CHAPTER I
INTRODUCTION AND DESIGN OF THE STUDY

1.1 Introduction
1.2 Statement of the Problem
1.3 Review of the Literature
1.4 Objectives of the Study
1.5 Hypotheses of the Study
1.6 Scope of the Study
1.7 Operational Definitions
1.8 Research Design and Methodology
1.9 Construction of Interview Schedule
1.10 Pre Test
1.11 Period of the Study
1.12 Area of the Study
1.13 Sampling Design
1.14 Field Work
1.15 Data Processing
1.16 Tools for Analysis
1.17 Limitations of the Study
1.18 Chapter Scheme
1.1 INTRODUCTION

Environmentalism has fast emerged as a worldwide phenomenon. Marketing organizations too have risen to the occasion and have started responding to environmental challenges by practicing green marketing strategies. The awareness of the Green marketing is increased among the Indian consumers. Many of the manufacturers are following Green marketing practices in India. So, the Green marketing concept is not the new survival mantra of the business organizations.

Green marketing includes the concept of planning, development and promotion of environment – friendly products or services to satisfy the needs of ultimate customers for quality, quantity, optimum price and service, without having a negative effect on the usage or its users. Therefore green marketing refers to a holistic marketing notion in which the production, marketing, consumption and disposal of products and services happen in a way that is less harmful to the environment with mounting awareness about the connection of global warming, non-biodegradable solid waste and harmful impact of pollution. It is a fact that both marketers and consumers are increasingly becoming aware of the need to switch over green products and services. The move from the existing marketing methods to green marketing may appear to be expensive in the short term, but it will absolutely prove to be crucial and beneficial, and cost effective in the long run.

Green marketing is rapidly changing the trendy marketing tactics as per the consumer demand in a sustainable way. Green marketing strategy reaps multiple benefits like increased revenue, reduced costs, new product development, risk mitigation, environment protection, global safety and enhanced brand reputation. Green marketing is needed to address environmental issues which influence all human society and natural atmosphere.

Green marketing has commanded tremendous attention in the context of global warming and climate change and as a result has forced both the customers on one side and the companies on the other to incorporate the principles of green marketing. Recently, it has drawn the attention of government too in this regard and paved the way for introducing many environment friendly policies. The divergence between limited resources and unlimited wants of human resource is to be used economically and in an environmental friendly way. Companies should adopt innovative methods sustainable
development in the competitive environment to enable the use of green marketing products. Using a green product safeguards the interests of its users, society and the environment. Setting up a responsive policy in this regard will maximize the health of the earth. Green Marketing, other similar terms used are Environmental Marketing and Ecological Marketing, is not all about manufacturing green products and services but encompassing all those marketing activities that are needed to develop and sustain consumer’s eco-friendly attitudes and behaviors in a way that helps in creating minimum detrimental impact on the environment.

Thus "Green Marketing" refers to holistic marketing concept wherein in the production, marketing consumption an disposal of products and services happen in a manner that is less detrimental to the environment with growing awareness about the implications of global warming, non-biodegradable solid waste, harmful impact of pollutants etc., both marketers and consumers are becoming increasingly sensitive to the need to switch over to green products and services. While the shift to "green" may appear to be expensive in the short term, it will definitely prove to be indispensable and advantageous, cost-wise too, in the long run.

Many organizations want to turn green, as an increasing number of consumers and to associate themselves with environmental-friendly products. Besides, one also witnesses confusion among the consumers regarding the products. In particular, one often finds distrust regarding the credibility of green products. Therefore, to ensure consumer confidence, marketers of green products need to be much more transparent, and refrain from breaching any law or standards relating to products or business practices.

1.2 STATEMENT OF THE PROBLEM

The present situation strongly evidences that environmental problems appear to concern all civil societies, firms and institutions globally for the past two decades. There are severe changes in the business world concerning the task towards the environment and the society. Strategies targeting not only make a profit for the day but also for long term prosperity and environment friendly sustainability have on track to become agendas of the companies. Another significant facet which a marketer wishes to deal with is to
foresee the transformation which affects the future, and consequently frame the marketing strategies. Marketers today are confronted with environmental issues like global warming, green house emissions, pollution and energy crisis. Therefore, the marketers have to embrace a green move towards framing marketing strategies and are now required to go green. It stresses that suitable concern must be shown while framing the marketing plans, strategies and policies so as to protect the environment and nature from any destruction caused due to its operations both at present and in future.

Over the past two decades, environmental problems have forced consumers to take interest in preserving the environment. Now the customers support business that operate in an environment friendly way. Green marketing should be considered as a significant approach to modern marketing and must be practiced with much more vigor, as it has an environmental and social constituent to it. With global warming threatening to unleash a disaster, it is extremely important that green marketing becomes a custom rather than an exception or just a fad. The need for recycling of paper, metals, plastics and other material in a safe and environment friendly manner should become much more standardized and universal. It has to become the general norm to use environmentally safe products and preserve the human society from the possible dangers.

Green marketing has gained momentum in the context of global warming and climate change, this, in turn has forced manufacturers to incorporate the principle of green marketing. As resources are limited and human wants are unlimited, resources have to be utilized economically and in an environment friendly way. While green marketing is growing greatly as increasing numbers of consumers are willing to back their environmental consciousnesses with their money, it can be dangerous. The public tends to be skeptical of green claims to begin with and companies can seriously damage their brands and their sales if a green claim is discovered to be false or contradicted by a company's other products or practices. The obvious assumption of green marketing is that potential consumers will view a product or service's "greenness" as a benefit and base their buying decision accordingly.

Companies all over the world are striving to reduce the impact of products and services on the climate and other environmental parameters. So in this scenario of global concern, corporate houses has taken green-marketing as a part of their strategy to promote
products by employing environmental claims either about their attributes or about the systems, policies and processes of the firms that manufacture or sell them.

Green Marketing is a part and parcel of overall corporate strategy; along with manipulating the traditional marketing mix (product, price, promotion and place), it require an understanding of public policy process. On the other hand, there is growing interest among the consumers all over the world regarding protection of environment. Worldwide evidence indicates people are concerned about the environment and are changing their behavior. As a result of this, green marketing has emerged which speaks for growing market for sustainable and socially responsible products and services. In order to know the practices of green marketing practices of manufactures, consumers and retailers in Virudhunagar District, this study is carried out.

1.3 REVIEW OF THE LITERATURE

The following are different review of literatures displayed by the researcher, which are collected from various books, journals and websites and so on.

C.L.Hartman (1997) in his article, “Green alliances: Building New Business with Environmental Groups”, enlighten partnerships between businesses and environmental groups, can be effective strategies for integrating corporate environmental responsibilities within market objectives. They are external growth of an emerging philosophy called ‘Market-based Environmentalism’ which advocates to businesses via market incentives. It describes the conceptual underpinnings of the market-based perspective and illustrates how green alliances specifically, are helping companies to develop ecologically-protective programmes which can lower costs and gives different advantages to the business.

