GREEN CONSCIOUSNESS AND CONSUMER BUYING BEHAVIOUR IN A DEVELOPING COUNTRY: A STUDY OF GHANAIAN CONSUMERS

By

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DECLARATION

I hereby declare that this submission is my own work towards the Master of Business Administration and that, to the best of my knowledge it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the university except where due acknowledgment has been made in the text.

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(Head of Department) Signature Date

DEDICATION

This project is dedicated to My Beautiful Lord and Savior, Jesus Christ. He has being my strength and joy through it all and to my wonderful and amazing parents; my father, Dr. Emmanuel Harry Tawiah and my precious mother, Mrs. Juliana Tawiah, for the love and encouragement. It is also dedicated to my best friend, Frank Kwabena Sika. You are appreciated.

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ABSTRACT

Environmental consciousness has seen more light over the past three decades because of the increasing indication of environmental problems. Consumers and businesses alike are more environmentally friendly. Ghana as a developing country faces a lot of environmental issues and it is imperative for the country to focus on decreasing the negative effect on the environment. Green marketing is a phenomenon that is still at its birth stage in Ghana as Ghanaian consumers are currently at the stage of green awaking and green consciousness. There is little academic evidence of the Ghanaian being environmentally friendly.The main objectives of the study are to determine if Ghanaian consumers have pro-environmental concerns,knowledge of environmental issues and awareness of green products. An objective is to know if Ghanaian consumers will be will to pay more for green products and if their concerns and knowledge of the environment would affect their purchasing decisions or buying behaviour. The study suggests that Ghanaian consumers are gradually moving towards the green phenomenon and that the consumers who are have knowledge in environmental issues and are green conscious prefer to purchase green products even at higher prices. This study was carried out using data collected from 350 residents of Kumasi in the Ashanti Region using a structured questionnaire. The questionnaire contained questions that were used to measure the attitude of Ghanaian consumers towards the environment and how these attitudes influence their buying behaviour. The collected primary data was analyzed with SPSS using tools such as descriptive statistics, factor analysis and correlation. The results of the study showed that the Ghanaian consumers' pro-environmental concerns notably affect their green buying behaviour. It also showed that consumers are willing to buy green products but are not willing to pay a higherprice for them. The survey findings suggest Ghanaian consumers' demographics which include age, educational level and income level do not have a strong impact on the green consciousness and green buying behaviour. There is a great need for a drastic promotion and awareness creation among consumers carried out by green marketing campaigns, government, businesses and organizations.

KEYWORDS

- ***Green Marketing***: 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.

- ***Green Product***: a product has a low environmental impact.

- ***Pro-Environmental Concern***: a general attitude that reflects the extent to which the consumer is worried about the threats to the environment

- ***Green Consumer***: a person who is mindful of environment related issues and obligations and is supportive of environmental causes to the extent of switching allegiance from one product or supplier to another even if it entails higher cost

- ***Green buying Behaviour***: purchasing and consuming products that are nonthreatening towards environment

- ***Environmental Sustainability***: the process of making sure current processes of interaction with the environment are pursued with the idea of keeping the environment as pristine as naturally possible

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ABBREVIATION

AMAAmerican Marketing Association

EPAEnvironmental Protection Agency

MESMinistry of Environment and Science

MOFA Ministry of Foreign Affairs

NGONon-Governmental Organization

WBCSDWorld Business Council for Sustainable Development

UNCSDUnited Nations Commission on Sustainable Development

CHAPTER ONE

INTRODUCTION

This chapter gives an overview of the research. It contains a short background and problem discussion (Statement), the research questions and objectives of this thesis. The scope, limitation and the methodology used in the research are also briefly discussed.

1.1BACKGROUND TO STUDY

Global warming, use of renewable resources, toxic waste disposal and resources depletion amongst others are environmental issues of both public and legislative concern. Saha and Darnton (2005) and Peattie (1995) affirm that a variety of stakeholders, including government, interest groups, investors and the media, expect companies to act in an environmentally responsible manner and indeed corporate environmentalism is on the rise (Maxwell, Lyon & Hackett 2000).

According to Polonsky (1994), although environmental issues influence all human activities, few academic disciplines have integrated green issues into their literature. Societies' developing interest and concern in the natural environment has driven organizations to revise their behaviour in an attempt to address these concerns with a few organizations accepting concepts such as waste management as well as integration of environmental issues into all its organizational activities.

Polonsky (1994) also acknowledged that one business area where environmental issues have received a great deal of discussion in the popular and professional press is marketing where terms like "Green Marketing" and "Environmental Marketing" are used.

Various governments around the world have become so interested in green marketing activities such that they have endeavoured to regulate them. An example is the United States of America where the Federal Trade Commission and the National Association of Attorneys-General have developed extensive documents examining Green Marketing issues (Polonsky, 1994).

Over the past three decades, Green Marketing has been of great importance in both academic and business research, coming up with many definitions. Polonsky (1994) defines Green or Environmental Marketing as "*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"*. Green Marketing refers to "*holistic marketing concept wherein the production, marketing, consumption and 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."*(Shrikanth and Raju, 2012). According to Dutta, B. (2009), Green Marketing involves developing good quality products which can meet the needs and wants of the consumer by focusing on the quality, performance, pricing and convenience in an environment-friendly way.

Marketers and consumers, alike, are increasing being converted into the marketing and use of green products and services due to being sensitive to the environment and health. The shift to "green" may appear to be expensive in the short term but it will definitely prove to be indispensable and advantageous, cost-wise too, in the long run.
(Sharma, 2011)

Environmental problems are not only important but also different from what it was in the past and organizations should not overlook this. This means they must not focus only on enhancing the quality of their goods and services but also on the quality of the environment. With this in mind, it must be noted that environmental issues are both regulatory and strategic business issues requiring a whole new approach which would be a proactive approach rather than a reactive approach when it comes to environmental issues (Azzone and Bertele, 1994; Meyer, 2000).

1.2 PROBLEM STATEMENT

As discussed in the background, both marketers and consumers' concern about the environment has gradually increased worldwide and has taken the place of being a primary concern. This concern has not been limited to industrialized nations such as Germany (Pierre and Prothero, 1997) and the United States of America (Ottman, 1998) but extended to other less industrialized nations such as India (Shrikanth and Raju, 2012), Egypt (Tantawi et al, 2009) and Mauritius (Juwaheer, 2010). Most academic studies concerning green marketing have been carried out in these countries but very little attention has been given to this area in Ghana. There is currently no evidence of academic analysis of green marketing and consumers' green consciousness in the Ghana.

Worldwide evidence indicates people are concerned about the environment and are changing their behavior towards the environment. It is understandable to assume that potential consumers will view a product's or service's 'greenness' as a benefit and base their buying decision accordingly. The not-so-apparent assumption is consumers being willing to pay more for green products than they would for a 'non-green' alternative product.

It could be concluded that Green marketing is very essential for the sustainability of an organization globally thus the need for the Ghanaian consumer to be studied to know if Ghanaians are green conscious and how their buying behaviour could be influenced.

1.3 PURPOSE OF RESEARCH

There is a gap in research concerning the 'greenness' of the Ghanaian consumer. This research paper aims at assessing the Ghanaian consumer's pro-environmental concerns, knowledge of environmental issues, awareness of green products, effects of income level and educational levels and any potential effect that these factors may have on green buying behaviour. It should be noted that similar researches have been carried out in both India (Saxena and Khandelwal, 2010) and Egypt (Tantawi et al, 2009) and would be used as a mark-up for this research.

1.4 RESEARCH OBJECTIVES

1. To identify Ghanaian consumer pro-environmental concerns, green products awareness and knowledge of environmental issues.
2. To assess the effect of Ghanaian consumers' pro-environmental concerns, awareness of green products and knowledge of environmental issues on buying of green products.
3. To assess Ghanaian consumers' willingness to pay more for green products.
4. To identify if socio-demographics (age, education levels and income levels) factors affect the green consciousness and buying behaviour of Ghanaian consumers for green products.

1.5 RESEARCH QUESTIONS

1. Do Ghanaian consumers have pro-environmental concerns, awareness of green products and knowledge of environmental issues?
2. Are Ghanaian consumers' buying behaviour of green product affected by their pro-environmental concerns, awareness of green products and knowledge of environmental issues?
3. Are Ghanaian consumers willing to pay more for green products?
4. What role do socio-demographics (age, education levels and income levels) play on the green consciousness and buying behaviour of Ghanaian consumers for green products?

1.6 RESEARCH METHODOLOGY

This research was based on exploratory and explanatory research design. The two types of research methods were used: quantitative method and qualitative method.

Based on the objectives, the research methodology adopted was mainly quantitative. Interviews were done to seek expert opinions prior to questionnaire design and for verifications after the questionnaire administration.

Data collection used in the research was based on the two general types of data collection: primary and secondary data collection processes.

Data collection processes included:

1. Issuing of questionnaires
2. Conducting formal and informal interviews with respondents
3. Library references which includes books, journals and other related literatures
4. The use of the internet
5. Data Analysis and observation

1.7 SCOPE AND LIMITATION

The scope of the project was limited to the residents of Kumasi, Ashanti Region and the research was carried out from May to July, 2012.

Due to limited time and financial resources, a sample population with varied characteristics of the entire population was chosen for the purpose of the study and the conclusion generalized to reflect the entire situation.

1.8 ORGANISATION OF THE STUDY

The structure of the thesis is principally focused on six chapters as follows.

Chapter One elaborates the background of the study, discusses the problem statement, research questions and objectives, purpose of the study as well as the research methodology, scope, limitations and outline of the thesis.

Chapter Two reviews the related literature which was of significant importance to the study. It includes theories, definitions, views of the studies undertaken and other authors in relation to the study.

Chapter Three covers the research methodology that was used to conduct this research, sources for collection of information and limitation of the study if any.

Chapter Four presents the data analysis and discusses the results of the study while Chapter Five provides the summary of Findings, Recommendations and Conclusion to the study.

CHAPTER TWO

LITERATURE REVIEW

INTRODUCTION

This chapter assesses various published literatures that examine the objectives of the research paper. The state of Ghana's environment is examined along with the concept of green marketing, sustainability, pro-environmental concerns, green consumers and consumer buying behaviour towards green products.

2.1 STATE OF GHANA'S ENVIRONMENT (EPA REPORT, 2004, 2008)

Ghana shares boundaries with Togo, Ivory Coast and Burkina Faso in West Africa.

Covering a total area of about 238,537 km^2, Ghana enjoys an equatorial climate. The country, like many other countries, is faced with many environmental issues. Bohlen (1994) argued that there may be certain country-specific factors such as different sources and types of pollution and their level of seriousness, environmental laws and legislation and the availability of green products which may affect the operationalization of the environmental consciousness domain. Ghana has a long history of attempting to safeguard the environment from being abused by enacting and including environmental protection in appropriate legislation.

Land degradation, coastal erosion, pollution of water bodies, deforestation, poor waste management, risk from chemical use, indoor and outdoor air pollution, desertification and flooding in some cities because of construction in waterways are a few of the environmental issues faced by the country.

Attempts at resolving these problems birthed the establishment of the Ministry of Environment and Science (MES) and Environmental Protection Agency (EPA).

