantly impact consumers' preference for Green Cosmetic products. Likewise all the above mentioned factors significantly impact consumers' preference for Green Food products too. In addition to these, Taste, Nutritional value and Looks of the Green Food products significantly impact consumers' preference for Green Food products. This is against the common perception that the green food products are good to taste compared to conventional products. Also, looks of the green food products are more original and not so attractive looking as compared with conventional food products. Green haldi will not be so yellowish and attractive looking as compared with conventional haldi. Also, while comparing the findings for the cosmetic products with that of the food products, there was not so much of difference. This may be due to the reason that the respondents for the cosmetic and food products were same.

Also, the same hypotheses were tested with respect to the non-users or occasional users of the green cosmetic and food products to compare the findings of the users and the non-users. The



findings of most of the hypothesis were same except a few. This proves that the findings of the research are consistent. Also, enquiring about the barriers which prevents the buyers from buying green products occasionally also, are price and its availability. The price is most significant barrier. Mainly for the semi-urban and rural areas, availability is a problem as the local retailers does not stock much product due to less demand. Also, awareness about the products needs to be improved by effective use of the promotional tools.

In comparing the above mentioned results with that of the existing literatures, the results obtained from this research are in line with that of the existing literatures, barring a few cases. In demographic variables Age, Gender, Occupation, Education and Number of members in the household does not significantly impact consumers' reference for Green cosmetic and food products. Some variables studied are not being tested earlier, such as Taste, Looks of the Green Food products, it can be seen that they significantly impact consumers' preference for Green Food products.

Only 18% respondents buy either green cosmetic or food products regularly compared to the others and they are mostly from the urban areas. This is due to the problem of availability of the products in the semi-urban or rural areas. Also, brands play a more significant role in case of preference for green cosmetic products more than that of green food products. In unorganized retailing sector, selling is mostly happening in case of fruits and vegetables. The unorganized sellers are selling both in the rural markets and also in the urban areas. In case many localities of Kolkata, such as Alipore, Salt Lake, green fruits and vegetables are sold on Saturdays and Sundays by the unorganized retailers.

### 7.3 Managerial Implications

The findings of the research will help the organizations to identify the key factors leading to more acceptability of the green cosmetic and food products in the Indian market, more specifically in Kolkata and the districts around it in West Bengal. Also, it will help all the concerned persons to identify the factors which act as barriers for green products' popularity and take corrective actions to overcome these barriers. The customers can be made more aware about the positive aspects of the green cosmetic and food products as a result of which they will be accepting these for their daily use. Some specific suggestions are listed below:-

- 1) More effective promotional campaigns to be undertaken to inform about the positive effects of Green products. The promotional campaigns should target all the geographies starting from urban to rural areas.
- 2) When consumers hold ambivalent attitudes toward buying green products, high effort should be given by the organizations to remove the discomfort of the consumers regarding buying green products. So, while going for green advertising, the organizations should assess the ambivalence of their target consumers' attitude toward buying green products. They should also try to map the relationship of demographics with that of ambivalence attitude.
- 3) Effective demographic or psychographic segmentation should be implemented so that the different categories of green products can be targeted according to the selected segment of the market.
- 4) The research also helps to understand the varying behavior pattern between the urban and rural consumers. For example, in case of rural consumers of green products, brand does not play an effective role whereas for urban consumers brand plays an effective role

while selecting specifically green cosmetic products. The above statement is not valid for green cosmetic products.

- 5) Overall all, these steps will help the organization to promote green products better, which will ultimately increase the number of green consumers and reduce environmental degradation. This will help the earth as well as the mankind to be sustainable.

## **7.4 Limitations of the Research**

Limitations of the research study are as follows:

- 7.4.1 The research study is limited to respondents related to only Green Cosmetic and Food products. The other types of green product users are not being studied in this research project.
- 7.4.2 The research study is limited to only Kolkata and the districts around it such as, North 24 Parganas , South Parganas, Howrah , Hooghly only. The other parts of West Bengal are not being studied.
- 7.4.3 Domain specific psychographic constructs used in this study consisted of truncated number of dimensions, compared to that in existing literature, created by researchers in the past. These limited numbers of dimensions of each construct were chosen specifically, ensuring that these were non-overlapping between dimensions of other constructs, to reflect the impact of marketing strategies of marketers, pertinent to this study.
- 7.4.4 The research study is limited to data collection over a period from December 2013 to January 2015.