R.H.Walker, and D.J. Hanson (1998) in their research article, “Green Marketing and Green Places: A Taxonomy for the Destination Marketer”, highlights environmental implications and imperatives associated with destination marketing as distinct from those related to products and services marketing. A comparative taxonomy has been generated to illustrate these, and to provide a structure for discussing their relevance, with reference to the particular case of Tasmania as a tourism destination.
Jari Karna et al. (2001) in this study entitled “Social responsibility in environmental marketing planning”, the purpose of the empirical study is to measure, describe, and compare how social responsibility is emphasized in the values of members of the forestry wood value chain in four European countries. Social responsibility values of respondents were examined using statements covering economic, ecological, and social aspects of business management.

Oyewole, P. (2001) in his article, ”Social Costs of Environmental Justice Associated with the Practice of Green Marketing”, presents a conceptual link among green marketing, environmental ethics, and industrial ecology. It argues for greater awareness of environmental ethics in the green marketing practices. Again it is suggested to determine consumers' awareness of environmental ethics, and their willingness to pay the costs associated with it.

Ricky Y. K. Chan., (2001). In his study entitled “Determinants of Chinese Consumers’ Green Purchase Behavior”, examines 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 and subjected to empirical verification with the use of a survey. Against the foregoing background, this study aims to grasp a better understanding of how various psychological factors might affect Chinese consumers’ green purchasing. As will be elaborated later, the major factors under investigation include the consumers’ affective responses toward and knowledge of ecological issues in general, and their specific attitudes toward green purchases.

M.J.Roy, and R. Vézina (2001) in their research article, ”Environmental Performance as a Basis for Competitive Strategy: Opportunities and Threat”, Shows that companies are considering environmental differentiation as a basis for their competitive strategy. Further it examines importance of the following three devices like Corporate Environmental Reports (CER), eco-labelling programs, and the ISO 14001 environmental management systems (EMS) standard.

H.Madsen and J.P.Ulhoi (2003) in their study, “Have Trends in Corporate Environmental Management Influenced Companies’ Competitiveness?” discusses that over the past two or three decades, corporate environmental management concept has gradually developed. Many companies have incorporated environmental considerations
into their activities in order to eliminate or minimize the impact of these activities on the natural environment. The question is, however, whether managers perceive corporate environmental initiatives as a challenge leading to new strategic method and, eventually, increased competitiveness or whether they regard it as yet another problem. Based on a number of surveys, this paper discusses contemporary trends in the implementation of environmental management systems in Danish industry up to the beginning of the new millennium in an attempt to identify any related impacts on competitiveness.

J.Thorpe and K.Prakash-Mani (2003) in their work,” Developing Value: The Business Case for Sustainability in Emerging Market”, explains that how corporate action on sustainability can improve financial performance, the focus of date has been on companies in developed markets. Based on an analysis of more than 240 case studies from over 60 countries, this study focuses on addressing the gap. It analyses the "business case" for sustainability in emerging markets, identifying opportunities for businesses to cut shot the costs, increase the sales, minimize the risks, develop manpower capital, build reputation, and enhance access to capital from better corporate governance, improved environmental practices, and investments in social and economic development.

Joshi, M. (2004) in his article, “Are eco Lables consistent with World Trade Organisation’s Agreements?” analyzed that Eco labeling has thus become the medium for promoting both the production and consumption of products that are “more eco friendly” than the competing products available in the product market. Further this research article was discussed that the consistency of voluntary life cycle analysis (LCA) based on eco-labeling, sponsored both by government as well as by NGOs, with the relevant provisions of the WTO agreement on Technical Barriers to Trade (TBT Agreement) and implications if these are considered to be covered by the relevant WTO agreements as has been claimed by some countries.

D.Pujari, K.Peattie and G.Wright (2004) in their research article, “Organizational Antecedents of Environmental Responsiveness in Industrial New Product Development”, examines the environmental responsiveness in industrial new product development in 82 industries. In comparison of traditional one with new product development process in the extant literature, the findings revealed additional activities in the greening of industrial
new product development. These activities fall under the broader scope of life cycle assessment (LCA) for environmental impact including supplier evaluation and design for environment issues 15.

Lee Eugene@ Li Yuren., (2004) has published the article entitled “A New Marketing Strategy For Green Fast-Moving Consumer Goods (FMCG) Based on Consumer Behaviour And International Environmental Management System Standards” The objective of the study report is to develop a new marketing strategy to create environmental awareness among Singaporeans through behavioral change. The main purpose of the study on the Green Label, administered by the Singapore Environment Council, the questionnaire was set to also understand how much Singaporeans know about the Green Label, how they learned of the Label, their perception towards the Label, as well as the possible types of incentives that would attract them to support products with the Label 16.

Calin Gurau and Ashok Ranch hod (2005) analyzed in their work” international green marketing – A comparative study of British and Romanian firms”, the concepts of international green marketing practices. More over they analyzed the general green strategic elements applied by UK and Romanian firms that commercialize ecological products in overseas markets. The findings indicate strong differences between the UK and Romanian eco-firms, in terms of marketing objectives and strategic orientation 17.

V.Venkataramana and Ms. Nisha singh, (2005) in their article on “Green Marketing: A “Sustainable” Strategy” In this study focused on although environmental issues influence all human activities, few academic disciplines have integrated green issues into their literature. There are 4 S’s of green marketing mix i.e., Satisfaction of customer needs, Safety of product and production for consumers, workers, society and the environment, Social acceptability of a products, its production and the other activities of the company; Sustainability of the product, their production and other activities of the company. It covers more than a firm’s marketing claims. And then it appears that consumers are not overly committed to improving their environment and may be looking to lay too much responsibility on industry and government 18.