Policy documents such as National Environmental Policy and the National Environmental Action Plan have been developed and implemented and steps are being taken on mine reclamation and monitoring of industries. Currently, the best attempt in resolving these environmental issues was the establishment of Environmental Protection Agency (EPA), an organization solely responsible for the environment. Focusing on avoiding environmental problems, the environmental protection in Ghana is guided by the preventive approach which is carried out through the Environmental Assessment Administration Procedures. These procedures were derived from the main Environmental Legislation, Environmental Protection Agency Act, Act 490, and Environmental Assessment Regulation, LI 1652.

The current state of the country as discussed by in the Ghana State of Environment Report, 2004 and 2008 by EPA, indicates that temperatures in the country are rising through the emission of Green House Gases such as carbon dioxide, carbon monoxide, oxides of nitrogen and sulphur oxide. Rainfall patterns have shown great fluctuations over the years and across vegetation zones. There is a gradual decease in rainfall distribution in all parts of the country.Agricultural production suffers when there is extreme rainfall pattern and high temperature.Agriculture is the most important activity in terms of spatial extent employing about 60 percent of the labour force. It contributes 40 percent to the Gross Domestic Product. (EPA, 2008)

Mining is important to the economy. The main minerals mined in Ghana are gold, diamonds, bauxite and manganese. The major forms of land degradation include soil erosion, desertification, salinization, acidification and plinthite formation. Large tracts of land have been destroyed by water erosion. The gross annual economic loss due to

erosion ranged from 2 to 5 percent of Agricultural Gross Domestic Product. The estimated percentage of total land area of Ghana prone to desertification is 64.97 percent, which is about 165,000 km^2. (EPA, 2004)

Environmental impacts of land degradation include reduced crop yield, reduced quantity of vegetative cover and reduced resilience of land to climatic variability. It can also lead to barrenness of the land. Increased scarcity of forest products, famine and malnutrition, increased migration and social cost, low incomes and increased poverty are some of the socio-economic impacts. (EPA 2004)

Freshwater is vital for life. In the mining areas high levels of arsenic have been recorded in ground waters at Obuasi and Prestea, and high cyanide at Sumang. Rivers located near industrial areas are dying. Many industries fail to treat their effluent prior to discharge into the rivers, leading to nutrient enrichment and odour. Population growth, changes in land-use patterns and climatic variability have resulted in dwindling of freshwater resources. The high rates of logging, fuel wood extraction, poor agricultural practices and surface mining have exacerbated the vulnerability of freshwater resources. (EPA, 2004)

Originally forests cover about 36 percent (84,000 km^2) of the country. This reduced to 23 percent by 1972, 13.3 percent in 1990, and 10.2 percent in 2000. Deforestation has resulted in adverse effects on the integrity of our environment. Prime timber species including Meliciaexcelsa (odum) that were common in forest reserves have drastically reduced. Species such as Triplochitonsclceroxylem(wawa), Ceibapentandra(silk cotton), Terminaliasuperba(Ofram), are becoming extinct. The forest provides CO_2

sinks. However from 1990-1996, the sink capacity of the country reduced by 400 percent due to wood harvest for timber, charcoal, fuel wood and low forest restoration. Due to indiscriminate harvesting of wood, wood products are becoming scarce and resulted in high cost of the product. The Forestry Commission and the Private Sector are engaged in cultivation of forest plantations as sources of electrification transmission poles, furniture and for export. From 2001, the government launched the National Plantation Development Programme, which aims at planting 20,000 ha of trees per annum. By the year 2003, an estimated total area of 35, 000 ha was planted using the modified taungya system (EPA, 2004).

There are over 90 lagoons and wetlands in Ghana. Environmental degradation is common in the coastal areas. Surface waters carry pollutants from municipal and industrial drains, land runoff containing soil, pesticides and fertilizers into the coastal zone. There is serious pollution of surface waters in Accra and Tema. Many breweries, petrochemicals and textile industries discharge untreated and partially treated wastewater into nearby drains, which flows directly into water bodies. Contributing factors to environmental issues include improper siting of industries and the use of obsolete industrial plants and equipment (EPA, 2004).

Many settlements along the coastline have been submerged under the sea. Areas with the most serious erosion problems are Keta, Ada-Foah, Labadi Beach, Nkontonpo Beach and Axim. The structure of the coast, coastal farming, sands and gravel winning and vegetation cover loss all induce coastal erosion. Mangroves and wetlands are being destroyed through fuel-wood gathering, clearance for salt pans, pollution and human settlement (EPA, 2004).

Biodiversity means the variability of living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems. Ghana is rich in biodiversity. There are over 3600 plant species. Fortythree species are endemic. The Kakum forest reserve is home to several floral species. The faunal diversity includes 225 mammal species, 74 bat species, 37 rodents, 724 birds, 221 amphibian and reptiles, and 850 species of butterflies in the forest zone alone. Unfortunately this richness in biodiversity is under threat. According to the Red List of Threatened Species 13 mammals, 10 birds, 4 reptiles and 103 plant species are listed as under threat. The giant forest hog, giant pangolin, leopard, golden cat, bongo and elephant are under threat (EPA, 2004).Various factors pose threats to biodiversity. These include indiscriminate mining activities, use of agro-chemicals, overgrazing and overexploitation of certain species. Hunting of elephants for meat caused local extinction in some areas. Areas of importance to biodiversity are protected such as resource reserves, wildlife sanctuaries, national parks, ramsar sites and botanical gardens. The indigenous people protect biodiversity through sacred groves. Projects such as environmental education, eco-tourism development, afforestation and watershedprotection are being carried out by EPA, MOFA and NGOs.

Ghana's energy comes from petroleum, electricity and biomass. Problems associated with exploration activities onshore are existent and drilling of wells has introduced amounts of pollutants into the marine environment. The oil and grease flowing from the refinery and other factories has increased the biological oxygen demand and chemical oxygen demand of the lagoon, leading to inadequate oxygen supply to support plant and animal life.

The population of Ghana has quadrupled in size from about 6 million at independence in 1957 to about 24 million in 2010. Ghana's population is young with a substantial proportion under age fifteen and youthful age structure is creating high young dependency on the working force. The sex ratio was 97.3 males per 100 females in 1984 and 95 males per 100 females in 2010. (Ghana Statistical Service, 2011).

The burden of diseases in the country indicates that about 70 percent can be attributed directly to the environment, the lack of proper water and means of sanitation. Malaria is the highest outpatient and hospital admissions. Malaria accounts for 18 percent of all deaths. Cholera is rampant in Greater Accra and Central regions at the peak of the rainy and dry seasons. National case fatality rate increased from 1.9 percent in 2002 to 2.5 percent in 2003.

Urban areas produce a variety of waste such as solid waste, industrial waste and liquid waste from households, industries and demolition sites. The current state of waste management in the country leaves much to be desired. Less than 40 percent of urban residents are served with solid waste collection services and less than 30 percent by an acceptable household toilet facility. The problem of waste is a direct result of a growing urban population, the changing patterns of production and consumption, the inherently more urbanized life-style and industrialization (EPA, 2004).

2.1.1 Major Environmental Concerns

The current state of the country as discussed by in the Ghana State of Environment Report, 2004 and 2008 by EPA indicates that the country has serious environmental problems. The table below enumerates their causes and effects

Table 2.1 Environmental Problems in Ghana – Causes and Effects

Environmental Problems in Ghana Nature of concern	Causes	Effects	Indicators
Land degradation	Traditional farming methods Bush fires Clearing of watersheds Sand and stone winning Harvesting of firewood	Loss of top soil Loss of biodiversity Loss of medicinal plants Siltation of rivers Salinization of soil	Area affected by erosion Area affected by salinization Area of land contamination Area of water logging
Coastal erosion	Rising sea level Sand wining on beaches Harbour construction	Erosion of coast Loss of spawning ground	% land loss to erosion No of sand wining sites on beach
Pollution of water bodies	Mining activities Indiscriminate waste disposal Farming along river banks Indiscriminate defecation	Damage to aquatic life Poor water quality Toxic water sources	Increase BOD in rivers % loss in aquatic life % faecal coliform in rivers Use of agricultural pesticide
Deforestation	Timber exploitation Fuel wood extraction Shifting cultivation Bushfires	Loss of biodiversity Drying of streams Soil erosion	% loss of fauna, flora % loss of forest land/year Number of bushfire/year Annual Allowable Cut
Poor Waste management	Human activities Mining activities Industrial activities Agricultural activities	Increased soil toxicity Poor water quality Visual intrusion Increase in diseases Emerging diseases	Volume of types of waste No of waste treatment plants
Risk from chemical use	Use of chemicals in fishing Use of chemicals in hunting Agrochemical/pesticides use Industrial use of chemicals Spillage from mining activities	Polluted water bodies Polluted air Increase crop toxicity Death related to pesticides	Increase pesticides use Level of pesticide in crops Increase in pesticide related disease. Chemical poisoning
Indoor air pollution	Use of charcoal and fuel wood Use of insecticides Use of mosquito coils	Poor air quality Increase chest problems Increase in coughs	Emission of CO_2 Respiratory infections Expenditure on air pollution

	Smoking cigarettes		
Outdoor air pollution	Vehicular pollution Industrial pollution Dust from road construction Release of methane Stench from waste	Health problems increase Poor air quality Loss of flora and fauna	Emission of CO_2 Emission of Nitrogen oxide Emission of Sulphur oxide Air quality Emission of GHG
Desertification	Climatic change Deforestation Poor farming practices Drying of local streams	Loss of livelihood Erosion Loss of vegetation cover	Increase in vegetation loss Decrease in food production loss of soil moisture % loss of surface water

Source: Adapted from the SEA of GPRS, 2003 and Sustainable Development Indicators for Ghana (EPA, 2008)

2.2GREEN MARKETING

2.2.1 Marketing

To a lay person,marketing is an activity that is performed when and only when a consumer is found (Green and Wiliams, 1996).Thinkers including some business managers have over the years, limited marketing to advertising. P. Kotler (2002), a marketing management expert and researcher states that marketing has often been described as “the art of selling products.” These ideas are not far-fetched, but marketing is a lot more that these speculations (Hundekar et al, 2010).

Peter Drucker (1993), a leading management theorist, views that marketing aims at making selling superfluous. To him, the aim of marketing is to know and understand the customer so well that the product or service fits him and sells itself. Ideally, marketing should result in a customer who is ready to buy”.

The American Marketing Association (AMA) offers a managerial definition stating that marketing (management) is the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational goals. This is argued by Gronroos (2006); who is of the opinion that these definitions view marketing as one function amongst others and that such a conception of marketing is ill-equipped to deal with new forms of relationships with customers. This definition has become a straitjacket for marketing research, where at least mainstream marketing research has not been able to cope with the changes that have taken place in the customer boundaries. The content of customer boundaries has grown far beyond what a one function marketing approach can handle.

AMA produced a second updated version of the definition of marketing in 2007 defining marketing as the activity, conducted by organizations and individuals thatoperate through a set of institutions and processes for creating, communicating, delivering and exchanging market offerings that have value for customers, clients, marketers and society at large. This definition has yet to be fully debated and applied (Sheth and Uslay, 2007), but it certainly seems to represent a step in the right direction.

Marketing management is the art and science of applying core marketing concepts to choose target markets and get, keep, and grow customers through creating, delivering, and communicating superior customer value (Kotler, 2002).Sharm and Dilip (2008) describe marketing as a discipline in business which is accountable for developing programmes to obtain and keep hold of their customers. Hundekar et al, (2010) are of the view that organizations have a major concern in developing different marketing activities to satisfy, if not exceed, the needs of different groups of consumers. This concern has helped organizations develop new goods, products and services with specialization in products being achieved.

