Chapter 3

Research Design
3.1 Rationale of the Study

Today the earth faces more environmental problems than ever before, which includes, global warming, pollution, depletion of ozone layer, and water contamination. Concern over environmental degradation has led to increased worldwide interest in finding alternatives to the conventional products and their means of marketing. Environmental issues have become one of the major areas of concern in industrial as well as academic research. Not only the industries, governments, NGOs, but the individual consumers also are now raising their concerns towards the deteriorating state of the natural environment and are asking for the steps to be taken for the protection of the environment.

The changes in the climate conditions are considered as one of the biggest threat to the mankind, and its consequences are one of the mainframe concern considered globally. The visible effects of climate changes are the scarcity of fresh water, acidification of the oceans, flooding of coastal areas, increase in mean sea level, and increase in the water borne diseases associated with the extreme weather conditions. Greenhouse gas concentration is continuously increasing in the atmosphere due to which a treaty was signed by more than 186 countries in 1992 with the aim to reduce the emission in the atmosphere to significant extent. But, in India, a developing country, the evolution of green economy is still a long way to be achieved.

The era after the industrial revolution has resulted in the huge spurge in growth of the industries resulting in increased concentration of greenhouse gases in the atmosphere of the earth which ultimately resulted in the increase in the earth’s temperature and negative impact on the natural environment. Another concern in India is the tremendous growth of population which leads to strain our natural resources, thereby impacting the climate change in negative way. India’s economy is a mixed economy and is the fastest growing and one of the leading and emerging economies of the world. Not only the consumers and corporate world, the Indian government has also started addressing the issue of climate change along with other environmental issues and have started dealing these issues very seriously. India, as a country, has shown tremendous interest and improvement in undertaking environment protection programs and implementing these programs with due sincerity.
The consumers’ concern is found to have been increased over the various environmental issues and have shown positive response towards the environment protection programs. Strong evidence is available in the past showing the environmental concern of the consumers as the major factor influencing their purchase decisions (Zimmer et al., 1994). Increase in the purchasing power of consumers is witnessed due to the growth in the economy of the country resulting in increased level of disposable income. Dynamics of the urban consumers has also witnessed change and fairly radical changes in the consumption pattern of consumers is identified in recent decades. Due to these changes, the consumers have started demanding green products having less negative impact on the natural environment.

Another reason for increase in green consumerism is the increased exposure to the media, increase in the level of awareness of the consumers, along with the availability of green products that act as the substitutes for the traditional products, and the increase in the usage of green themes in the advertisements of the products (Strong, 1998). Consumers are found to be limiting their usage of traditional products and are now looking for the green products (traditional product’s counterpart) with the objective to consume the product which is having minimal detrimental impact on the environment.

Due to economic growth of the country, more global players are entering the Indian market resulting in the increased competition faced by Indian manufacturers. Indian firms have also shown competence by equipping themselves to provide requisite quality and standards. Due to fierce competition of global players, todays marketers operates in highly competitive environment and they need to be innovative to sustain in the market. Excelling and being above the competition is the need of the hour. It is required by the marketers to continuously assess the latest trends in the market. Marketing of green products is very different from the marketing of traditional products. Green marketing is in India is considered to be in transformation phase. In consumer durable segment, the marketers need to aggressively communicate and promote the green products. The reasons for the same being lack of brand loyalty by the consumers in this segment, and the level of involvement consumers show while purchasing consumer durable goods to its high price and the tenure for which the product is being purchased. Another reason is that once the purchase is made, it is very difficult to reverse this purchase decision. Due to above mentioned reasons, marketers need to aggressively communicate the about the availability of green product and its features to the
consumers. This helps to identify the marketing trends by continuously researching about the changes in consumer behavior in the marketplace. By identifying the changes in the consumer behavior in the marketplace, business can modify, or provide with new product or offering to the consumers.

Government of India has also framed various laws towards the protection of the environment. It also take care of controlling carbon emissions in the earth’s atmosphere and have committed to reduce the emissions to the larger extent. World has witnessed several movements showing concern towards environment protection and various economic factors have also been identified that are believed to play important role in the protection of environment. It is not the responsibility of the governments only to protect the environment, while it is also the duty of the consumers and the companies to promote the use of green products and help the country to provide solution to various environmental problems faced by the country within its regulatory framework as the consumers’ consumption and the marketing efforts are considered as both the causes and remedies for the degradation of the environment (Fisk, 1974).