Dr. R. Azhagaiah and A. Ilango van, (2006) in their article on “Green Marketing and Environmental Protection”. In this article, it is analyzed and inferred that the modern
concept is insufficient for sustainable development. At the same environmental condition is deteriorating at an alarming rate, mostly due to consumption-oriented marketing. Therefore, it will require a proactive corporate marketing strategy and active government involvement to encourage green marketing. In addition, it must encourage re-consumption of products through re-cycling of waste and increase the usage of capacity. Further, it must re-orient its marketing mix to develop and promote environmentally safe products and re-organise to achieve this aim.\(^{19}\)

Emma Rex, Henrike Banumann (2006) in his study, “Beyond eco labels: What green marketing can learn from conventional marketing”, examined that eco-labels emerged as one of the dominant means of market communication for green credentials of products, but a sustainable production and consumption system is still far away. To achieve greener production and consumption patterns we need to address a wider range of consumers than the deep green segment.\(^{20}\)

Mrs. P. Santhi, Dr. U. Jerinabi and N. Mohandas Gandhi, (2007) have published their study entitled “Green Consumerism – Issues and Implications”. It is now widely accepted that societies, economics and the businesses within them need to find a more sustainable path for future development. Achieving this will involve saying some very new things about marketing and perhaps rediscovering some of the fundamental truths. A number of factors have caused business firms to incorporate an environmental ethic into their operation. The principal factor, of course, is the growth in population and natural resource consumption throughout the world. The response of a company to the green consumers within its market will depend on a number of factors. The key issues for the future that marketers could convert into opportunity include health, globalization, water, chemicals, fair trade etc.\(^{21}\)

Sheenu Jain, (2007) in his article on “Green Marketing: An Illusion or Reality” in this conceptual paper, seeks to review and understand the green marketing story with reference to a landmark paper published 20 years ago in a leading UK academic marketing journal, the journal of marketing management. Entitled, “Has marketing failed, or was it never really tried?” A Prominent marketing practitioner, king penned this article. How does this discussion help us to understand the story of the evaluation of green marketing? It certainly highlights elements of tragedy in how the opportunities to make
substantive progress towards sustainability have been squandered because of the inappropriate focus of much “Green Marketing” activity. The longer we take to address the issue, and to make progress towards more sustainable marketing, the greater the disruption and effort will be. The sooner substantive progress is made, the more likely the story will be to have a happy ending.

Giorgia Nervi., (2008), In their study entitled “A study on Green Market Research practice among companies”, has analyzed the current green marketing wave is based on a better, more reliable and focused green market research. The thesis seeks if any and what kind of green market research practice is carried out by companies that expose themselves as being environmentally friendly or sustainable. In particular, the project focused on: monitoring the practice of green market research as a way to collect green signals from the market.

Brahma, M. & Dande, R. (2008), The Economic Times, Mumbai, had an article which stated that, Green Ventures India is a subsidiary of New York based asset management firm Green Ventures International. The latter recently announced a $300 million India focused fund aimed at renewable energy products and supporting trading in carbon credits. Founder & CEO of Emergent Ventures India (EVI) Vinod Kala says he realised in 2004 that there is huge business potential in environment. He further adds that financial investors are increasingly looking at Green Technology as profit opportunity than only a morally right thing to do, but there are dozens of entrepreneurs who have found that the capital expenditure involved in such projects are overwhelming and funds too hesitant to invest in them. The US and the EU have asked both India and China to reduce their baseline emissions, which should get implemented by 2020. Mr. Bharathwaj says that once that happens and the Government adopts more stringent policies for curbing carbon emissions, Clean Technology ventures would assume greater importance in the country and as a result there would be more investment interest within the sector.

Chaudhary, R., And Bhattacharya, V. (2007), in their article on “Clean Development Mechanism: Strategy for Sustainability and Economic Growth” published in Indian Journal for Environmental Protection, state that, The Clean Development Mechanism (CDM), a co-operative mechanism established under the Kyoto protocol, has the potential to assist developing countries in achieving sustainable development by
promoting environment friendly investment from industrialized country governments and businesses. The funding channeled through the CDM should assist developing countries in reaching some of their economic, social, environmental, and sustainable development objectives, such as clean air and water, improved land use, accompanied by social benefits, such as rural development, employment, and poverty alleviation and in many cases, reduced dependence on imported fossil fuels. Thus environment friendly strategies become the key factors for CDM projects.

Kalama, Eric (2007) in his study “Green Marketing Practices By Kenya Petroleum Refineries: A Study of The Perception of The Management of Oil Marketing Companies In Kenya”, findings show that the Kenya Petroleum Refineries had put in mechanisms that help check on the environment and hence making it to be perceived as practicing green marketing. The company has invested heavily on its employees who were perceived to be well trained in their areas of specialization and above all, there was management support in all the activities that take place.

Rajeev Kumar Panda (2007) in his study, “Sustainable Marketing: Challenges and Opportunities” highlights recycling a much greater percentage of household and industrial waste is also part of this new mentality. If powerful members of the channel considered new possibilities in “Backward” channels, markets and new businesses might occur. Some companies have been very successful in promoting product recalls. The same strategies could be employed for recycling if the market could be stimulated. Finally, the market system of the world should be shown with great adaptability and responsiveness. The same spirit needs to be applied to sustainable marketing and hopefully; much more progress and prosperity can be achieved in the times to come.

Sheenu Jain (2007) in their article, “Green Marketing: An Illusion or Reality” highlights the need to address sustainability is a serious issue, but there have also been moments of farce, particularly in terms of some of the early green marketing claims. Moreover, there has been an ironic element to much of the discussion about the green marketing to date because, from a theoretical point of view, green marketing has been severely restricted by its emphasis on the purchasing component of the consumption process. Environmental amelioration has been largely portrayed as a question of consumers expressing their concerns by purchasing new greener products.
Ina Landua Glaciärvägen (2008), in their master thesis, “Gaining Competitive Advantage through Customer Satisfaction, Trust and Confidence in Consideration of the Influence of Green Marketing”, highlights the need for customer relationship marketing originates from the changing requirements of the global marketplace and the changing requirements for competitive success. Green marketing has increased in prominence in the business community as the desire increases to control the effect of business activities on the environment and to minimize environmental impact. Competitive advantage can be achieved by environment-related activities and motivates companies to go beyond mere legal compliance, so that competition itself might promote more ecologically sustainable practices. As analyzed, proactive companies do their best to reduce environmental impact, through cooperation or implementation of environmental standards.

Pavel Kren (2008), in their master thesis, “The Road to Green Business”, states that, running a green business requires a holistic approach to business that not only considers but also actively seeks the participation of various stakeholders, in order to arrive at the desired solution. The organization, as well as the individual, is now required to think in economic and environmental terms at the same time. Such acting can only be achieved if it is rooted in the corporate culture that unites all employees. Thus, executives who want to go green need to start big – the fundamentals of the company need to be shaped. Providing that the company is ready, the sense of urgency needs to be established among stakeholders to make them move. After the green vision is created and widely accepted, the process of implementation can begin. The support of the top management is crucial throughout the whole ongoing change. They must monitor the process, remove the barriers inherent in the old system, and most importantly act as examples for others.