A great deal of new concepts are developed and implemented to reach consumers. These concepts include Network Marketing, Relationship Marketing, Direct Marketing, and Internet Marketing among others. The main mantra of today's marketing activities is consumer satisfaction, a wide range of consumer producer goods have been designed with the development of new markets and new selling opportunities. Marketing occupies a vital place in business activities in many developing countries.

According to Adinyra and Gligui (2012), a major function of marketing is to understand customers and their consumption patterns. Two major and powerful forces, technology and globalization, is said to shape up today's consumer backdrop. In relation to these innovations in technology and globalization, problems created by industrial activities have created environmental problems; a very good example of this is Global warming. Other examples are air pollution and natural resource scarcity (Brown, 1993).

Businesses face pressure to become "environmentally correct" (Chambers and Whitehead, 1993) with the dispute that environmental policies will boost the business' economic performance (Gore, 1992). Gladwin (1992) stressed that if goals of sustainability are to be achieved, firms must be reformed, redesigned and restructured to minimize the negative ecological impacts. The fundamental role of marketing in the enterprise was drawn from the fact that marketing is a procedure through which a firm produces value for its customers created by meeting customer requirements, therefore a firm must define itself not by the product it offers in the market, but by the customer benefit it offers (Silk, 2006).

2.2.2Sustainability

Combining environmental concern (which traditionally involves encouraging conservation) with the discipline of marketing management (which aims to stimulate and facilitate consumption)may seem inconsistent when it comes to the concept ofsustainability. The philosophy of green marketing resolves this irony because sustainability is the key stone of green marketing. A sustainable approach to consumption and production involves enjoying a standard of living today which is not

at the expense of the standard of living that can be enjoyed by future generations (Pierre and Prothero, 1997).

To Charter (1992), sustainability is at the nucleus of the green marketing philosophy. Van Dam and Apeldoom (1996) contended that the proactive elements of green marketing are being abandoned in favour of a responsive attitude, and environmental issues are converted from a societal challenge into a marketing problem. They indicated that sustainability as a social goal requires a change in virtually everyone's behaviour. Although changes in individual attitudes and behaviours are important contributors to achieving sustainability, individual action alone cannot form the basis for collective action (Barry, 1999).

"Report of the World Commission on Environment and Development (United Nations, 1987)" states that Sustainable Development is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but in the indefinite future. Sustainable development does not focus solely on environmental issues. The United Nations 2005 World Summit Outcome Document refers to the "interdependent and mutually reinforcing pillars" of sustainable development as economic development, social development and environmental protection.

Environmental sustainability is the process of making sure current processes of interaction with the environment are pursued with the idea of keeping the environment as pristine and as naturally possible. The increasing environmental consciousness makes it imperative for marketers and organizations not just to respond to, but also to lead the way in, environmental sustainability programs. Sustainable consumption is a

major focus in recent times as it is viewed by many economists as indispensable for solving the dilemma of balancing economic prosperity with ecologic vitality and social justice.

Sustainable Consumption and Sustainable Development are the two sides of the same coin. Sustainable development refers to maintaining long-term economic, social and environmental capital while sustainable consumption is using resources in a way that minimizes harm to the environment while supporting the well-being of people. Green marketing is one of the key business strategies, if not 'the' key business strategy, for sustainable growth.

Dr. Peter White, Director of Global Sustainability, Procter & Gamble, states that there is a need to connect sustainable production with sustainable consumption. This means understanding current and future consumption patterns, then harnessing innovation to develop more sustainable products, services and behavior change initiatives". Sustainable production and consumption can be defined in a very simple way; "The use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations." To meet the challenge of sustainable development, businesses can help to foster more sustainable levels and patterns of consumption. There is a significant opportunity for businesses to help consumers choose and use their goods and services sustainably. This means business must create sustainable value for consumers by supplying products and services that meet their functional and emotional needs – now and for future generations – while respecting environmental limits and common values (Symposium on

Sustainable Consumption, Oslo, 1994; UN Commission on Sustainable Development, hereafter UNCSD).

The World Business Council for Sustainable Development (WBCSD, 2008) brings together some 200 international companies in a shared commitment to sustainable development through economic growth, ecological balance and social progress. According to WBCSD, "Current global consumption patterns are unsustainable". Based on the facts and trends outlined in their document, "it is becoming apparent that efficiency gains and technological advances alone will not be sufficient to bring global consumption to a sustainable level; changes will also be required of consumer lifestyles, including the ways in which consumers choose and use products and services. We recognize the need for business to play a leadership role in fostering more sustainable levels and patterns of consumption, through current business processes such as innovation, marketing and communications".

A 2008 survey by the National Geographic Society and GlobScan on consumer choice and the environment reported on current behavior in fourteen countries (including Canada, China, France, Germany, India, Mexico, Russia, the UK and the US). The study found signs that consumer in all countries "feel empowered when it comes to the environment and are taking some action in their daily lives to reduce consumption and waste."

2.2.3The Green Marketing Concept

People talk about becoming green, politicians have green platforms and businesses have claims of 'greener products'. Everything is green, energy is green, nature is green and so are many other things yet we do not know what is green and what is not (Windsor, 2010). All the activities of man affect the environment that explains why green issues are now being incorporated by different academic disciplines in their literature and marketing as a discipline has not been left out with concepts like Green Marketing and Environmental Marketing taking the fore front of all endeavours.

People believe that green marketing refers solely to the promotion or advertising of products with environmental characteristics. Consumers often associate green marketing with terms like Phosphate Free, Recyclable, Refillable, Ozone Friendly and Environmentally Friendly. While these terms are expressive of green marketing concepts, claims in general, green marketing is a much broader concept, one that can be applied to consumer goods, industrial goods and even services. An example of 'green services' is the promotion of resorts as "eco-tourist" facilities that "specialize" in experiencing nature or operating in a fashion that minimizes their environmental impact (May, 1991; Troumbis, 1991).

Green marketing encompasses a wide variety of activities, including product modification, changes to the production process, packaging changes as well as modifying advertising. Yet defining green marketing is not a simple task. Indeed the terminology used in this area has varied, it includes: Green Marketing, Environmental Marketing and Ecological Marketing. While green marketing came into prominence in the late 1980s and early 1990s, it was first discussed much earlier (Polonsky, 1994). The American Marketing Association (AMA) held the first workshop on "Ecological

Marketing" in 1975. The workshop attempted to bring together academics, practitioners, and public policy makers to examine marketing's impact on the natural environment. The proceedings of this workshop resulted in one of the first books on green marketing entitled "Ecological Marketing" (Henion and Kinnear, 1976). Since that time, a number of other books on the topic have been published (Charter, 1992; Ottman, 1993).

At this workshop, Ecological Marketing was defined as the study of the positive and negative aspects of marketing activities on pollution, energy depletion and non-energy resource depletion. (Henion and Kinnear, 1976)

There are three major components in this definition:

1. it is a subset of the overall marketing activity; 2. it examines both the positive and negative activities; and
3. it examines a narrow range of environmental issues.

While this definition is a useful starting point, to be comprehensive green marketing needs to be more broadly defined.

Green or Environmental Marketing entails 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 (Polonsky 1994). This definition incorporates much of the traditional components of the marketing definition that is "All activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants" (Stanton and Futrell, 1987). Therefore it ensures that the interests of the organization and all its consumers are protected, as voluntary exchange will not take place unless both the buyer and seller mutually benefit.

Polonsky (1994) notes that the definition also includes the protection of the natural environment, by attempting to minimize the detrimental impact this exchange has on the environment. This second point is important, for human consumption by its very nature is destructive to the natural environment. To be accurate, products making green claims should state they are "less environmentally harmful" rather than "Environmentally Friendly", thus green marketing should look at minimizing environmental harm, not necessarily eliminating it.

Rex and Baumann (2007) define Green marketing as marketing that include environmental issues in the marketing efforts. The main idea is that customers should be provided with information of the environmental effects of the products they are considering buying so they can take this information into account when deciding which product to purchase. Those aspects will in turn make companies more inclined to produce products that are better from an environmental point of view.

Peattie (1995) and Welford (2000) define “green marketing” as the management process responsible for identifying, anticipating and satisfying the requirements of customers and society, in a profitable and sustainable way, making understanding consumers, the first logical process in green marketing as well.

Green marketing uses the four basic elements of the marketing mix – products, price, place and promotion; to offer environmental benefits to consumers.

2.2.4Evolution of Green Marketing

Green Marketing has evolved over a period of time. Peattie (2001) maintains that the evolution of green marketing has three phases.

- First phase was termed as "Ecological" green marketing. Throughout this period, all marketing activities were concerned with helping environment problems and providing remedies for environmental problems.
- Second phase was "Environmental" green marketing when the focus shifted to clean technology that involved designing of innovative new products, which take care of pollution and waste issues.
- Third phase was "Sustainable" green marketing which became prominent in the late 1990s and early 2000.

The first signs of interest in green marketing could be seen in the 1970s but it was not until the late 1980s and the 1990s that environmental friendly or green marketing gained attention from a broader audience. Researchers argued for a rapid growth in the use of green products which represented a shift in consumption behaviour (Prothero, 1990).

Much research conducted on the subject identified a greater awareness of the environment from the public. Furthermore the findings showed an increased demand for green products from consumers and that people were inclined to pay additional costs for products with environmental friendly characteristics (Mintel, 1991). Furthermore the view of green management as a profitable strategy arose, since green corporations ideally use fewer raw materials, waste less and produce less pollution (Wasik, 1996).

The interest in green marketing from corporations rose as a result of all of those aspects. Companies claimed to have changed to a more environmental friendly approach and promotion and advertisement containing green information rocketed (Crane, 2000). Companies such as McDonald's, Merck and Quaker Oats were praised for their environmental efforts in terms of adopting environmental policies, recycling efforts, energy efficiency, corporate responsibility and so forth (Wasik, 1996). The positive response those efforts gave in the press were examples of how environmental efforts could pay.

However as research progressed, findings emerged showing that the positive attitudes toward environmental friendliness did not show an increased sales of green products. The actual growth of green consumerism was found to be very little and a difference between concern and actual purchase was identified. Although the market share of green products continued to slowly increase, the earlier boom or the remarkable growth of environmental products were no longer a reality (Peattie, 1999; Crane, 2000).

A dominating approach to green marketing that evolved during this period was the Holistic view. Representatives of the Holistic perspective hold the view that marketers and corporations adopting an environmental friendly strategy must, due to the nature of environmental issues, consider the entire chain of events the company enrolls in.
How a product is made cannot be separated from how it is sold and how it affects the environment. According to the Holistic view events such as planning, production, product features, logistics, packaging as well as promotion and advertisement is a part of the marketing process (Wasik, 1996; Ottman, 1993). Green or ecological features signal genuine environmental benefits. It is therefore important for customers to be able

to trust the dealer's declaration of environmental friendly offers. As well as it is essential that the dealer provides information that enables the trust from the customer.

2.2.5Benefits of Green Marketing

Many companies take up green marketing to maintain their competitive edge. The question of why green marketing has increased in importance is quite simple and relies on the basic definition of Economics: "Economics is the study of how people use their limited resources to try to satisfy unlimited wants". (McTaggart et al, 1992) Thus mankind has limited resources on the earth, with which she/he must attempt to provide for the worlds' unlimited wants. There is a general acceptance in market societies where there is "freedom of choice", that individuals and organizations have the right to attempt to have their wants satisfied. As firms face limited natural resources, they must develop new or alternative ways of satisfying these unlimited wants. Ultimately green marketing looks at how marketing activities utilize these limited resources, while satisfying consumers wants, both individuals and industry, as well as achieving the organization's objective of maximizing profits.