7.4.5 The awareness about green products both with respect to the consumers' and the organizations have changed dramatically during the research period. So, the population size of 400 may be is not sufficient with respect to the current scenario.

7.4.6 The responses from the respondents can be biased and as a result some findings can be incorrect.

## **7.5 Scope of Future Research**

The quest for knowledge, solutions to problems and research questions leading to improved quality of research is synonymous with progress of human civilization. Whereas the current research provided answers to the research questions, it also highlighted its limitations in the previous section 7.4. This section provides brief directions for future researchers to pursue, in the domain of impact of marketing strategies of marketers on popularizing and successfully selling green cosmetic and food products.

7.5.1 Future research can improve generalization of the findings of this research by extending this study to include the following:

- other geographies like different states
- localities with wide variations in their socio-economic profile,
- other categories of green products except than cosmetic and food products

7.5.2 Future research can take place to enrich the research work by incorporating the following additional factors which are expected to change over time:

- expected increase in awareness of consumers regarding green products

- change in involvement due to increase in product complexity, durability, performance and price
- change in consumer exposure to social and online media due to wider access through improved internet connectivity
- increase in disposable income

7.5.3 Researchers in future are encouraged to create and develop new constructs to better reflect evolution of marketing in future and changes in lifestyle of communities, as follows:

- propensity of consumers towards opportunities of co-creation of innovative solutions by marketers,
- emotional and enthusiastic affiliation to a brand

## **7.6 Summary**

The thesis highlights the importance of identifying the various psychographic variables and demographic variables which act as positive motivators influencing the preference for the Green Cosmetic and Food products , specifically for Kolkata and in and around of it. But, still now there are some important barriers which need to be tackled by the organizations to establish the Green product industry in a sustainable manner. The chapter also discusses the limitations, contribution of the research findings and future scope of research which will actually lead to newer areas of research in the specified domain.

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## 9. Appendices

### Appendix 1

#### Questionnaire used for Physical survey(Offline mode):-

##### Survey Questionnaire

Dear Respondent,

This questionnaire is prepared regarding a research activity related to PhD program at ICFAI University, Jharkhand on Green products. Green products can be stated as environment friendly or sustainable products, organic in nature. I shall be highly grateful if you could spare a few minutes to complete the questionnaire. There is no right or wrong answers to the questions. Answers given by you will be kept confidential and used for academic purpose only.

1) Do you know about green products?

- i) Yes                      ii) No

2) Do you buy green products?

- i) Yes                      ii) No

3) How much do you spend in buying green products (monthly)?

---

4) Did you buy green products in this shopping trip?

- i) Yes                      ii) No

5) What all green products did you buy in this shopping trip?

- |                             |        |        |
|-----------------------------|--------|--------|
| A) Green cosmetics products | i) Yes | ii) No |
| B) Green food products      | i) Yes | ii) No |

6) Name the green products you have bought \_\_\_\_\_

7) Reasons for buying the above mentioned green products

---

8) How much did you spend for buying green products in this shopping trip?

---

9) How frequently do you buy green products?

- i) Less than once a month                      iii) Once a fortnight

ii) Once a month

iv) More than once a fortnight

Reasons \_\_\_\_\_

## **Part -1**

### **Environmental Consciousness:-**

10) On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	Views							
	VSD	SD	D	NAD	A	SA	VSA	
I support different measures to improve water management leading to water conservation	1	2	3	4	5	6	7	
I am aware about the issues and problems related to the environment	1	2	3	4	5	6	7	
I would be willing to pay higher prices for water	1	2	3	4	5	6	7	
It is very difficult for a person like me to do anything about the environment	1	2	3	4	5	6	7	
I believe that using recyclable materials for daily use will improve the environment	1	2	3	4	5	6	7	

## **Part -2**

### **Price sensitivity**

11) On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	Views							
	VSD	SD	D	NAD	A	SA	VSA	
In general the price or cost of buying green products is important to me	1	2	3	4	5	6	7	
I know that a new kind of green product is likely to be more expensive than older ones , but that does not matter to me	1	2	3	4	5	6	7	
I am less willing to buy a green product if I think that it will be high in price	1	2	3	4	5	6	7	
I don't mind paying more to try out a new green product	1	2	3	4	5	6	7	
A really good green product is worth paying a lot	1	2	3	4	5	6	7	

of money								
I don't mind spending a lot of money to buy a green product	1	2	3	4	5	6	7	