William Young, Kumju Hwang, Seonaidh McDonald and Caroline Oates (2008), in their study entitled “Sustainable consumption: green consumer behavior when purchasing products” The study focused on the incentives and single issue labels 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. To attempt made to discover the micro-purchase decision process of green consumers. To know about the Product environmental performance, Product manufacturing and Second hand availability.
The Oscar Baverstam, Maria Larsson (2009), in their study entitled “Strategic Green Marketing – A comparative Study of How Green Marketing Affects Corporate Strategy within Business to Business”, the researcher has to examine how strategic green marketing can be developed and what incentives there are for companies to do so. To fulfill the objectives of this thesis, four research questions were formed and a qualitative case study was conducted of three business to business companies from different industries. The result implies that companies do not use green as factor when segmenting their market. In addition, how useful it is to track the environmental attitudes of business consumers is highly dependent on the type of company and what industry the company is active in.

Scott Bearse et al. (2009) have published their study entitled “Finding the green in today’s shoppers Sustainability trends and new shopper insights”. This report follows the sustainability movement across retail and consumer goods sectors, and it provided senior leadership with a perspective about best practices and strategies for sustainability initiatives. The 2008 report covered best practices for sustainability in manufacturing and distribution operations. Since green products generate a relatively high level of product switching—and green shoppers tend to stick with green products once they like them—companies that develop and market successful green products ahead of competitors are much better positioned to gain advantage.

Julie Stein and Ann Koontz.,(2009), in their study entitled “Green Marketing Trends – Guidance for Wildlife Friendly Products to Understand and Access Green Markets” state that we will all benefit from environmentally literate and empowered consumers ‘voting’ their values through purchases to support responsible and transparent companies, products and services. Reaching those consumers quickly, effectively and efficiently is critical in moving towards that vision. A thoughtfully executed green marketing plan is one tool to empower consumers helping them to weed through information overload and make purchases that have meaning for them by aligning with their values.

Pavan Mishra & Payal Sharma (2010), in their study entitled “Green Marketing in India: Emerging Opportunities and Challenges” discuss how businesses have increased their rate of targeting green consumers, those who are concerned about the environment
and allow it to affect their purchasing decisions. To know about the Reduce production of harmful goods or by products, Modify consumer and industry's use and consumption of harmful goods; or ensure that all types of consumers have the ability to evaluate the environmental composition of goods\textsuperscript{35}.

Joseph Cronin, et al. (2010), in their study entitled “Green marketing strategies: an examination of stakeholders and the opportunities they present”, has examined to identify potential research opportunities in marketing while also offering a series of representative research questions that can help guide future research in marketing. This alone suggests the need for marketing research to address the massive disconnect between attitudes toward green products and businesses and actual purchase behaviors. A summary of the areas that to be discussed and evaluated relative to the use of green marketing strategies to maximize the triple-bottom line performance demanded by stakeholders worldwide\textsuperscript{36}.

Nai-Jen Chang and Cher-Min Fong., (2010) in their study entitled “Green product quality, green corporate image, green customer satisfaction, and green customer loyalty”, indicate that green product quality could bring about green customer satisfaction and green customer loyalty. Additionally, green corporate image contributes to green customer satisfaction and green customer loyalty. In recent year, business ethics, social responsibility, sustainable development, and environmental issues have become important strategic concerns among companies. At the same time, customers in major international markets were demanding that companies produced higher quality products that are consistent with societal and environmental values if they wish to remain competitive in global markets\textsuperscript{37}.

Reem Refai Ahmed (2010) in his work, “An Analysis of the Relationship between Green Marketing and ganizational Performance”, analysed the green marketing practices of hotel sectors in Egypt. Further the report shows that green hotel have more potential market in current and future scenario\textsuperscript{38}.

Usama Awan Muhammad Aamer Raza (2010) in their joint research, “The role of green marketing in development of consumer behavior towards green energy”, analysed that the choice of Energy company, whether it is green or conventional, Price is the most important factor. The results show that consumers are conscious about environment and are willing to pay extra for green energy\textsuperscript{39}.
M.N. Welling and Anupama S Chavan (2010) in their research article “Analysing the feasibility of green marketing in Small and Medium Scale Enterprises”, examined that adoption of green marketing may not be easy task, but in the long run it will definitely have a positive impact on the firm.

Tara Mcbride Mintz., (2011), in their study entitled “Profiling Green Consumers: A Descriptive Study”, examine what actions they actually take and how they feel post-purchase. If marketers continue to rely on eco-labels, cause-related marketing, and existing green consumers the market share for green products will not see a dramatic increase. To achieve a greener world through mass green purchases and consumption patterns, marketers must address a broader range of consumers rather than focusing on those already green segments.

Christian Fuentes., (2011) in their study entitled “Green Retailing A Socio-material analysis”, identifies the implicitly or explicitly aim to understand, improve, and develop green retailing approaches by examining and analyzing existing retail practice. These studies demonstrate, offers a set of practices, products, and brands around which to form communities and produce meanings. According to these studies, green communities are, much like green identities and experiences, seen as alternatives to the mainstream and perceived as rebellious constructions that enable consumers to resist and fight market hegemony.

Jacquelyn A. Ottman (2011), in their study entitled “The New Rules of Green Marketing: Strategies, Tools, and Inspiration for Sustainable Branding”, has identified the latest new green products and green living tips. Does an Internet search of the words, “green,” “environment,” or “eco” and you will find that entire communities of tweeters and bloggers are passing along trusted recommendations about which products to buy and which companies to trust. These reports often detail progress related to sustainability performance aligned with standards produced by the Global Reporting Initiative, along with glowing mentions of coveted green awards – credible third-party demonstrations of environmental excellence.

Nitin Joshi et al. (2011), in this study entitled “Environment Friendly Car: A study of Consumer Awareness with special reference to Maharashtra State”. The study is being
carried out to understand the customer awareness on environment friendly car (EFC). The objective of the study is to understand the awareness levels and create awareness of the EFC so that the efforts of the manufacturing the green car will be achieved. Many governments around the world have become so concerned about green automobile that they have attempted to regulate them. Wide spread public acceptance of the global environment crisis have caused a gradual shift in the focus of the environmental movement. For marketers, environmentalism has become a criterion influencing customer purchase behaviour. There is a need to map the customer dynamic behaviour as new green technologies need to be encouraged and adopted44.

Phuah Kit Teng et al. (2011), have published their study entitled “Consumers’ Intention to Purchase Green Foods in Malaysia” The objective of this study is to determine the extent to which selected socioeconomic demographic characteristics and attitudes influence the consumers’ intention to purchase green foods in Malaysia especially since there are emerging global issues concerned with the environment, food safety and animal welfare. The Various models have been used to explain consumer purchasing behavior towards food. The theory of Planned Behavior is a leading framework that has been used to examine consumers’ behavior45.

Christian Fuentes (2012), in their study entitled “Green marketing at the store the socio-material life of a t-shirt”, illuminates the process of green making. Departing from an understanding of marketing as socio material practice I analyzed how a green outdoor product - a t-shirt – was constructed as green through the marketing practices of the Nordic Nature Shops. To promote green products, to make them part of everyday life, companies need only to find and categorize green consumers, develop offering that will fit this segments and communicate the benefits of the green products effectively. In this literature, green marketing is simply a matter of adapting traditional marketing to environmental issues46.