2.2.6 Reasons Why Organizations Practice Green Marketing

There are several suggested reasons for firms increased use of Green Marketing. Five possible reasons are:

1. Organizations perceive environmental marketing to be an opportunity that can be used to achieve its objectives (Keller, 1987; Shearer, 1990);
2. Organizations believe they have a moral obligation to be more socially responsible (Davis, 1992; Keller 1987; Shearer 1990);
3. Governmental bodies are forcing firms to become more responsible (NAAG, 1990);

4. Competitors' environmental activities pressure firms to change their environmental marketing activities (NAAG, 1990); and
5. Cost factors associated with waste disposal, or reductions in material usage forces firms to modify their behavior (Azzone and Manzini, 1994).

2.2.6.1 Opportunities

It appears that all types of consumers, both individual and industrial are becoming more concerned andaware about the natural environment. In a 1992 study of 16 countries, more than 50% of consumers ineach country, other than Singapore, indicated they were concerned about the environment [Ottman 1993].

As demands change, many firmsee these changes as an opportunity to be exploited. It can be assumed that firms marketing goods with environmental characteristics willhave a competitive advantage over firms marketing non-environmentally responsible alternatives. There arenumerous examples of firms who have strived to become more environmentally responsible, in an attempt to better satisfy their consumer needs (Polonsky, 1994).

An example is when McDonald's replaced its clam shell packaging with waxed paper because of increased consumerconcern relating to polystyrene production and Ozone depletion [Gifford 1991, Hume 1991].Xerox introduced a "high quality" recycled photocopier paper in an attempt to satisfy the demandsof firms for less environmentally harmful products.

This is not to imply that all firms who have undertaken environmental marketing activities actually improvetheir behavior. In some cases firms have misled consumers

in an attempt to gain market share. In other cases firms have jumped on the green bandwagon without considering the accuracy of their behavior, their claims, or the effectiveness of their products. This lack of consideration of the true "greenness" of activities may result in firms making false or misleading green marketing claims (Polonsky, 1994).

2.2.6.2 Social Responsibility

According to Polonsky (1994), many firms are beginning to realize that they are members of the wider community and therefore must behave in an environmentally responsible fashion. This translates into firms that believe they must achieve environmental objectives as well as profit related objectives. This results in environmental issues beingintegrated into the firm's corporate culture.

Firms in this situation can take two perspectives;

1) they can use the fact that they are environmentally responsible as a marketing tool; or 2) they can becomeresponsible without promoting this fact.

There are examples of firms adopting both strategies. Organizations like the Body Shop heavily promote thefact that they are environmentally responsible. While this behavior is a competitive advantage, the firm wasestablished specifically to offer consumers environmentally responsible alternatives to conventional cosmeticproducts. This philosophy is directly tied to the overall corporate culture, rather than simply being a competitive tool.

An example of a firm that does not promote its environmental initiatives is Coca-Cola. They have investedlarge sums of money in various recycling activities, as well as having modified their packaging to minimize its environmental impact. While being

concerned about the environment, Coke has not used this concern as a marketing tool. Thus many consumers may not realize that Coke is a very environmentally committedorganization. (Murphy, 1985)

2.2.6.3 Governmental Pressure

As with all marketing related activities, governments want to "protect" consumers and society; thisprotection has significant green marketing implications.

Governmental regulations relating to environmental marketing are designed to protect consumers by pressurizing firms to reduce production of harmful goods or byproducts; and to modify consumer and industry's use and/or consumption of harmful goods as well as to ensure thatall types of consumers have the ability to evaluate the environmental composition of goods.Governments establish regulations designed to control the amount of hazardous wastes produced by firms.

Some governments have introduced voluntary curb-side recycling programs, making it easier for consumers to act responsibly. In other cases governments tax individuals who act in an irresponsible fashion. For example in Australia there is a higher gas tax associated with leaded petrol. (Polonsky,1994).

2.2.6.4 Competitive Pressure

Another major force in the environmental marketing area has been firms' desire to maintain theircompetitive position. In many cases firms observe competitors promoting their environmental behaviors andattempt to emulate this behavior. In some instances this competitive pressure has caused an entire industryto modify and thus reduce its detrimental environmental behavior. For example, it could be argued thatXerox's

"Revive 100% Recycled paper" was introduced a few years ago in an attempt to address theintroduction of recycled photocopier paper by other manufacturers. In another example when one tunamanufacturer stopped using driftnets the others followed suit (Polonsky, 1994)

2.2.6.5 Cost Or Profit Issues

Firms may also use green marketing in an attempt to address cost or profit related issues. Disposing of environmentally harmful by-products, such as polychlorinated biphenyl (PCB) contaminated oil are becoming increasingly costly and in some cases difficult. Therefore firms that can reduce harmful wastes may incur substantial cost savings. When attempting to minimize waste, firms are often forced to re-examine their production processes. In these cases they often develop more effective production processes that not only reduce waste, but reduce the need for some raw materials. This serves as a double cost savings, since both waste and raw material are reduced.

2.2.7 Green Products

Environmental friendliness is about ecological, sustainability regarding all the features of the product and the production process, therefore it is logical that green marketing concerns deeper aspects than just traditional promotion. Wasik (1996) means that eco labeling and certification is a way to practically verify the message communicated.

If a product has a low environmental impact, it is regarded as a green product. Mainieri et al., (1997) define green products as ecologically safe products that can facilitate the long term goal of protecting and preserving our natural habitat. PickettBaker & Ozaki (2008) suggest that green products should be supplied by companies with a reputation for reducing environmental impacts from their manufacturing processes

2.3 CONSUMER BEHAVIOUR AND ATTITUDE TOWARDS THE ENVIRONMENT

The harshness of environmental deterioration is necessitating technological changes as well as changes in attitude and behaviour of consumers (Weigel et al., 1978). Consumers' growing concern for the environment and environment related issues are driving businesses across the globe to offer a wide range of green products choices across a wide variety of product categories: from fashion, cars to gadgets.

Businesses that offer products which are designed and manufactured with an environmental marketing mix have a strategic competitive advantage. Environmental or ecological issues are of importance to consumers who are environmentally conscious when making a purchase. Hence, a better understanding of consumer preferences in this instance should allow businesses to acquire more marketapplicable approach to sustain in the competitive market. Consumers who are concerned with the environment and are knowledgeable about the environmental issues when shopping try to purchase only green products (Laroche, Bergeron &Babaro-Forleo, 2001).

2.3.1 Pro-environmental Concerns

Laroche et al (2001) further state that increasing pro-environmental concerns and awareness of green products among consumers have resulted in their green buying behaviour. Recent increase in the number of individuals who are willing to pay more for these green products suggests that the market for these products is ever expanding. Previous research conducted internationally suggests that the eco-friendly category of consumers is continuing to evolve and that consumers tend to vary in terms of their acceptance of green products and lifestyle (Jungermann &Jungermann, 2010). Buying

green products have become all the rage among consumers with pro-environmental concerns.

As consumers attitudes towards eco-friendly products continue to evolve, green marketing continues to be an issue of global interest. Laroche et al., (2001) suggests that there has been an increase in the number of individuals who are willing to pay more for environmentally friendly products. In 1991, environmentally conscious individuals in America were willing to pay 15-20 percent (Suchard&Polonsky, 1991) as compared 5-10 percent in 1989 (Coddington, 1990). Consumers are willing to help out environment and engaging in green buying could be one such compensatory behaviour. Concerns about environment are making consumers to contribute to the environment positively. This could be the reason for consumers engaging in green buying behaviour.

Marketers and researchers seek to explore if pro-environmental concern among consumers is predictive of their any green buying behaviour. Researchers (Dunlap & Van Liere, 1978; Weigel &Weigel, 1978) relate pro-environmental concern to environmental protection.

Pro-environmental concern is conceptualized as a general attitude that reflects the extent to which the consumer is worried about the threats to the environment (Alhassan, 2007). Recent studies suggest that the concerns for the environmental problems is high (Mainieri*etal.,*1997), suggesting a likely increase in green buying behaviour

Environmental concern can be described as a general attitude that reflects the extent to which the consumer is worried about threats to the environment, the consequences of

such threats for the harmony of nature and future generations, and the lack of human action to protect the environment for future generations (Bohlen et al., 1993;

Bohlen, 1994; Diamantopolous et al., 2003).

2.3.2 Green Consumer

Researchers have analyzed green consumer profiles with an attempt to target specific segments (Brown and Wahlers, 1998). With knowledge of consumers who are green or more receptive to green brands, marketers as well as organizations are guided to design their marketing strategies matching to profile of these green consumers, resulting in enhancing the customer value and gaining competitive advantage for sustainable growth. The last decade or so has witnessed a radical change in consumer preferences towards green products with the emergence of green consumers provoking market mechanisms for environmentally friendly organizations and new product innovations (Ottman, 1993).

Green consumer can be defined as a person who is mindful of environment related issues and obligations and is supportive of environmental causes to the extent of switching allegiance from one product or supplier to another even if it entails higher cost (Business Dictionary.com, 2009). Ottman (1993) defines green consumer as "those actively seek and support those products satisfy their needs that are having less impact on environment".

Green consumers can be grouped into three: Deep Green Consumers, Genuinely Interested Consumers and Apathetic Consumers. Deep Green Consumers are consumers who are serious about their choices and look out for hard proof of the environmentally friendliness of the claims being made by green companies. They

require verifiable proof of what products and services are being offered and whether that would truly benefit the environment. Genuinely Interested Consumers are people who are keenly interest in helping the planet but perhaps not as knowledgeable on the bigger environmental issues. They may be less willing to pay a premium for green offerings. Apathetic Consumers are consumers who have no care of the environment or green marketing efforts. Marketers often design different communication tools to reach out to each of these audiences. (Ottman, 1993)

Green consumers "are sincere in their intentions, with a growing commitment to Greener lifestyle; almost always judge their environmental practices as inadequate and do not expect companies to be perfect in order to be considered 'green'. Rather, they look for companies that are taking substantive steps and have made a commitment to improve". In general, green consumers tend to have direct relationship to their income and educational levels. This means that the more they earn and the more schooling they have had, the greener they tend to be (Coddington, 1993).There are existing studies that indicate a demand for, and an awareness of information regarding environmental product attributes (Wessells et al., 1999).

In relation to green attitudes specifically, a consumer may be segmented as having either high involvement environmental awareness or low-involvement environmental awareness. Most researchers view environmental concern as a general attitude that relates to consumers' cognitive and affective evaluation of the attitude object 'environmental protection' (Bamberg, 2003).

In general terms, a consumer's level of involvement refers to the extent to which they perceive there to be some personal relevance regarding the object in question

(Zaichkowsky 1985). Therefore, a consumer with high involvement environmental awareness is one who is more likely to be socially conscious with regard to the environment; Follows & Jobber (2000) state that socially-conscious consumers are aware of, and take into account, the broader consequences and impact of their consumption.

Conversely, a consumer with low-involvement environmental awareness would exhibit little or no concern for the environment when making purchase decisions. The Elaboration Likelihood Model (ELM) supports this assertion by suggesting that those with high involvement will base their decisions on the consumption object and be more likely to make use of cognitive information processes, thus more readily considering environmental aspects of the organization or product (Petty, Cacioppo& Schumann 1983). On the other hand, those with low involvement are more likely to consider 'peripheral' factors such as price, and place less relevance on environmental factors. Consumers' level of involvement will consequently be determined by the strength of the values and attitudes they hold about the environment (Foxall et al, 1998).