**Part -3**  
**Innovativeness**

12) On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	Views							
	VSD	SD	D	NAD	A	SA	VSA	
I like to take a chance in buying new products	1	2	3	4	5	6	7	
I like to try new and different products	1	2	3	4	5	6	7	
I am the first in my circle of friends to buy a new product when it appears in the market	1	2	3	4	5	6	7	
I am the first in my circle of friends to experiment with the brands of latest products	1	2	3	4	5	6	7	

**Part -4**  
**Involvement**

13) On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	Views							
	VSD	SD	D	NAD	A	SA	VSA	
I select the green products very carefully	1	2	3	4	5	6	7	
Using branded green products helps me express my personality	1	2	3	4	5	6	7	
You can tell a lot about a person from whether he/she buys green products	1	2	3	4	5	6	7	
I believe different brands of green products would give different amounts of satisfaction	1	2	3	4	5	6	7	

## **Part -5**

### **Health consciousness**

**14)** On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	Views							
	VSD	SD	D	NAD	A	SA	VSA	
I worry that there are chemicals in my food.	1	2	3	4	5	6	7	
I worry that there are chemicals in my cosmetic products	1	2	3	4	5	6	7	
I'm concerned about my drinking water quality.	1	2	3	4	5	6	7	
I avoid foods containing preservatives.	1	2	3	4	5	6	7	
I read more health-related articles than I did 3 years ago.	1	2	3	4	5	6	7	
I'm interested in information about my health.	1	2	3	4	5	6	7	
I'm concerned about my health all the time.	1	2	3	4	5	6	7	
Pollution in food and cosmetic products does not bother me.	1	2	3	4	5	6	7	

## **Part– 6**

### **General characteristics about green cosmetic products**

**15)** On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements with respect to green cosmetic products.

Factors	Views							
	VSD	SD	D	NAD	A	SA	VSA	
Green cosmetic products are safer to use than non-green cosmetic products	1	2	3	4	5	6	7	
Green cosmetic products are of better quality than non-green cosmetic products	1	2	3	4	5	6	7	
Green cosmetic products are more effective than non-green cosmetic products	1	2	3	4	5	6	7	

Branded green cosmetic products are better than non-branded green cosmetic products	1	2	3	4	5	6	7
Less knowledge about green cosmetic products prevent people from buying them	1	2	3	4	5	6	7
Less information about green cosmetic products prevent people from buying them	1	2	3	4	5	6	7
Less availability about green cosmetic products prevent people from buying them	1	2	3	4	5	6	7
Green cosmetic products are expensive than non-green cosmetic products	1	2	3	4	5	6	7

16) i) What is your experience of using green cosmetic products?

Not at all 1 2 3 4 5 6 7 Extremely Satisfied

ii) \_\_\_\_\_ Reasons

## **Part – 7**

### **General characteristics about green food products**

15) On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD), 3 = Disagree(D), 4 = Neither Agree Nor Disagree(NAD), 5 = Agree(A), 6 = Strongly Agree(SA), 7 = Very Strongly Agree(VSA)), please indicate how strongly you agree or disagree to the following statements with respect to green food products.

Factors	Views						
	VSD	SD	D	NAD	A	SA	VSA
Green food products are safer than non- green food products	1	2	3	4	5	6	7
Green food products are healthier than non-green food products	1	2	3	4	5	6	7
Green food products have more nutritional value than non-green food products	1	2	3	4	5	6	7
Green food products are tastier than non-green food products	1	2	3	4	5	6	7



- Number of members in the household:  
a)  $< 2$     b)  $2 - 4$     c)  $\geq 5$

Name:- \_\_\_\_\_

Location: - \_\_\_\_\_

Contact No.- \_\_\_\_\_ (optional)

-----**Thank you very much for your time**-----

## Appendix 2

### Questionnaire used for Online survey:-

#### Survey Questionnaire

Dear Respondent,

This questionnaire is prepared regarding a research activity related to PhD program at ICFAI University, Jharkhand on Green products. Green products can be stated as environment friendly or sustainable products, organic in nature. I shall be highly grateful if you could spare a few minutes to complete the questionnaire. There is no right or wrong answers to the questions. Answers given by you will be kept confidential and used for academic purpose only.