Michel Laroche.,(2012) have published their study entitled ”Targeting consumers who are willing to pay more for environmentally friendly products”. 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. An important finding of this research is that consumers who consider
environmental issues when making a purchase are more likely to spend more for green products. In fact, 80 percent of these respondents said they refuse to buy products from companies accused of being polluters\textsuperscript{47}.

Prof. Keshav Sharma and Dr. Deepak Raj Gupta, (2012)\textsuperscript{22} in their study entitles “Green Marketing-Trends”, focused on green products will work only if enough consumers find it appealing. So far consumer interest is mixed. Most people that protecting the environment is growing faster than the concern on any other issue. However people tend to blame business enterprises for local, national and global environmental problems. Approximately 75% of consumers study says that business is at fault for not developing consumer products that are friendly to environment (Crowley and Hoye, 1994). On the other hand, a typical survey by a 1991 issue of ‘The Wall Street Journal’ found that more than 80% of consumers find it more important to protect the environment than to keep price down. It covers the Green manager, who understands the need to stimulate the development, production and sale of eco-friendly products in order to drive out the more environmentally undesirable products. Role of Government to promote the development of green business is very important. These have vital role to play in shaping up the green attitudes at the consumer levels and at the corporate level\textsuperscript{48}.

Noamesi Adinyra and Elliot Gligui, in their research (2012), “Green Marketing Potential as Assessed from Consumer’s Purchasing Behaviors”, highlight that green marketing potential does exist in Ghana with basis on consumer perspectives. Environmental awareness and Green Product awareness have mostly contributed to the establishment of this potential as residents of Ghana are extensively aware of the implications of both concepts. Although results reveal that a potential for all types of products are somehow present, food and body care products present the highest potential in a green market in Ghana\textsuperscript{49}.

H. Ramakrishna,(2012) in his article on “Green Marketing in India: Some Eco-Issues”, deals with environmental marketing satisfies human needs with minimal detrimental impact on the natural environment. At the same time it should be noted that in the era of green marketing, each and every stakeholder should take part in this access a social responsibility. The terms like “Green Marketing”, “Ecological Marketing” and “Environmental Marketing” are getting popular in modern days. The American
Marketing Association (AMA) conducted its first workshop on “Ecological Marketing”. The studies analyze the concept of green marketing across the globe in general and with special reference to India. To analyze the legal environment of green marketing across the globe, with special reference to the Indian researcher also intended to draw the attention of traditional customers towards green marketing. Now – a-days, the consumers are getting quite aware about the importance of the protection of the earth. Protecting the ozone layer, pollution of air, water and environment from print and non-print media. Therefore, in order to survive in the present era of cut-throat competition, firms need to go greener than their competitors\(^{50}\).

P.B. Singh and Kamal K. Pandey (2012) in their joint article, “Green marketing: Policies and Practices for Sustainable Development”, indicate that green philosophy and green marketing are done in developed countries but such studies however, remain conspicuously missing in the context of developing economies like India. Green marketing is still in infancy stage and lot of research needs to be done by the companies to project a green Corporate Image rather than focusing on the environmental benefits. In future only those companies will reap the greatest reward that innovates with new products, materials, technologies which are eco-centric and address the challenge by walking their talk\(^{51}\).

Reutlinger, Janina (2012), in their bachelor thesis, “Sustainable Marketing - The Importance of Being a Sustainable Business”, highlights the companies’ operations and products are very consistent with the contents of sustainable marketing and practice it, although none of the companies calls its activities sustainable marketing. Both the social and environmental dimensions of sustainable marketing are part of the companies’ operations. Sustainability is a holistic approach for all of the companies and is not only limited to marketing, although the degree of sustainability being integrated into every day activities varies. For some of the companies it is also part of their core values. Clearly, all companies want to satisfy their customers through their activities. Consumer behaviour, which was least applicable to Peikko and Elematic and the difference between B-to-C and B-to-B was most pronounced. At the same time, sustainable consumer behaviour is least considered by the B-to-C companies and the companies’ target markets are not segmented nor chosen according to sustainability criteria. However, Nudie Jeans takes the post-use
of their jeans into account. By offering customers to repair their jeans, the company contributes to sustainable consumption. Accordingly, sustainability as such is not the main factor when it comes to positioning. Either single benefits of sustainability are highlighted, such as cost savings or health benefits compared to competitors’ products\textsuperscript{52}.

R. Shrikanth and D.Surya Narayana Raju (2012) in their study, “Contemporary green marketing - Brief reference to Indian scenario”, analysed that Green marketing should not be considered as just one more approach to marketing, instead should be pursued with greater vigor as it has societal and environmental dimensions. Marketers also have the responsibility to make the stakeholders aware about the need and the advantages of green products\textsuperscript{53}.

Anusha Sri Chintala, Raj Shravanthi Andukuri and Dr. N Ajjan, in their article “Green Marketing In Food Industry”, findout that only young and middle age people have more awareness towards green marketing, further Newspapers are the major source of awareness to the people followed by the television and People will not always buy the green products, and they often read the nutritional and ingredients section of food labels before buying the new food products\textsuperscript{54}.

Giulia Calabretta, in his doctoral thesis, “The Takeoff of Environmental Technologies: A Historical Analysis of Timing and Affecting Factors”, highlights the opportunity to investigate not only the relative importance of the internal and external factors over time, but also how the forces reinforce each other, and how this interaction affects change\textsuperscript{55}.

Narges Delafrooz, Mohammad Taleghani, Bahareh Nouri (2014), in their research article, “Effect of green marketing on consumer purchase behavior”, entitled, We need public officials, people and producers to assist in this area, to help each other move towards a healthy production and cleaner future. In addition, environmental products should come with more advertising, increased variety and lower prices so to be fully appreciated\textsuperscript{56}.

P.Purushotham and B. Saaranga Paani (2014) in their article, “Green energy technologies: Key to India’s energy independence” highlights the national energy policy, agriculture policy, transport policy and fiscal policies should go hand in hand such that
they mutually aid and reinforce the objective of achieving sustainable development. Green technologies offer vast scope for decentralizing power generation by which the renewable energy technology boom could do to power industry what the internet did to the depth, range, speed and cost of media\textsuperscript{57}.

J.Vimal Priyan and V.Karthihai Selvi (2014) in their study entitled “Green Tehnology: Motivating Economic and Environmental benefits from ICT” said that the majority of ICT organizations recognize that there is a fundamental need to be able to demonstrate ICT’s value and contribution to overall emissions reduction and that measurements, standards and innovation need to be promoted to ensure the desired outcomes are measurable and achievable. A solid data-driven approach is required to articulate the value and benefits of green ICT innovation and solid business cases will need to be built to ensure that both economic and environmental concerns are addressed\textsuperscript{58}.