2.3.3 Green Buying Behaviour

An attitude towards the environment was used by Bohlen et al. (1993) and Bohlen (1994) as a one-dimensional scale representing consumers' concern about the quality of the environment and reflecting the attitude towards key environmental issues. All factors included in the attitude scale appeared to capture the importance that individuals attributed to the environment.

The field of consumer behavior covers a lot of different areas. Antonies&Raaij (1998) identify consumer behavior as “studies concerning attitudes, intentions and decision processes in order to explain and predict behavior”.

Consumers become more suspicious towards those firms that stress more environmental theme in their communication. . Kreidlerb and Joseph (2009) state that research proves income and education have positive relationship and direct impact on green behavior. A consumer, who is knowledgeable about environment, will tend to make “green purchase” (Peattie, 2001). Survey shows that the European consumers have a growing interest in green products and are willing to purchase them forcing about 92% of European multinationals has adopted environmental sustainability programs (Peattie& Crane, 2005).

Green buying can be defined as purchasing and consuming products that are benign towards environment (Mainieri et al., 1997). Some studies suggest that there is a positive relationship between environmental concern and green buying behaviour (Arbuthnot &Lingg, 1975). Although past research indicates that the consumers are concerned with the environment, marketers have found that consumers are pricesensitive when it comes to buying green (Mandese, 1991).

Consumers’ willingness to pay more for eco-friendly products is not always indicative of their green buying behaviour. For example, consumers who recycle waste may not want to buy products made from recycled material. Pickett-Baker & Ozaki (2008) suggest that an individual who is concerned about environment does not necessarily purchase eco-friendly products. The pro-environmental

Ottman (1993) confirms that a green consumer can be motivated by providing an added benefit in product either through a cost effective or an environmentally friendly solution. Peattie (2001) states that consumer behavior can be developed by highlighting the relative advantage of Greener Products as compared with the other products that creates environmental problems. Mintel (2006) cites that consumer willingness to pay more for environment friendly products and his concern for pollution and recycling forms his attitude as a "Green buying behavior". Antonies and Raaij (1998) defines attitude as an individual's particular trait. All consumers are potentially green consumers (Macdonald and Oates, 2006)

The behavior of the consumer can be changed and modified if organizations and the government speak desirable benefits or features of product or services that matched with the consumer belief in their advertising or other communication (Antonies and Raaij, 1998). Business organizations should focus a lot more on rewarding schemes in early stages of "habit formation" of consumer (Peattie, 2001).

Fuller (1999) has suggested that consumer purchase decision help the marketers to design the marketing mix to achieve the target of sustainability and provide the criteria that the product system must be "compatible with ecosystems". He further stated that "customers must learn to base their purchase decision not only on how well products satisfy individual needs but also on how these products affect the natural environment".

Wood and Neal (2009) suggested that consumer will repeat purchase if the outcome of purchase and consumption would be rewarding. Ottman (1993) emphasized that when consumers make decision to buy the product or service, they evaluate products not only on "performance and price", but also on the "social responsibility of

manufacturers".
Information and knowledge consumer received from environment, affect in their decision making process.

2.3.4.1Stages of the Decision Process

1. Problem Recognition: The consumer decision process model starts with the problem recognition what are the needs and satisfaction process. Consumer is not always attached with the ecological needs it is hardly express and not recognized by the consumer at all. (Fuller, 1999)
2. Information Search: The ecological attributes of a product plays important role in choosing the product. The consumer here will pass from the two situation "Firstly Sustainability Needs" it's required by a consumer likes or not and secondly "the environment" lower in importance but influence on the consumer. (Fuller 1999)
3. Purchasing Process: This phase focuses on the two aspects:
    - Purchase patterns, it include where to buy (Location), quantity to buy, and when to buy (timing) and
    - Purchasing outcome, the final outcome of the action. (Fuller 1999).
4. Post Purchase Behavior: Fuller (1999) describes when the purchase is less than satisfactory for whatever reasons; it creates a state of tension called post purchase dissonance. Post purchase dissonance is basically an after purchase cognitive behavior. Kreidler, & Joseph, (2009) explained that people react in two different ways toward environment, "Approach and Avoidance behavior". In approach behavior people shows positive behaviors to stay, keep searching for the product, power to spend money and look into particular environment.

On the other side Avoidance includes negative behavior is attached, exhibiting to leave from a particular situation.

The green consumer's point of view cannot be ignored. In a survey conducted in the United States of 400 Midwestern consumers, 36 percent of the respondents were found to be "very likely" to change from one food brand to another competitive label which used a recycled carton; only 2.8 percent stated that they would be "somewhat unlikely" to make brand changes because of recycled packaging (Eisenhart, 1990). In many cases, mandatory environmental legislation is also forcing behavioral changes in consumers. Business may adopt an eco-marketing orientation as a strategic response to the dynamic environments of the nineties (Geri, 2004).

CHAPTER THREE

METHODOLOGY

INTRODUCTION

The aim of this study was to assess the Ghanaian consumer's pro-environmental concerns, knowledge of environmental issues, awareness of green products and sociodemographics (age, education and household income) and their possible effects on green buying behaviour. Consumers' willingness to pay a higher price for these products was also researched into. An in-depth analysis of the potential of green marketing in the country and consumer behavior was carried out.This chapter is therefore reflective of a number of topics used to describe and assess the procedures used mainly for data collection and analysis within this study. Research designs, research methods, sources of data, questionnaire design and distribution, sampling and research tools for analyzing collected data are presented. The limitations to the survey are also stated in this chapter.

3.1 RESEARCH DESIGN

The research design is the basic plan for a piece of empirical research which includes the research's main ideas such as strategy, sample, and the tools and procedures to be used for collecting and analyzing empirical data (Punch, 2000). Saunders, Lewis and Thornhill (2009) states that the role of a research design is to connect research questions to the data thus it shows how the research questions are connect to the data and the tools and procedures to use in answering them. This research was based on exploratory and explanatory research design.

3.2 RESEARCH METHOD

The two types of research methods were used: quantitative method and qualitative method. Based on the objectives, the research methodology adopted was mainly

quantitative. Literatures were reviewed initially. Interviews were then carried out to seek expert opinions prior to questionnaire design and for verifications after the questionnaire administration. The questionnaire method was used to facilitate the gathering of data to make the data more accurate within the limited time frame. The questionnaire method was also seen as appropriate for the objectives of this study as it seeks to distinguish data within certain parameters, thereby creating a solid approach to the collection and gathering of needed data.

In the quest of going green, an online survey method was employed for the study as well. The online survey method is a method in which respondents are to answer a set of questions aimed at the objective of the study through the internet. 100 out of the 350 questionnaires were administered online through social networks such as Facebook, Skype and Google+. Links to an online survey website, Survio (www.survio.com), were sent to these social networks for participants to follow the link and take the survey. The set of questions used for the online survey was the same questions used for the printed questionnaire survey method.

3.3 SOURCES OF DATA

Data was collected from both primary and secondary sources. Collected data were primary and secondary data. The first type of data to be collected was the secondary data which was the preliminary study

3.3.1 Preliminary Study (Secondary Data)

This involves the initial approach to understand the study. It involved the review of relevant literature, interviews and discussions. The sources of the literature were both

formal and informal and included the use of the internet to review journals, articles and reports and the use of published books. Mails were continuously exchanged between the researcher and experts of green marketing such as Jacqueline Ottman (USA) and Martin (Australia) among others. All the literatures were basically from other countries especially the United States, India and Egypt based on their experiences.

3.3.2 Primary Data

Primary data was collected from 350 consumers by using the questionnaire survey method.

3.4 QUESTIONNAIRE DESIGN

The questionnaire was structured as follows:

The first part measured general consumers' pro-environmental awareness and their knowledge of green products. It contained a question with a list of common environmental issues in Ghana, 9 dichotomous questions with Yes and No as two possible responses to measure consumers' awareness of green products, trust in performance of green products.

The second part focused of consumers' willingness to pay more for green products.

The third part of the questionnaire consisted of a 5-point likert attitude scale statements that was used to explore and assess pro-environmental concerns and any potential effect of such concerns on consumers' green buying behavior.

The attitudinal scale consisted of 28 statements adapted from Roberts and Bacon's (1997) Ecologically Conscious Consumer Behaviour (ECCB) scale, the attitude scale of Bohlen et al. (1993) and Bohlen (1994) and the qualitative studies of Tantawi et al.

(2006a; 2006b). The scores on the scale varied from a low of 1 (strongly disagree) to a high of 5 (strongly agree), with disagree, neutral, and agree as interval points.

The final part of the questionnaire deals with general socio-demographics of consumers. Questions asked included gender, age, education and household income levels.

3.5 QUESTIONNAIRE DISTRIBUTION

The questionnaires were mainly distributed among the residents of Kumasi, Ashanti Region. The questionnaires were distributed face-to-face and through the internet. Respondents were given the freedom to self-administer the questionnaires. However, a few respondents requested for guidance in answering the questionnaires. Selfadministration of the questionnaires reduced interview bias and saved time as well as money. Relatively, data was collected within a short period of time because many respondents could answer the questionnaire at the same time. The researcher was only present to assist in explaining ambiguities.

100 questionnaires were also administered online through social networks (Facebook, Skype and Google+) and an online survey website, www.mysurvio.com. Mails and links were sent to prospective participants taking into consideration their locations as stated on their informative sections of their profile pages.

3.6 SAMPLING

Sampling techniques provide a range of methods that enable you to reduce the amount of data you need to collect by considering only data from a subgroup (sample data) rather than all possible cases or elements. (Saunders, Lewis, Thornhill, 2009)

Patton (2002) is of the view that research questions and objectives determines the sample size especially in finding out what is credible and can be done within the available resources. In relation to this theory, the most appropriate method of collecting data was the use of questionnaires. The choice of the technique was dependent on the feasibility and sensibility of the data collection in answering the research questions and objectives.

The non-probability approach of sampling is to be adopted for this survey.

Judgment and Convenience sampling methods were used for selecting the prospective respondents to ensure that subjects represent both the genders, different age groups, education levels and monthly income levels.

According to the World Gazetteer, 2012, the population of Kumasi, Ghana is approximately 1,989,062. Out of convenience, the targeted sample size was 350 people.

Sample respondents were gathered through the following:

(1) Aged 16 years old and above

(2) Resident of Kumasi, Ashanti Region

(3) Have the capability and ability to make purchasing decisions

Due to time and financial constraint, 350 questionnaires were sent out. Of the 350 respondents reached out to in need of the research, 319 responses were received representing 91%.

3.7 RESEARCH TOOLS

The primary data collected from the various valid sources was subjected to various statistical tools for verification and interpretations, such as Descriptive Statistics (Mean, Standard Deviation and Percentile) were used to have an understanding on the basis of the respondents group. The data once collected was analyzed by using the Statistical package for Social Sciences (SPSS). The tests used for analysis were Factor Analysis and Correlation and Cross-Tabulation. The reliability of the questionnaire was tested for using the Cronbach Alpha reliability coefficient for all items in the questionnaire.

3.8 RELIABILITY AND VALIDITY

Reliability and validity of data collected for a research seek to make sure that the collected data actually measures to what the research aims at.