Thanks and regards

Sudipta

Majumdar

Kolkata

09883138397

\* Required

**1) Do you know about green products? \***

- ☐ Yes
- ☐ No

**2) Do you buy green products? \***

- ☐ Yes
- ☐ No

**3) How much do you spend in buying green products (monthly)? \***



**4) Did you buy green products in the last shopping trip? \***

- ☐ Yes
- ☐ No

**5) What all green products did you buy in that trip? \***

- ☐ Green cosmetic products
- ☐ Green food products

**6) How much did you spend for buying green products in the last shopping trip? \***

**7) How frequently do you buy green products? \***

- ☐ Less than once a month
- ☐ Once a month
- ☐ Once a fortnight
- ☐ More than once a fortnight

**8) On a seven point scale (i.e. 1 = Very Strongly Disagree, 2 = Strongly Disagree , 3 = Disagree , 4 = Neither Agree Nor Disagree , 5 = Agree , 6 = Strongly Agree , 7 = Very Strongly Agree) , please indicate how strongly you agree or disagree to the following statements. \***

	1	2	3	4	5	6	7
I support different measures to improve water management leading to water conservation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am aware about the issues and problems related to the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be willing to pay higher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4	5	6	7
prices for water							
It is very difficult for a person like me to do anything about the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that using recyclable materials for daily use will improve the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**9) On a seven point scale (i.e. 1 = Very Strongly Disagree, 2 = Strongly Disagree , 3 = Disagree , 4 = Neither Agree Nor Disagree , 5 = Agree , 6 = Strongly Agree , 7 = Very Strongly Agree) , please indicate how strongly you agree or disagree to the following statements. \***

	1	2	3	4	5	6	7
In general the price or cost of buying green products is important to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know that a new kind of green product is likely to be more expensive than older ones , but that does not matter to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am less willing to buy a green product if I think that it will be high in price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't mind paying more to try out a new green product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4	5	6	7
A really good green product is worth paying a lot of money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't mind spending a lot of money to buy a green product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**10) On a seven point scale (i.e. 1 = Very Strongly Disagree, 2 = Strongly Disagree , 3 = Disagree , 4 = Neither Agree Nor Disagree , 5 = Agree , 6 = Strongly Agree , 7 = Very Strongly Agree) , please indicate how strongly you agree or disagree to the following statements. \***

	1	2	3	4	5	6	7
I like to take a chance in buying new green products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to try new and different products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am the first in my circle of friends to buy a new product when it appears in the market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am the first in my circle of friends to experiment with the brands of latest products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**11) On a seven point scale (i.e. 1 = Very Strongly Disagree, 2 = Strongly Disagree , 3 = Disagree , 4 = Neither Agree Nor Disagree , 5 = Agree , 6 = Strongly Agree , 7 = Very Strongly Agree) , please indicate how strongly you agree or disagree to the following statements. \***

	1	2	3	4	5	6	7
I select the green products very carefully	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using branded green products help me to express my personality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You can tell a lot about a person from whether he/she buys green products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe different brands of green products would give different amount of satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**12) On a seven point scale (i.e. 1 = Very Strongly Disagree, 2 = Strongly Disagree , 3 = Disagree , 4 = Neither Agree Nor Disagree , 5 = Agree , 6 = Strongly Agree , 7 = Very Strongly Agree) , please indicate how strongly you agree or disagree to the following statements. \***

	1	2	3	4	5	6	7
I worry that there are chemicals in my food.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm concerned about my drinking water quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I avoid foods containing preservatives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I read more health-related articles than I did 3 years ago.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4	5	6	7
I'm interested in information about my health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm concerned about my health all the time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I worry that there are chemicals in my cosmetic products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pollution in food and cosmetic products does not bother me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**13) On a seven point scale (i.e. 1 = Very Strongly Disagree, 2 = Strongly Disagree, 3 = Disagree, 4 = Neither Agree Nor Disagree, 5 = Agree, 6 = Strongly Agree, 7 = Very Strongly Agree), please indicate how strongly you agree or disagree to the following statements with respect to green cosmetic products. \***