Susmitha Mohan and Dr.Philo Francis (2014) in their article, “Green Marketing: An initiative for Green growth” entitled companies have developed and adopted GM strategies as a part of their corporate social responsibility (CSR) strategies in order to meet the economic development. At the same time, they also consider environmental protection. Thus there is an inter connection between CSR, sustainable development and GM activities and this will lead to green growth and will develop a green economy\textsuperscript{59}.

The reviews are collected under the title Green marketing Practices from various secondary sources. They provide a multilevel and multidisciplinary theoretical framework that synthesizes and integrates the literature at the individual level of analysis. The authors’ review highlight limited aspects of the sustainability practices of marketing. Many of the authors are not studied the attitude of stakeholders towards green marketing practices thoroughly. Further Many of researchers have done their research on green marketing practices of consumers, retailers and manufacturers individually. But here researcher has jointly studied the green marketing practices of consumers, retailers and manufacturers regarding with green marketing practices and provided proper suggestions to uplift the sustainability practices in the market.
1.4 OBJECTIVES OF THE STUDY

The present work on green marketing has been carried out with the following objectives:

- To understand the concept of green marketing
- To analyze the green marketing practices of consumers in Virudhunagar District
- To analyze the green marketing practices of retailers in Virudhunagar District
- To analyze the green marketing practices of manufacturers in Virudhunagar District
- To suggest the measures to enhance the practice of green marketing in the study area.

1.5 HYPOTHESIS OF THE STUDY

On the basis of the foregoing research objectives, the following null hypothesis has been framed for the present study.

There is no significant relationship between the business profile of manufacturers and their level of attitude towards green marketing practices.

1.6 SCOPE OF THE STUDY

This study is mainly confined to study on green marketing practices among the consumers, manufacturers and retailers in Virudhunagar District. The application of green marketing strategies and green manufacturing methods are analyzed and evaluated and green retailing practices are also examined. The opinions of the consumers are also discussed with a view to the development of green marketing practices in Virudhunagar District.

1.7 OPERATIONAL DEFINITIONS

1.7.1 Green Marketing

According to The American Marketing Association, “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 occurs with minimal detrimental impact on the natural environment\textsuperscript{60}.

\subsection*{1.7.2 Green consumer}

The green consumer is generally defined as one who adopts environmentally-friendly behaviors and/or who purchases green products over the standard alternatives\textsuperscript{61}.

\subsection*{1.7.3 Green Manufacturer}

Green manufacturer is a person one who is producing eco-friendly products which are giving less or zero detrimental effect to the environment.

\subsection*{1.7.4 Green Product}

In business, the terms “green product” and “environmental product” are used commonly to describe those that strive to protect or enhance the natural environment by conserving energy and/or resources and reducing or eliminating use of toxic agents, pollution, and waste.

\subsection*{1.7.5 Green Pricing}

Green price takes into consideration the people, planet and profit in a way that takes care of the health of employees and communities and ensures efficient productivity.

\subsection*{1.7.6 Green Place}

Green place is about managing logistics to cut down on transportation emissions, thereby in effect aiming at reducing the carbon footprint.

\subsection*{1.7.7 Green Promotion}

Green promotion involves configuring the tools of promotion, such as advertising, marketing materials, signage, white papers, web sites, videos and presentations by keeping people, planet and profits in mind\textsuperscript{62}.

\subsection*{1.7.8 Eco Label}

Eco Label Eco label is an environmental claim that appears on the packaging of a product. It is awarded to a manufacturer by an appropriate authority. ISO 14020 is a guide to the award of Eco-labels \textsuperscript{63}.
1.8 RESEARCH DESIGN AND METHODOLOGY

The study is descriptive based on both the primary and secondary data. The research problem, the hypotheses and interview schedule all have been formulated and framed accordingly. The suggestions of the study emerge from the inferences drawn from the sample survey of consumers, retailers and manufacturers in Virudhunagar district.

1.8.1 Secondary Data

The secondary data were collected from standard text books related to topic, leading journals, published reports and booklets, documents and records of the Government departments and the internet.

1.8.2 Primary Data

The present study is an empirical one based on survey method. First hand data were collected from the field through interview schedule. In this study, the researcher prepared three interview schedules, one for consumers, one for retailers and the other one for manufacturers.

Data relating to the green marketing practices of consumers, retailers and manufacturers are collected through the separate interview schedules. A number of discussions were held with knowledgeable persons such as academicians, government officials and NGOs for designing the interview schedule.

1.9 CONSTRUCTION OF INTERVIEW SCHEDULE

The variables to be studied are identified from the standard marketing text books and the pilot study with some consumers, retailers and manufacturers. The variables thus established by the researcher are operationalised. The schedules so drafted are critically reviewed with regard to wording, format, sequence and the like.

They are redrafted on the light of their comments. The schedules, accordingly prepared, are an ‘undisguised’, ‘structured’, data gathering instrument suitable for a personal interview.
1.10 PRE TEST

The pretests are conducted in January 2013 with 90 respondents (30 manufacturers, 30 consumers and 30 retailers). The draft schedules are also revised according to the results of the pretest. The specimen of the interview schedules used for the present study is shown in Appendix.

1.11 PERIOD OF THE STUDY

Secondary data are collected for the period of 6 months. The primary data are collected from the respondents through interview schedules from June 2013 to November 2013.

1.12 AREA OF THE STUDY

Virudhunagar District of Tamil Nadu state is taken as the study area for this research. Virudhunagar district is formed by the trifurcation of restwhile Ramnad district into Ramanathapuram, Sivagangai and Virudhunagar District on 14.3.1985 having Virudhunagar., the birth place of ‘Great Leader Perunthalaivar K. Kamaraj’, as the headquarters. The district is located between 11th and 12th North Latitude and 77028’ and 780 50’ East Longitude in an area of 4,232sq.kms.

The district is bound by Madurai district at the North, Sivagangai district at the North – East, Ramanathapuram district at the East, Thoothukudi district and Tirunelveli districts at the south, Kerala State at the West and Theni district at the North – West. Of the total area in Virudhunagar district, 28,466 Hec are forest area.

The total population of the District was 19,22,309 as per 2010 – 11 census. It has mineral deposits of limestone, limekankar, granite, charnockite and the like. The general temperature in Virudhunagar district is hot ranging from 38.20 to 17.90 C.