Reliability focuses on the whether the research and the method used for the research can be trusted. Reliability from the statistical point of view deals with how reproducible the outcome or measures of a research are when retested. It answers the question: '*Will the same result appear if the test or research is done a second time?*'

(Jacobsen, 2002 and Eliasson, 2006). A positive answer would indicate that the research can be noted as reliable whilst a negative answer indicates a low level of reliability.

Validity, on the other hand, deals the degree to which a study supports the envisioned conclusion drawn from the results thus it is important for the results if the study to show validity to be accepted and recognized.

3.9 LIMITATION

The sample in the study is limited to Kumasi only due to the limited time and nature of project, the findings was drawn from the analysis of this data collected from the limited sample size and then generalized for the whole population.

The time given to complete the research is very limited.

There were a number of challenges encountered during the study hindering the smooth running of the survey. These challenges include people failing to answer the questionnaires after receiving them, assuring responses to the researcher. As noted from experience, a relevant number of Ghanaians tend to have some reservations about filling questionnaires whilst others complained about time constraints.

CHAPTER FOUR

DATA ANALYSIS

INTRODUCTION

The main aim of this chapter is to analyze the obtained data in order to transform the said data into useful information for the research. Data was gathered from the questionnaires administered.The analysis was carried out bearing in mind the objectives of the study.

4.1 RELIABILITY OF THE SCALE

Reliability refers to the consistency of a measure of a concept (Bryman, 2004). It indicates how free a scale is from random error (Pallant, 2001). The reliability of the attitude scale was tested and resulted in a Cronbach's alpha. There are different reports about the acceptable values of alpha, ranging from 0.70 to 0.95.

Table 4.1 : Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.669	.727	28

Source: Author's Survey, 2012 using SPSS

The Cronbach Alpha reliability coefficient for all items in the questionnaire was found to be 0.669, which is in close approximation to the acceptable range. The result is shown in Table 4.1.

4.2 DISCUSSION OF FINDINGS IN RELATION TO THE OBJECTIVES OF THE STUDY

4.2.1 Ghanaian Consumers' Pro-Environmental Concerns, Green Products Awareness and Knowledge of Environmental Issues.

Table 4.2: Summary Of Survey Results: Consumer Pro-Environmental Awareness And Knowledge Of Green Products

	Frequency	Percentage
Have you heard about green products? Yes No Total	255 64 319	79.9 20.1 100
	Frequency	**Percentage**
Are you aware of any such products? Yes No Total	 226 93 319	 70.8 29.2 100
Are you aware that purchasing green products will contribute to the sustainable future? Yes No Total	 263 56 319	 82.4 17.6 100

Source: Author's Survey, 2012

The study results indicate that a majority of sample respondents are aware of products and are quite conversant with environment related issues. About 80% of the respondents stated that they had heard of green products and approximately 71% respondents claimed awareness of green products. 82% were aware of the fact that purchasing green products will contribute towards a sustainable future. (Table 4.2) **Table 4.3: Summary Of Survey Results: Consumer Pro-Environmental Concerns And Green Buying Behaviour**

	Frequency	Percentage
Do you consider your effect on the environment as a consumer before purchasing general day to day products? Yes No	148 171 319	46.4 53.6 100

Total		
Do you consider your purchase correct from the environmental point of view? Yes No Total	150 169 319	47.0 53.0 100
Do you consider if the product and its package are designed to be recycled before making a purchase? Yes No Total	101 218 319	31.7 68.3 100
If the product is green-labeled, would this information change your choice of purchase? Yes No Total	161 158 319	50.5 49.5 100
Have you bought or considered buying green products available in the market? Yes No Total	194 125 319	60.8 39.2 100
Do you trust the quality of green products? Yes No Total	230 89 319	72.1 27.9 100

Source: Author's Survey, 2012

Less than half, 46%, stated that they consider the effect on the environment when purchasing day to day products with 54% admitting that they do not. 47% of the respondents were of the view that their purchases are correct from an environmental point of view. Approximately, 32% of the respondents reported that they checked if the packages were designed to be recycled before making a purchase. About 50% of the respondents stated that a green-labeled product would change their choice of

purchaseFurthermore, 60% of the sample respondents considered buying green products and 72% proclaimed their trust in the quality of green products. (Table 4.3)

4.2.2 Effect of Ghanaian Consumers' Pro-Environmental Concerns, Awareness of Green Products and Knowledge of Environmental Issues on Buying Of Green Products.

4.2.2.1 Factor Analysis

According to Julie Pallant (2011), factor analysis is a 'data reduction' technique. It takes a large set of variables and looks for a way the data may be 'reduced' or summarized using a smaller set of factors or components. To verify that your data set is suitable for factor analysis, it is imperative to check that the **Kaiser-Meyer-Olkin Measure of Sampling Adequacy** (KMO) value is .6 or above and that the **Bartlett's Test of Sphericity**value is significant (i.e. the Sig. value should be .05 or smaller).

Table 4.4 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.740**
Bartlett's Test of Sphericity	Approx. Chi-Square	2764.349
	Df	378
	Sig.	.000

Source: Author's Survey, 2012 using SPSS

From Table 4.4, it is noted that factor analysis is suitable for use as a tool in the survey because the KMO value is 0.740 (which is above the recommended value of 0.6 or above) and the Bartlett's Test of Sphericity is 0 (which is also below 0.05)

Table 4.5: Mean and Standard Deviation Statistics of Attitude Scale (Consumers' Pro-Environmental Concerns And Green Buying Behaviour)

Item No.	Item Description	Mean	Standard Deviation
V1	The increasing deterioration of the environment is a serious problem.	4.59	.860
V2	Strict global measures must be taken immediately to stop environmental decline.	4.59	.742
V3	The environment is one of the most important issues facing the Ghanaian society today.	4.35	.919
V4	I would describe myself as environmentally responsible	3.88	.798
V5	I am concerned about the current environmental state Ghana is in	4.32	.748
V6	I care about buying environmentally friendly products	3.90	.836
V7	If I understand the potential damage to the environment that some products can cause, i do not purchase those products	3.91	.950
V8	When I purchase products, I try to make efforts to buy products that are low in pollutants.	3.68	1.045
V9	I make every effort to reduce the use of plastic bags and shop with shopping bags	3.50	1.018
V10	I have purchased light bulbs that were more expensive but saved energy	4.11	1.113
V11	I have economic concerns which I consider more important than preserving the environment	2.66	1.147
V12	It is of no use worrying about environmental issues: I can't do anything about them.	2.06	1.275
V13	Using environmentally-friendly products is for luxury and showing-off not for protecting the environment	2.08	1.305
V14	I have convinced members of my family or friends not to buy some products which are harmful to the environment	3.35	.979

V15	I will not buy a product if the company which sells it is environmentally unfriendly	3.53	1.135
V16	I trust that companies producing environmentally friendly products are really providing environmentally safe products.	3.80	.998
V17	Citizens should recycle their household waste.	4.02	.995
V18	Firms should provide a wide array of green products in the market.	4.29	.748
V19	Firms should always put profitability before environmental protection	2.21	1.295
V20	Industries should recycle their wastes to protect the environment	4.57	.798
V21	The government should subsidize research on technology for recycling waste products.	4.37	.953
V22	Products which pollute the environment during manufacturing or consumption should be heavily taxed by the government.	4.34	1.055
V23	It is the government's job to worry about environmental issues.	2.98	1.479
V24	The government should communicate environmental rules and regulations to the public through the media.	4.50	.781
V25	The government should enforce environmental rules and regulations.	4.69	.566
V26	It genuinely infuriates me that the government does not provide more help to control pollution of the environment.	4.10	.868
V27	Schools should require all students to take a course dealing with environment and conservation problems.	4.24	.858
V28	The benefits of protecting the environment do not justify the expense involved	2.95	1.383

Source: Author's Survey, 2012 Scores on scale items in the table above (Table 4.5) suggest that a majority of respondents describe themselves as being environmentally responsible and are concerned with the environmental and ecological issues. With item

means ranging from 2.06 to 4.69, the relation of the scale items to the pro-environmental concerns and green buying behavior was assessed. Based on these ratings, we considered items that had mean ratings below the scale midpoint, 3, to be weak and unfavourable to be analyzed.

Mean and Standard Deviation of of each item from Table 5 reveals that majority of respondents describes themselves asbeing environmentally responsible (*M* = 3.88, *SD* = 0.80) and are concerned about the current state of the country's environmental state (*M* = 4.32, *SD* = 0.75). The respondents indicated that if they understand that products can cause potential damage, then they try not to buy that product (*M* = 3.91, *SD* =.95). Respondents agreed to purchasing light bulbs that were more expensive but saved energy (*M* = 4.11, *SD* =1.11) and making effort to reduce the use of plastic bags (*M* =3.50, *SD* =1.02). The respondents gave importance to buying products that are low in pollutants (*M* =3.68, *SD* =1.05) claiming they would not buy a product if the company that sells it is environmentally unfriendly (*M* =3.53, *SD* =1.13).

Therespondents reported that they agreed that that the government should enforce environmental issues (*M* = 4.69, *SD* = 0.57) and communicate environmental rules and regulations to the public through the media(*M* = 4.50, *SD* = 0.78) as well as subsidize research on technology for recycling waste products (*M* = 4.37, *SD* = 0.80). Respondents also agreed that the increasing deterioration of the environment is a serious problem (*M* = 4.59, *SD* = 0.86) and indicated that strict global measures must be taken immediately to stop environmental declination (*M* = 4.59, *SD* = 0.74). The findings also suggests that the consumers are of the view that industries should recycle their wastes to protect the environment (*M* = 4.57,*SD*=.80).

Table 4.6: Exploratory Factor Analyses for Measuring Consumers' Pro-Environmental Concern and Green Buying Behaviour

Item No.	Item Description	Factor Loading (Proenvironmental Awareness	Factor Loading (Green Buying Behaviour)
V1	The increasing deterioration of the environment is a serious problem.	.699	
V2	Strict global measures must be taken immediately to stop environmental decline.	.681	
V3	The environment is one of the most important issues facing the Ghanaian society today.	.670	
V4	I would describe myself as environmentally responsible	.647	
V5	I am concerned about the current environmental state Ghana is in	.603	
V6	I care about buying environmentally friendly products		.586
V7	If I understand the potential damage to the environment that some products can cause, i do not purchase those products	.542	
V8	When I purchase products, I try to make efforts to buy products that are low in pollutants.		.660
V9	I make every effort to reduce the use of plastic bags and shop with shopping bags		.558
V10	I have purchased light bulbs that were more expensive but saved energy		.473
V14	I have convinced members of my family or friends not to buy some products which are harmful to the environment		.581

V15	I will not buy a product if the company which sells it is environmentally unfriendly		.613
V16	I trust that companies producing environmentally friendly products are really providing environmentally safe products.	.720	
V17	Citizens should recycle their household waste.	.592	
V20	Industries should recycle their wastes to protect the environment	.701	
V21	The government should subsidize research on technology for recycling waste products.	.751	
V22	Products which pollute the environment during manufacturing or consumption should be heavily taxed by the government.	.598	
V24	The government should communicate environmental rules and regulations to the public through the media.	.676	
V25	The government should enforce environmental rules and regulations.	.652	
V26	It genuinely infuriates me that the government does not provide more help to control pollution of the environment.	.542	
V27	Schools should require all students to take a course dealing with environment and conservation problems.	.588	
Eigen values		**14.425**	**3.496**
% Of Variance		51.517	12.482
Cumulative % of Variance		51.517	63.999

Source: Author's Survey, 2012

Factor analysis was conducted to identify factors that statistically explain the variation and co-variation among measures. In interpreting the factor, only loading of 0.5 or greater on the factor was considered (Igbaria et al., 1995).