It can be concluded that going green and protecting the environment has been the main issue and goal both in the academic and business world. Innovation towards green life styles are one of the main concerns of the society. Consumers have become more enlightened on environmental issues and negative impact of uses of traditional products and services on the environment. An increase in the demand of environmentally friendly products (Green products) has been witnessed worldwide in recent decades. This has given the world a new concept, i.e. the evolution of a new concept “Green Marketing”. Green Marketing, as defined by American Marketing Association is the marketing of products that are presumed to be environmentally safe. A wide range of activities are covered under green marketing, which includes modifying the product and/or production process, as well as modifying the packaging, advertising or removing any activity that impacts the environment negatively. Green marketing provides innovative and environmental friendly trends that helps in the sustainability and growth of the firm (Singh & Kushwaha, 2010). Using green marketing not only provides an opportunity to meet consumer expectations and addresses the environmental concerns, it also helps the organization to gain competitive advantage and a strong consumer base (Renfro, 2010).
Due to increased exposure to the media, the consumers worldwide have shown the willingness to favor green products, however the action to do so in reality is debatable (Mendleson & Polonsky, 1995). Consumers have shown huge interest in green marketing and green products, but the demand of green products is not as high as expected. Significant gap was found between consumers’ action and their actual green purchasing (Mintel, 1995). Considerable barriers were identified towards the diffusion of more green consumption styles. It indicates a gap between what people say and what actually they do.

In India, green marketing has started evolving as one of the major area of interest due to the competitive advantages associated with it. Indian consumers, due to increased level of awareness (resulting from higher exposure of green advertisements and media) about environmental issues, have shown concern towards the state of environment and have started demanding green products (at sustainable prices) for consumption. Many firms in India, have now started marketing themselves as green organizations due to governmental norms and shift in the consumption pattern of the consumers. Firms have started differentiating themselves by showing commitment towards environment protection. However, the consumers were found to be skeptical about green claims made by these organizations and a significant gap was found in what consumers say and what they do. The demand of green products is not as high as expected. In terms of green awareness, significant difference is found between developing and developed countries (Tantawi et al., 2009). In western countries, awareness and sustainable consumption is found to be driven by education and high level of awareness of the consumers, yet there are evidences that barriers exists in increase in the green consumption patterns of the consumers. This is due to the effect of cultural, political, economic and infrastructural factors.

Eco-friendly business operations and green marketing are not only beneficial to the environment, but it also helps the business to gain competitive advantage and a strong consumer base. Hence, it is imperative for companies to make and market themselves as environmentally friendly. Thus green marketing today, has become a popular promotional strategy. Green Marketing is considered as the most mainstream and modern way to market a product and an organization. Hence any organization operating green practices in their processes and products is considered as environmentally
friendly by the consumers and they prefer to purchase the products of the organization that are marketing themselves as green organizations.

From the literature review, it was found that in India, green marketing concept is in nascent stage. The concept of green marketing has not picked up in India in spite of increase in the literacy rate. It was also found that many people are not buying green products even after having the awareness about the state of environment and various environmental concerns. At the same time, not much research with respect to green marketing has been done in India and there is a question about the awareness and consumption pattern of Indian consumers. The attitude of Indian consumers towards green products and the relationship between attitude and behavior is also questionable. Marketers today have identified the shift in the consumption pattern of the consumers and know about the impact of their products and policies on the condition of environment. It is considered to be on prime importance to identify the green consumers and segmenting of consumers to green or non-green. Marketers make use of green marketing with the aim to enhance the appeal of consumers towards green products for both types of consumers - those who have already started using green products and those who have not yet started consumption of green products. The advertisements or promotional campaigns for green products must communicate the information regarding green features of the products and must be easy to understand by the consumers. However, this is not an easy task for the marketers. As green marketing is different from the marketing in traditional way, marketers need to know the factors that persuade the consumers to buy the green products to assess the consumers’ green behavior. Studies in various countries have shown mix results towards the purchase of green products. Also, due to cultural gap in India with respect to various countries, the potential for the green products and practices is questionable and cannot be generalized based on the studies done in other countries. Hence, it is decided to develop a green consumer behavior scale to assess the underlying dimensions and attributes that determine the green consumer behavior. The aim of this research is to resolve the research question that what factors influence the consumer persuasion to buy the green products.