The average amount of rainfall in the district is 987.7 mm. The gross area under cultivation is 14,16,615 ha were crops like paddy, millets and other cereals, groundnut, gingelly, cotton, sugarcane are cultivated.
The national highways of 100.2 kms, Golden Quadrilateral 50.4 kms, state highways of 162.13 kms and municipal and panchayat roads of 1500.6 kms connect the different towns and villages of the district. Virudhunagar district of Tamil Nadu has eleven blocks namely Aruppukottai, Kariapatti, Narikudi, Rajapalayam, Sattur, Sivakasi, Srivilliputtur, Tiruchuli, Vembakottai, Virudhunagar and Watrap. The map of the Virudhugar District is given in figure 1.1.
Figure 1.1

VIRUDHUNAGAR DISTRICT
1.13 SAMPLEING DESIGN

Sample respondents are selected from three categories like consumers, retailers and manufacturers separately. Selection is based on sampling technique and they are explained below:

1.13.1 For Consumers

There are totally 19,22,309 people living in Virudhunagar District as per 2010-2011 Census Report. It is not possible to collect the data from the entire population. Therefore, it is decided to use sampling technique. The Virudhunagar District has eight taluks such as, Aruppukottai, Kariapatti, Rajapalayam, Sattur, Sivakasi, Srivilliputtur, Tiruchuli, and Virudhunagar. Hence, the population is divided into eight strata according to the taluks. Then the samples are selected proportionately from each stratum by using Judgement Sampling Method. The Sample size i.e 384 has been identified by using online sample size calculator [www.surveystem.com](http://www.surveystem.com) and the details of sampling are shown in Table 1.1

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Taluk</th>
<th>Total number of Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aruppukottai</td>
<td>2,46,186</td>
<td>49</td>
</tr>
<tr>
<td>2</td>
<td>Kariapatti</td>
<td>1,03,829</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>Rajapalayam</td>
<td>3,43,318</td>
<td>69</td>
</tr>
<tr>
<td>4</td>
<td>Sattur</td>
<td>1,66,659</td>
<td>33</td>
</tr>
<tr>
<td>5</td>
<td>Sivakasi</td>
<td>4,22,072</td>
<td>84</td>
</tr>
<tr>
<td>6</td>
<td>Srivilliputtur</td>
<td>2,89,895</td>
<td>58</td>
</tr>
<tr>
<td>7</td>
<td>Tiruchuli</td>
<td>1,01,568</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>Virudhunagar</td>
<td>2,48,782</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>19,22,309</td>
<td>384</td>
</tr>
</tbody>
</table>

*Source: Census Report 2010-2011*
1.13.2 For Retailers

As per Yellow Page 2011, there are totally 12,044 retail businesses available in Virudhunagar District\textsuperscript{66}. It is not possible to collect the data from the entire population. Hence, it is decided to use sampling technique. In order to ensure that the sample group represents the population, Simple Random Sampling Technique has been used to select sample retailers. There are 120 sample respondents selected from 12044 populations (1% of 12044) according to the convenience of researcher.

1.13.3 For Manufacturers

There are totally 16,839 manufacturing units available in Virudhunagar District\textsuperscript{67}. It is not possible to collect the data from the entire population. Therefore, it is decided to use sampling technique. In order to ensure that the sample group represents the population, Proportionate Stratified Random Sampling Technique has been applied to select the sample manufacturers. The Virudhunagar District has many industries and they are producing the products like food and beverages, textiles, wool, jute, hosiery garments, wood and paper products, leather and rubber products, chemical products, minerals, metals and machineries and miscellaneous products. Hence, the population is divided into eight strata according to the grouping of products. Then the samples are selected proportionately from each stratum. The sample of 168 (1% on 16,839) manufacturers are selected and they are shown in Table 1.2.
TABLE 1.2
Sample Design for Manufacturers

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Category of the Industries</th>
<th>Total number of Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Food products and Beverages</td>
<td>914</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>Textiles (cotton, jute, wool, silk, and Hosiery garments)</td>
<td>3663</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>Wood and Paper Products</td>
<td>5206</td>
<td>52</td>
</tr>
<tr>
<td>4</td>
<td>Leather and Rubber Products</td>
<td>773</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Chemicals (Fireworks, Matchworks and others)</td>
<td>3743</td>
<td>37</td>
</tr>
<tr>
<td>6</td>
<td>Minerals, Metals and Machineries</td>
<td>1298</td>
<td>13</td>
</tr>
<tr>
<td>7</td>
<td>Electricals, Transports equipments</td>
<td>535</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Miscellaneous Manufacturing units</td>
<td>707</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>16839</strong></td>
<td><strong>168</strong></td>
</tr>
</tbody>
</table>

Source: Industrial Profile of Virudhunagar District 2012-2013

1.14 FIELD WORK

Field work for the present study was carried on personally by the researcher himself. The survey is made during the period from June 2013 to November 2013. Though the interview schedules for the consumers, retailers and manufacturers are in English, it is administered in Tamil, and in the vernacular language also. The opinions and suggestions of the respondents on the topic under discussion are also elicited and recorded at the end of the schedules. Completed schedules are checked immediately on the spot as to their correctness and completeness in order to avoid revisits.
1.15 DATA PROCESSING

After collecting the primary data with the help of interview schedules, a thorough verification of data is made. Then editing work is undertaken. Further in order to process the responses of consumers, retailers and manufacturers, three master table are prepared separately and they are given codes to indicate each of the information to be used for analysis. Data processing and data analysis are carried out with help of Statistical Package for Social Sciences (SPSS) Version 16.

1.16 TOOLS FOR ANALYSIS

The data are analyzed by using appropriate statistical techniques such as, Percentage Analysis, Mean, Garret Ranking Technique, Chi-square Test, ANOVA Technique, Likert’s Scaling Technique, Factor Analysis and Cluster Analysis.

**Percentage Technique** has been used throughout the report to express the opinion of the respondents. In order to analyze the ranking data, **Garret Ranking Technique** is used. The order of merit assigned by the respondents is converted into scores by using the following formula.

\[
\text{Percent position} = \frac{100(R_{ij} - 0.5)}{N_j}
\]

Where,
- \( R_{ij} \) = Rank given by \( i^{th} \) individual for the \( j^{th} \) respondent.
- \( N_j \) = Number of variables ranked by the \( j^{th} \) respondent.

The per cent position of each rank is obtained which is converted into scores using Garret Ranking table. After that, the scores of individual respondent for each factor are added and then divided by total number of respondents. The mean score is ranked in descending order. In order to measure the thoughts of consumers and attitudes of retailers and manufacturers towards green marketing practices, Likert type five points scaling technique is adopted.