The items in the scale were subjected to a set of exploratory factor analyses using Varimax rotation with Kaiser Normalization. All factor loadings greater than 0.5 was assumed to have practicalsignificance to the research (Hair, 1995). Eigenvalues >1 were noted and the cumulative % variance of these variables were calculated as approximately 64% of the total % of variance. The variables with Eigen values > 1 formed the first 9 variables of the factor analysis table and was used to produce a twofactor solution (see Table 6). The two significant factors were named proenvironmental (15 items), and green buying behaviour (6 items).The first factor labeled as pro-environmental concern reflects the consumers concern for thedegrading environment and depleting natural resources. The second factor labeled as green buying behaviour represents consumers' acceptance and willingness to buy green products. This factor reflects how pro-environmental concerns enter the buying decision making process (Roberts& Bacon, 1997).

4.2.2.2 Correlation

Table 4.7. Association between Pro-environmental Concern and Green Buying Behaviour

		Green Buying Behaviour
Pro-Environmental Concerns	Pearson Correlation	0.651
	Sig. (2-tailed)	0
	N	319

Source: Author's Survey, 2012

The correlation between the pro-environment concern and the green buying behaviour is found out to be taking out the average of similar variables and then the mean of these variables is correlated with each other. For pro-environment concern, the mean of the statements V1, V2, V3, V4, V5, V7, V16, V17, V20, V21, V22. V24, V25, V26 and V27 were used. For buying behaviour the mean of statements V6, V8, V9, V10, V14 and V15 were taken. Pearson correlation was computed between the two factors. Results suggest (see Table 4.7) that a strong ($r = 0.65$) and significant ($p<0.05$) correlation exists. This means that if consumer is environmentally concerned, he would patronize green products.

4.2.3 Ghanaian Consumers' Willingness to Pay More for Green Products.

Table 4.8: Summary Of Survey Results: Consumers' Willingness-To-Pay For Green Products

	FREQUENCY	PERCENTAGE
Do you agree that the price of green products is supposed to be higher?		
Yes	135	42.3
No	184	57.7
Total	319	100
Are you will ng to pay more for green products?		
Yes	189	58.9
No	131	41.1
Total	319	100
How much are you willing to pay more for green products?		
5%	130	40.8
5% - 10%	147	46.10
11% - 15%	26	8.20
16% - 20%	14	4.40
20%	2	0.6
Total	319	100

Source: Author's Survey, 2012

In fulfilling this objective, respondents were asked if they agreed that the prices for green products should be relatively higher than that of non-green products. To this, 135 respondents representing a 42.3% of the respondents said yes and the remaining 184 respondents disagreed to this notion, representing 57.7%.

Notwithstanding, 188 respondents claimed to be willing to pay a relatively higher price for green products representing 58.9% whilst 131 respondents representing 41.1% stood on their grounds demonstrating unwillingness to pay a higher price for green products. When asked for how much more respondents would be willing to pay for a green product if the need be for a higher pricing system for green products, 147 respondents resulting to 46.1% stated that they would be willing to pay between 5% and 10% higher price for a green product. 40.8%, 130 respondents, said they would warm up to a <5% higher pricing whilst 26 respondents (8.2%) agreed to an 11% to 15% higher price, 14 respondents (4.4%) thought that a 16% to 20% higher price for green product was appropriate. 2 respondents (0.6%) assumed that prices for green products should be more than 20% higher than non-green products.

4.2.4: Socio-Demographics (Age, Education Levels and Income Levels) Factors Affect the Green Consciousness and Buying Behaviourof Ghanaian Consumers for Green Products

Table 4.9: Descriptive Characteristics of Respondents

	FREQUENCY	PERCENTAGE
AGE		
< 21	9	2.8
21-30	221	69.3
31-40	56	17.9
41-50	26	8.2
>50	6	1.9
Total	319	100
EDUCATION		
None	5	1.6
High School Certificate	24	7.5
HND / Diploma	44	13.8
Undergraduate Degree	146	45.8
Postgraduate Degree	100	31.3
Total	319	100
HOUSEHOLD INCOME (PER MONTH)		
< ¢ 500	93	29.2
¢ 500 - ¢ 1,000	102	32.0
¢ 1,000 - ¢ 2,000	59	18.5
> ¢ 2,000	65	20.4
Total	319	100

Source: Author's Survey, 2012

Table 4.10: Effect Age On Green Consciousness And Buying Behaviour

			Age					Total
			< 21	21 30	31 40	41 - 50	> 50	
Green Consciousness and Buying Behaviour	Yes		2	94	38	11	3	148
		%	1.4 %	63.5 %	25.7%	7.4%	2.0%	100.0 %
	No		7	127	19	15	3	171

		%	4.1 %	74.3 %	11.1%	8.8%	1.8%	100.0 %
Total			9	221	57	26	6	319
		%	2.8 %	69.3 %	17.9%	8.2%	1.9%	100.0 %

Source: Author's Survey, 2012

From above Table4.10, out of the 319 respondents, those who were green conscious and had a positive green buying behaviour were 148 in number resulting in about 46% of the total sample. Out of the 148 respondents who are green conscious, 94 respondents (63.5%) were between the ages of 21 and 30 years. 38 respondents (25.7%) who agreed green issues affected their purchase decisions were between the ages of 31 and 40 years whilst those between the ages of 41 and 50 years formed about 7% (11 respondents). Only 2 respondent (1.4%) below the age of 21 years and 3 respondents (2%) older than 50 years showed any concern for the environment.

Unfortunately, when it came to those who do not show concern for the environment or are not green conscious, it was realized that those between the ages of 21 and 30 led the team again with 221 respondents forming 69%. However, the study suggests that the leading age group when it comes to balancing both the green conscious and the 'non-green' conscious respondents, the age group of 31-40 years are more likely to be considered as the favourable group.

Table 4.11: Effect Of Educational Level On Green Consciousness And Buying Behaviour

			Educational Level					
			None	High School Certificate	HND / Diploma	Undergraduate Degree	Postgraduate Degree	**Total**
Green	Yes		0	6	26	68	48	148

Conscious-ness and Buying Behaviour	%		.0%	4.1%	17.6%	45.9%	32.4%	100%
	No %		5	18	18	78	52	171
			2.9%	10.5%	10.5%	45.6%	30.4%	100%
Total			5	24	44	146	100	319
			1.6%	7.5%	13.8%	45.8%	31.3%	100%

Source: Author's Survey, 2012

Table 4.11 above shows the impact of educational level on green consciousness and buying behaviour of consumers in Ghana. 148 (46%) respondents claimed green conscious and a positive green buying behaviourout of the 319 respondents. Out of the 148 respondents who are green conscious, 68 respondents (46%) have an undergraduate degree, 48 respondents (32%)have postgraduate degrees and 26 (18%) have Diploma or HND Certificate. 6 out of the 24 respondents with High School Certificate were green conscious. It can be noted however that all the 5 respondents without any formal education were not green conscious. 38 respondents (26%) who agreed green issues affected their purchase decisions were between the ages of 31 and 40 years whilst those between the ages of 41 and 50 years formed about 7% (11 respondents). Again, when it came to those who do not show concern for the environment or are not green conscious, it was realized that those with undergraduate degree who led the team for green consciousness also led the team for 'un-green' consciousness and negative green buying behaviour with 146 respondents (45%).

Table 4.12: Effect Of Income Level On Green Consciousness And Buying Behaviour

	Income Level				**Total**
	< ¢500	¢500 ¢1,000	¢1,000 - ¢2,000	>¢2,000	

Green Consciousness and Buying Behaviour	Yes		35	53	27	33	148
		%	23.6%	35.8%	18.2%	22.3%	100%
	No		58	49	32	32	171
		%	33.9%	28.7%	18.7%	18.7%	100%
Total			93	102	59	65	319
		%	29.2%	32.0%	18.5%	20.4%	100%

Source: Author's Survey, 2012

The study also suggests that income levels do not necessary have an effect on green consciousness going against the notion that the higher a person's income level, the more green conscious the person is in making buying behaviour decisions. This is seen from the table above (Table 4.12) which shows that out of the 148 respondents who claimed to be green conscious, a lower percentage of 18% (27 respondents) with monthly income level between ¢1,000 and ¢2,000 and 22% (33 respondents) with monthly income of more than ¢2,000 were green conscious and have a positive green buying behaviour. Respondents with monthly incomes below ¢500 and those with income level between ¢500 and ¢1,000 formed the bulk of the green conscious and positive green buying behaviour segment with 24% (35 respondents) and 36% (53 respondents) respectfully.

In summary to the analysis from the previous three tables, the research suggests that socio-demographic factors such as age, educational and income levels do not necessarily play an important role in green consciousness and green buying behaviour of the Ghanaian consumer.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

The purpose of this research was to assess the Ghanaian consumer's proenvironmental concerns, knowledge of environmental issues, awareness of green products, effects of income level and educational levels and any potential effect that these factors may have on green buying behaviour.

From the study, the research question, '*Do Ghanaian consumers have proenvironmental concerns, awareness of green products and knowledge of environmental issues?*' was answered. The study suggests that Ghanaians have high concern for the environment and are knowledgeable of the current environmental state and issues of the country. They also have a relatively positive attitude towards green products. Nevertheless, a few Ghanaians have a positive green buying behaviour. This means that there is the need for Ghanaians to be trained to have tastes and preferences for green products. Trust for green products in terms of quality of the product received a higher vote from the research which means Ghanaians are ready to trust green products and their quality.

An objective of the research was to answer the research question, '*Are Ghanaian consumers' buying behaviour of green product affected by their pro-environmental concerns, awareness of green products and knowledge of environmental issues?* This objective was to assess if pro-environmental concerns of consumers affect their green buying behaviour. The results indicate that overall environmental concern is positively related with Ghanaian consumers' green buying behaviour.

Within the sample frame of this study, it may also be suggested that consumers' proenvironmental concern is a likely predictor of their green buying behaviour, although such conclusions may only be drawn after a more rigorous analysis based of a

randomly generated dataset.

Ghanaian consumers' willingness to pay more for green products was studied to answer the research question, *'Are Ghanaian consumers willing to pay more for green products?'* From the study, the Ghanaian consumer is of the view that there should not be a higher price level for green products. It is also noted that almost half of the respondents were willing to pay 5% - 10% more for green products. Thus, while proenvironmental concern could emerge as one of the powerful drivers that influence green buying behavior, it is also noted that pro-environmental concern has resulted consumers being willing to buy green products even at a relatively higher price. This does not imply that firms should increase prices because an increase in consumer demand will come about where there is a decrease in price and in turn cause a higher increase in demand by consumers.

The research question, *'What role do socio-demographics (age, education levels and income levels) play on the green consciousness and buying behaviour of Ghanaian consumers for green products?'* was also answered. The study notes that sociodemographics such age, educational background and income levels play a role in green consciousness are less important than attitude. A key result of this study is that a higher income or education level does not prove, according to the study, that a consumer has a positive green buying behaviour.

From the survey, consumers suggest that industries should be made to recycle or dispose their waste bearing the protection of the environment in mind. They further suggested that the government should tax firms that manufacture products that pollute the environment, heavily. Enforcement of environmental rules and regulations by the government was also suggested as well as the suggestion of school teaching courses on the environment and how to deal with conservation problems to all students.