	1	2	3	4	5	6	7
Green cosmetic products are safer to use than non-green cosmetic products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green cosmetic products are of better quality than non-green cosmetic products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green cosmetic products are more effective than non-green cosmetic products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Branded green cosmetic products are better than non-branded green cosmetic products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Less knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4	5	6	7
about green cosmetic products prevent people from buying them							
Less information about green cosmetic products prevent people from buying them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Less availability about green cosmetic products prevent people from buying them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green cosmetic products are expensive than non-green cosmetic products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**14)i)What is your experience of using green cosmetic products? \***

- ☐ Not at all Satisfied (1)
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7(Extremely Satisfied)

**ii) Reasons**

**15) On a seven point scale (i.e. 1 = Very Strongly Disagree, 2 = Strongly Disagree , 3 = Disagree , 4 = Neither Agree Nor Disagree , 5 = Agree , 6 = Strongly Agree , 7 =**

Very Strongly Agree) , please indicate how strongly you agree or disagree to the following statements with respect to green food products. \*

	1	2	3	4	5	6	7
Green food products are safer than non-green food products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green food products are healthier than non-green food products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green food products have more nutritional value than non-green food products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green food products are tastier than non-green food products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Less knowledge about green food products prevent people from buying them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Less information about green food products prevent people from buying them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Branded green food products are better than non-branded green food products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green food products do not look good in appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4	5	6	7
Less availability about green food products prevent people from buying them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green food products are expensive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**16)i)What is your experience of using green food products? \***

- ☐ Not at all Satisfied(1)
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ (Extremely Satisfied)7

**ii) Reasons**

**Please supply the following details about you**

**Please supply the following details about you**

**Age**

- ☐ 18-25
- ☐ 26-35
- ☐ 35-50
- ☐ > 50

**Gender**

- ☐ Male
- ☐ Female

**Last grade of school you completed:**

- ☐ High School
- ☐ Graduate
- ☐ Post Graduate



- ☐ Others

**Occupation**

- ☐ Student
- ☐ Business
- ☐ Service
- ☐ Housewife
- ☐ Others

**Income(monthly)**

- ☐ < 25,000
- ☐ 25,000 - 49,999
- ☐ 50,000 - 74,999
- ☐ 75,000 - 99,999
- ☐ >= 1,00,000

**Number of members in the household**

- ☐ < 2
- ☐ 2 - 4
- ☐ >=5

**Name****Location****Contact Number**

Never submit passwords through Google Forms.

### **Appendix 3**

#### **Publications by the Scholar in the Research area**

1. Majumdar, S and Swain, S. (2015). Mapping of Demographic Profile of Consumers vis-à-vis Preference for Green Cosmetic Products: A Study in and around Kolkata, India. *Household & Personal Care Today, Italy*, Vol. 10, Issue 6 , pp. 26 – 29, December, 2015.
2. Majumdar, S and Swain, S. (2015). Prioritization of Factors influencing Preferences for Green Cosmetic Products: A Study in and around Kolkata (India). *International Journal of Trend in Research and Development*, Vol 2, Issue 3, pp. 103 – 111, June, 2015.
3. Majumdar, S and Swain, S. (2015). Prioritization of Factors influencing Preferences for Green Food Products: A Study in and around Kolkata (India). *International Journal of Research & Development in Technology and Management Science*, Vol 21 , Issue 6, pp. 157 – 170, March , 2015
4. Majumdar, S and Swain, S. (2015). Identification of Factors influencing Preferences for Green Products: A Study in and around Kolkata (India). *Academicia (An International Multidisciplinary Research Journal)*, Vol 5 , Issue 4, pp. 354 – 370, April , 2015
5. Majumdar, S and Swain, S. (2015). Identification and Analysis of Factors influencing Preferences for Green Products: A Study in and around Kolkata (India). *International Journal of Business Quantitative Economics and Applied Management Research*, Vol 1 , Issue 9, pp. 36 – 49, February , 2015
6. Majumdar, S (2014). Factor influencing Preferences for Green Products: A Literature Review. *IUJ Journal of Management*, Vol 2, Issue 1, pp, May, 2014.