To classify the attitude level into three groups namely high, medium and low levels, arithmetic mean score is used. In order to analyses the relationship between the
business profile factors of manufacturers and their perception towards green marketing practices, **Chi-Square Test** is applied by using the following formula.

\[ \chi = \epsilon \frac{(O - E)^2}{E} \]

With \((r-1) (c-1)\) degrees of freedom

Where \(\sum = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}\)

- \(O\) = Observed frequency
- \(E\) = Expected frequency
- \(r\) = Number of rows in a contingency table
- \(C\) = Number of columns in a contingency table

In order to find out the factor influencing the thoughts of consumers towards green marketing practices, attitude of retailers and manufacturers towards green marketing practices **Factor Analysis** is applied. The Factor Analysis is used to narrate the data related to variables considered the opinion about the green marketing practices. Factor Analysis and Chi-square test are carried out with help of computer using SPSS Package (Version 16).

Mathematically Factor Analysis is somewhat similar to multiple regression analysis. In factor analysis, each variable is expressed as a linear combination of the underlying factors. The amount of variance a variable shares with all the other variables included in the analysis is referred to communality. The co-variation among the variables is described in terms of a small number of common factors plus a unique factor for each variable. These factors are not over observed. If the variables are standardized, the factor model may be represented as

\[ X_i = A_{ij}F_1 + A_{i2}F_2 + A_{i3}F_3 + \ldots + A_{im}F_m + V_iU_i \]

Where

- \(X_i\) = \(i^{th}\) standardised variable
- \(A_{ij}\) = standardised multiple regression coefficient of variable \(i\) on common factor \(j\)
- \(F\) = common factor
- \(V_i\) = standardised regression coefficient of variable \(i\) on unique factor \(i\)
$U_i = \text{the unique factor for variable } i$

$m = \text{number of common factors}$

The unique factors are uncorrelated with each other and with the common factors. The common factors themselves can be expressed as a linear combination of the observed variables.

$$F_i = W_{i1}X_1 + W_{i2}X_2 + W_{i3}X_3 + \ldots + W_{ik}X_k$$

Where

$F_i = \text{estimate of } i^{\text{th}} \text{ factor}$

$W_i = \text{weight or factor score coefficient}$

$K = \text{number of variables}$

It is possible to select weights or factor score coefficient so that the first factor explains the largest portion of the total variance. Then a second set of weight can be selected, so that the second factor accounts for most of the residual variance, subject to being uncorrelated with the first factor.

This same principle could be applied for selecting additional weights for the additional factors. Thus, the factors can be estimated so that their factor scores, unlike the value of the original variables, are not correlated. Furthermore, the first factor accounts for the highest variance in the data, the second factor the second highest, and so on.

The factors with factor loadings of 0.50 or greater are considered as significant factors. This limit is chosen because it had been judged that factors with less than 50 per cent Common Variation with the related factor pattern are too weak to report.

In the present study, the principal components or factors analysis method with Orthonogal Varimase Rotation is used to identify the significant set of factors influencing the attitude of relations towards green marketing practices.

Before extracting the factors to test the appropriateness of the factor model, Barlett’s test of sphericity is used to test if the null hypothesis of the variables is index correlated in population. The test statistic for sphericity is based on a chi square transformation of the determinant of the correlation matrix.
Another useful statistics is the **Kaiser-Meyer-Oklin (KMO) test** of sampling adequacy. Small value of the KMO statistic indicates that the correlation between pair of variables cannot be explained by other variables and that factor analysis may not be appropriate. Generally, a value greater than 0.5 is desirable.

The correlation matrix is examined carefully and the two tests viz., Kaiser-Meyer Oklin test are undertaken to test it is judicious to proceed with factor analysis in the present study.

In order to find out cluster variables, *Cluster Analysis* is used. Cluster Analysis is a convenient method for identifying homogenous groups of objects called Clusters. It is also referred to as a classification technique, numerical taxonomy and Q analysis. The group can be done for objects, individuals and entities.

The basic assumption is the fact similarity is based on multiple variables and it attempts to measure the proximity in terms of the study variables. The researcher identifies a set of clustering variables which have been assumed as significant for the purpose of classifying the objects into groups. It is basically because the technique is used in various branches of Social Science.

Cluster Analysis procedure can be done by following steps. The first step is to decide on the characteristics that that researcher will be used to segment the variables. In other words, the researcher has to decide clustering variables.

Then the next step is to identify the groups of objects or variables that are very similar. After having decided on the clustering variables, the researcher needs to decide on the clustering procedure to form groups of objects. This step is crucial for the analysis, as different procedures require different decisions prior to analysis.

There is an abundance of different approaches and little guidance on which one to use in practice. There are many popular approaches or methods used in market research as they can be easily computed using SPSS. Like Hierarchical methods, Partitioning method methods (more precisely, K-means) and two-step clustering. Researcher can be used any one of above methods for cluster analysis.

In the final step, the researcher needs to interpret the solution by defining and labeling the obtained clusters.
1.17 LIMITATIONS OF THE STUDY

Every researched study suffers from errors and limitations. Some of these are inherent in the research design while some others become part of the study during various stages of operation. The present study is subjected to the following limitations:

1. The size of the sample is selected by contacting consumers, retailers and manufacturers. The researcher selected only 384 consumers, 120 retailers and 168 manufacturers due to paucity of the time and cost. The present study is only confined with Virudhunagar District of Tamil Nadu. Hence, the findings of the study cannot be generalized in any other district, state or country.

2. The data gathering instrument is another source of error. The interview schedules are used for this study despite pre-tested does remain a source of error. Moreover, the translation of the questions in Tamil could create response errors specially ambiguity in understanding the question as well as the answer.

3. One of the limitations of the study relates to the qualitative nature of several responses which could be analysed properly only on the basis of scoring or ranking method. The result is limited to the reliability of the method used in measurement and the analysis of the data.

1.18 CHAPTER SCHEME

The present study entitled ‘A study on Green Marketing Practices in Virudhunagar District’ has been organized into six chapters.

- The first chapter presents a brief introduction to Green Marketing. It also presents the objectives of the study, operational definitions, review of literature, methodology, statistical tools employed, sampling design and chapterisation of the research report under the titled on “Introduction and Design of the Study”.

- The second chapter spells out the history and growth of green marketing under the titled on “An Over view of Green Marketing”.

- The third chapter studies the socio-economic background of the consumers, information about the green marketing practices followed by them, factors influencing the thoughts of consumers towards the green marketing practices
under the titled on “Green Marketing Practices of Consumers in Virudhunagar District”.

- The fourth chapter presents a clear picture about the business profile of the retailers, attitude of retailers towards green marketing practices under the titled on “Green Marketing Practices of Retailers In Virudhunagar District”.

- The fifth chapter comprises of about the business profile of the manufacturers, attitude of retailers towards green marketing practices under the titled on “Green Marketing Practices of Manufacturers in Virudhunagar District”.

- The last chapter offers summary of findings, suggestions conclusion of the study under the titled on “Summary of Findings, Suggestions and Conclusion”.
References