3.2 Objectives of the Research

3.2.1 To explore the challenges and opportunities in green marketing with respect to consumer durable goods in India.
3.2.2 To analyze the green marketing strategies adapted and practiced by consumer
durable companies in India and their influence on consumer purchase behavior
towards green products.

3.2.3 To identify the factors that influences the customer persuasion to buy green
products.

3.2.4 To understand consumer behavior in terms of awareness level, green values,
brand identification and preferences, towards green products.

3.3 Hypotheses Formulation

In line with the above mentioned objectives, factors influencing the Green Consumer
Behavior were identified based on factor analysis of statements developed as part of
Green Consumer Behavior Scale development. The factors thus identified were tested
using Structural Equation Modeling in subsequent analysis (as given as Primary
Hypotheses in Section 3.3.1 below). The factors identified were also tested with respect
to demographic profile of consumers as Secondary hypotheses (as given in Section
3.3.2 below)

3.3.1 Primary Hypotheses

H₀₁: “Preference towards Green Products” does not significantly affect the “Purchase
Intention” of consumers. [Tested with the help of Structural Equation Modeling].

H₀₂: “Pro-Environment Action” does not significantly affect the “Purchase Intention”
of consumers. [Tested with the help of Structural Equation Modeling].

H₀₃: “Learning and Experience” does not significantly affect the “Purchase Intention”
of consumers. [Tested with the help of Structural Equation Modeling].

H₀₄: “Perception of Green Products and Practices” does not significantly affect the
“Purchase Intention” of consumers. [Tested with the help of Structural Equation
Modeling].

H₀₅: “Environmental Concern” does not significantly affect the “Purchase Intention”
of consumers. [Tested with the help of Structural Equation Modeling].

H₀₆: “Knowledge and Awareness” does not significantly affect the “Purchase
Intention” of consumers. [Tested with the help of Structural Equation Modeling].
3.3.2 Secondary Hypotheses

H₀7: “Preference towards Green Products” does not significantly differ amongst respondents of various age groups.

H₀8: “Purchase Intention towards Green Products” does not significantly differ amongst respondents of various age groups.

H₀9: “Pro-environment action taken by respondents” does not significantly differ amongst respondents of various age groups.

H₀10: “Learning and Experience of Respondents” does not significantly differ amongst respondents of various age groups.

H₀11: “Perception of green products and practices” does not significantly differ amongst respondents of various age groups.

H₀12: “Environmental Concern of respondents” does not significantly differ amongst respondents of various age groups.

H₀13: “Knowledge and Awareness of respondents” does not significantly differ amongst respondents of various age groups.

H₀14: “Preference towards green products and practices” does not significantly differ amongst the gender of respondents.

H₀15: “Purchase Intention towards Green Products” does not significantly differ amongst the gender of respondents.

H₀16: “Pro-environment action taken by respondents” does not significantly differ amongst the gender of respondents.

H₀17: “Learning and Experience of Respondents” does not significantly differ amongst the gender of respondents.

H₀18: “Perception of green products and practices” does not significantly differ amongst the gender of respondents.

H₀19: “Environmental Concern of respondents” does not significantly differ amongst the gender of respondents.

H₀20: “Knowledge and Awareness of respondents” does not significantly differ amongst the gender of respondents.

H₀21: “Preference towards Green Products” does not significantly differ amongst respondents of various academic qualification.
$H_0\text{22}$: “Purchase Intention of consumers towards Green Products” does not significantly differ amongst respondents of various academic qualification.

$H_0\text{23}$: “Pro-environment action taken by respondents” does not significantly differ amongst respondents of various academic qualification.

$H_0\text{24}$: “Learning and Experience of consumers” does not significantly differ amongst respondents of various academic qualification.

$H_0\text{25}$: “Perception of green products and practices” does not significantly differ amongst respondents of various academic qualification.

$H_0\text{26}$: “Environmental Concern of consumers” does not significantly differ amongst respondents of various academic qualification.

$H_0\text{27}$: “Knowledge and Awareness of respondents towards green products” does not significantly differ amongst respondents of various academic qualification.

$H_0\text{28}$: “Preference towards Green Products” does not significantly differ amongst respondents with various occupations.

$H_0\text{29}$: “Purchase Intention of consumers towards Green Products” does not significantly differ amongst respondents with various occupations.

$H_0\text{30}$: “Pro-environment action taken by respondents” does not significantly differ amongst respondents with various occupations.

$H_0\text{31}$: “Learning and Experience of consumers” does not significantly differ amongst respondents with various occupations.

$H_0\text{32}$: “Perception of green products and practices” does not significantly differ amongst respondents with various occupations.

$H_0\text{33}$: “Environmental Concern of consumers” does not significantly differ amongst respondents with various occupations.

$H_0\text{34}$: “Knowledge and Awareness of respondents towards green products” does not significantly differ amongst respondents with various occupations.

$H_0\text{35}$: “Preference towards Green Products” does not significantly differ amongst respondents of different income groups.

$H_0\text{36}$: “Purchase Intention of consumers towards Green Products” does not significantly differ amongst respondents of different income groups.

$H_0\text{37}$: “Pro-environment action taken by respondents” does not significantly differ amongst respondents of different income groups.
H₀38: “Learning and Experience of consumers” does not significantly differ amongst respondents of different income groups.
H₀39: “Perception of green products and practices” does not significantly differ amongst respondents of different income groups.
H₀40: “Environmental Concern of consumers” does not significantly differ amongst respondents of different income groups.
H₀41: “Knowledge and Awareness of respondents towards green products” does not significantly differ amongst respondents of different income groups.

H₀42: “Preference towards Green Products” does not significantly differ amongst respondents of different cities.
H₀43: “Purchase Intention of consumers towards Green Products” does not significantly differ amongst respondents of different cities.
H₀44: “Pro-environment action taken by respondents” does not significantly differ amongst respondents of different cities.
H₀45: “Learning and Experience of consumers” does not significantly differ amongst respondents of different cities.
H₀46: “Perception of green products and practices” does not significantly differ amongst respondents of different cities.
H₀47: “Environmental Concern of consumers” does not significantly differ amongst respondents of different cities.
H₀48: “Knowledge and Awareness of respondents towards green products” does not significantly differ amongst respondents of different cities.

H₀49: “Green consumer values” does not significantly differ amongst respondents of different cities.
H₀50: “Green consumer values” does not significantly differ amongst the gender of respondents.
H₀51: “Green consumer values” does not significantly differ amongst respondents of various age groups.
H₀52: “Green Consumer Values” does not significantly differ amongst respondents of various academic qualification.
H₀53: “Green Consumer Values” does not significantly differ amongst respondents with various occupations.
H₀54: “Green Consumer Values” does not significantly differ amongst respondents of different income groups.

3.4 Type of Research
Descriptive research is used in this study. The data is collected from consumers of consumer electronics goods with the help of structured questionnaire and the findings are presented as facts and figures found during the analysis. The descriptive research is the most suitable form of research for the topic selected.

3.5 Scope of term “Green Marketing” for present study
The scope of this study is limited to the green marketing practices employed by the consumer durable industry in India and its impact on the purchase behavior of the consumers.

3.6 Sample Size and Sampling Technique
For this research, a sample of 669 respondents from six major cities of India, viz. Ahmedabad, Bangalore, Chennai, Delhi, Mumbai and Kolkata was selected. As this study is relevant to the consumer durable industry, only those respondents were selected who have recently purchased a consumer durable good. Due care was taken to select the respondents on the basis of the above mentioned criteria.

For selecting the target respondents, non-probability quota sampling was employed in this study. Care is taken to ensure that the target respondents have sufficient maturity and intellectual level.

3.7 Data Collection
For the current study, both the secondary as well as primary data was collected. Secondary data was collected from published reports, conference proceedings, published research papers, newspapers & magazine articles, periodicals and website, where as the primary data was collected through structured questionnaire including items on 5 point Likert scale. Demographic details of the respondents were also collected for further analysis.

3.8 Research Instrument
For collecting the primary data, structured questionnaire was used in the research. Initial pool of statements were generated with the help of literature review, pilot studies
and by taking interview of 50 individuals. These statements were converted into standardized scale items. Further these scale items were subjected to factor analysis and final instrument (questionnaire) was developed as the outcome of the factor analysis.

3.9 Data Analysis
Data analysis is done with the help of statistical analysis software. Analysis is done using descriptive statistics and parametric tests.