5.2 CONCLUSION

There is a creation of an opportunity for companies and the government to develop green marketing in the country. Even though, the survey suggests that a major percentage of Ghanaians are knowledgeable of the environment and have positive attitude towards the environment, this knowledge about the environment and its issues has not proven to be a strong reason for the Ghanaian consumer to be concerned about the environment enough to a green consumer. Green marketers as well as organizations and the government should educate, motivate, design and market green products at suitable prices (to both businesses and Ghanaian consumers).

5.3 RECOMMENDATIONS

A future research should be carried out using a larger sample size and a wider geographical area to establish green marketing and the Ghanaian consumer. Further studies should be made into green marketing and the Ghanaian to provide evidence for both academic studies and practical applications is recommended.

Green marketing campaigners and green brand producers should develop strategies that can carry their messages to a greater number of people more effectively. Promotion of

awareness of green products and choices between various types of these products cannot be overstated especially because the modern consumer feels the need to fulfill a level of responsibility to make a difference to the environment. Proenvironmental concerns can be raised by advertising that individual buying behaviour can make a difference and can have an impact on the welfare of the environment.

Companies that practice green marketing already must initiate several green products such as choosing sustainable raw materials, designing products to save energy and water or making products that are less toxic and more natural than competitors' products or services.

Finally, I recommend that consumers, marketers and the government must research further and promote the positive effects of Green marketing on the environment especially because Green marketing assumes even more importance and relevance in developing countries in the world like Ghana. This would make the country stand out as a path breaker and trendsetter for other developing countries to follow.

REFERENCES

Abdul-Muhmin, A.G. (2007). Exploring consumers' willingness to be environmentally friendly.*InternationalJournal of Consumer Studies*, *31*, 237-247

Adinyra, N. &Gligui, E. (2012), *Green Marketing Potential as Assessed from Consumer's Purchasing Behaviors: The Case of Ghana*. A dissertation submitted to School of Management, Blekinge Institute of Technology, Sweden, pp 15-25.

Antonies, G. &Raaij, V.F.W. (1998).*Consumer Behavior: A European Perspective*. West Sussex. England. John Wiley & Sons Ltd.

Azzone, G. and Raffaella M. (1994)."Measuring Strategic Environmental Performance."*Business Strategy and the Environment 3* (1): 1-14.

Bamberg, S. (2003). How Does Environmental Concern Influence Specific Environmentally Related Behaviours? : A New Answer to an Old Question. *Journal of Environmental Psychology*, 23, 21-32.

Barry, J. (1999). *Rethinking Green Politics*. London: Sage Publications.

Bohlen, G. M. M. (1994). *Environmental Consciousness: The Construct and Its Application in an Industrial Setting.* Swansea: A dissertation submitted to European Business Management School, University of Wales.

Bohlen, G., Schlegelmilch, B.B., & Diamantopoulos, A. (1993). Measuring Ecological Concern: A Multi-Construct Perspective. *Journal of Marketing Management*, 9, 415-430.

Charter, M. (1992). *Greener Marketing*. Sheffield, England: Greenleaf Publishing.

Clarke, G. (2004). Understanding Green Consumer Behaviour.*Journal of Consumer Behaviour*, Vol. 4, pp. 73 – 79.

Coddington, W. (1993).*Environmental Marketing: Positive Strategies for Reaching the Green Consumer.* London: McGraw-Hill.

Crane. A., (2000), "Facing the backlash: green marketing and strategic re-orientation in the
1990s", *Journal of Strategic Marketing*, Vol. 8, No. 3, pp. 277-296

Diamantopoulos, A., Schlegelmilch, B.B., Sincovics, R. R., & Bohlen, G. M. (2003). Can Socio-Demographics Still Play a Role in Profiling Green Consumers? A Review of the Evidence and Empirical Investigation.*Journal of Business Research*, 56, 465480.

Eisenhart, T., (1990). There is Gold in that Garbage. Business Marketing, (November), pp 24.

Freeman, R. E. and Liedtka, J., (1991). "Corporate Social Responsibility: A Critical Approach." *Business Horizons* 34 (4): 92-98.

Follows, S.B. & Jobber, D., (2000). Environmentally Responsible Purchase Behaviour: A Test Of A Consumer Model, *European Journal of Marketing.* pp 723746.

Foxall, G., Goldsmith, R., & Brown, S., (1998) *Consumer psychology for marketing.*2nd edition. International Thomson Business Press, Boston.

Fuller, D. A., (1999).*Sustainable Marketing: Managerial-Ecological Issues. Marketsband Market Development.* Sage Publications, California, USA.

Gladwin, T., (1992).*Building The Sustainable Corporation*. Washington DC: National Wildlife Federation

Gore, A., (1992). *Earth In Balance. New York*: Harper Row.

Hair, J. F. (1995).*Multivariate data analysis*. New York: Macmillan.

Henion, K.E &Kinnear,T.C., (1976), "Measuring the Effect of Ecological Information and Social Class on Selected Product Choice Criteria Importance Ratings", Ecological Marketing, Chicago: *American Marketing Association,* pp145-156.

Jungermann W. C., &Jungermann C. E., (2010).*Reconsider-Executive Summary*. [Online]:www.amazonaws.com (June 15, 2010)

Keller, G. M., (1987). *"Industry and the Environment: Toward a New Philosophy."*VitalSpeeches.pp 154- 157.

Kreidler, N. B., &Joseph.M., S. (2009).Understanding the role of green atmospherics in service environment evaluations.*International Journal of Culture, Tourism and Hospitality Research*, pp 228-245.

Laroche M., Bergeron J., &Babaro-Forleo G. (2001).Targeting consumers who are willing to pay more for environmentally friendly products.*Journal of Consumer Marketing*, pp 503-520.

Macdonald, S. & Oates, C. J. (2006). Sustainability: Consumer Perceptions and Marketing Strategies. *Business Strategy and the Environment*, pp 157-170.

Mansvelt, J., 2011. *Green consumerism: An A-to-Z guide. Volume 6 of the SAGE Reference series on Green Society: Toward a Sustainable Future-Series Editor: Paul Robbins.* Thousand Oaks, CA, SAGE.

May. V. 1991. "Tourism, Environment and Development: Values, Sustainability and Stewardship." *Tourism Management*, pp 112-118.

McIntosh, Andrew. 1990. "The Impact of Environmental Issues on Marketing and Politics in the 1990s." *Journal of the Marketing Research Society,* pp 205-217.

Mintel, (1991), *The Green Consumer Report*, Mintel, London.

National Association of Attorneys-General (NAAG), (1990).*The Green Report: Findings and Preliminary Recommendations for Responsible Advertising. (San Francisco), USA*

Ottman, J. A. (1993*). Green Marketing: Challenges & Opportunities for the New Marketing Age*. Chicago. NTC Publishing Group.

Peattie, K. (1995). *Environmental Marketing Management: Meeting the Green Challenge*. London: Pitman Publishing Company.

Peattie. K., (1999), "Trappings versus substance in the greening of marketing planning", *Journal of Strategic Marketing*, Vol. 7, pp. 131-148

Peattie, K. (2001), "Towards Sustainability: The Third Age of Green Marketing", *The Marketing Review*, Vol. 2, pp. 129-146.

Peattie, K., & Crane, A. (2005). Green Marketing: Legend, Myth, Farce Or Prophesy? *Qualitative Market Research: An International Journal*, pp 357-370.

Peter D. Bennett (1995), *Dictionary of Marketing Terms,* 2d ed. (Chicago: American Marketing Association, 1995).

Peter Drucker, *Management: Tasks, Responsibilities, Practices* (New York: Harper & Row, 1973), pp. 64–65.

Petty, R.E., Cacioppo, J. & Schumann, D. (1983).Central And Peripheral Routes To Advertising Effectiveness - The Moderating Role Of Involvement, *Journal of Consumer Research.*

Pierre, M., &Prothero, A. (1997).*Green Management: A Reader*. London: the Dryden Press.

Prothero. A., (1990), “Green Consumerism And The Societal Marketing Concept: Marketing Strategies For The 1990s”, *Journal Of Marketing Management*, Vol. 6, No. 2, Pp. 87-103.

Polonsky, M.J., (1994), “An Introduction To Green Marketing”, *Electronic Green Journal*, Vol. 1 No.2, Pp. 1-10.

Rex, E. & Baumann, H., (2007), “Beyond Ecolabels: What Green Marketing Can Learn From
Conventional Marketing”, *Journal Of Cleaner Production,* Vol. 15, Pp. 567-576.

Shearer, J. W., (1990)."Business and the New Environmental Imperative."*Business Quarterly*, pp 48-52.

Silk, A. J., (2006).*What Is Marketing?* Harvard Way Boston, MA: Harvard Business Press

Stanton, W. J., &Futrell, C., (1987).Fundamentals of marketing.*Mcgraw-Hill Series In Marketing.Marketing Series*. Avenue Of The Americas, NY.

Symposium on Sustainable Consumption, Oslo, 1994; UN Commission on Sustainable
Development (UNCSD)

Troumbis, A. Y., (1991). "*Environmental Labeling on Services: The Case of Tourism*." Ekistics pp. 167-173.

United Nations. 1987. “*Report of the World Commission on Environment and Development.*” General Assembly Resolution 42/187, 11 December 1987.

Van Dam, Y., &Apeldoom, P., (1996). Sustainable Marketing.*Journal of MacroMarketing*, Vol 2, pp 45-56.

Wasik, J.F., (1996), *Green Marketing & Management*. Oxford, Blackwell.

Welford, R., (2000), *Hijacking Environmentalism*, Earthscan, London.

Wessells, C., Jjohnston, R. &Donath, H., (1999), Assessing Consumer Preferences for Ecolabelled Seafood: the Influence of Species, Certified and Household Attributes, *American Journal Of Agricultural Economics,* Vol. 81, pp. 1084-96.
Windsor, S., (2010).*An Introduction To Green Process Management*. Milwaukee, WL: ASQ Quality Press.

Wood, W., & Neal, D. T. (2009), The Habitual Consumer. *Journal of Consumer Psychology*, pp 579-592.

World Business Council for Sustainable Development, Future Leaders Team Business Role Workstream- Dialogue on Sustainable Consumption in India, 2008, (*Consumer Attitudes In Emerging Markets: Focus On India*).

World Summit Outcome Document (2005), World Health Organization, 15 September
2005

Zaichkowsky, J.L. (1985). Measuring The Involvement Construct. *Journal of Consumer Behaviour,* pp 341- 352.

APPENDIX

APPENDICE 1

QUESTIONNAIRE

CONSUMER PRO-ENVIRONMENTAL AWARENESS AND KNOWLEDGE OF GREEN PRODUCTS

1 Which of these environmental issues are you aware of?

□ Desertification
□ Deforestation
□ Ozone Depletion
□ Harmful Waste Disposal
□ Greenhouse Gases (Carbon Monoxide, Hydrofluorocarbons, Carbon Diaoxide, etc)
□ Erosion
□ Effluents such as smoke and sewage
□ Use of Firewood
□ Water Pollution
□ Noise Pollution
□ Use Of Harmful Chemicals For Fishing And Farming

2 Have you heard about green products?
□ Yes
□ No

3 Are you aware of any such products?
□ Yes
□ No

4 Are you aware that purchasing green products will contribute to the sustainable future?
□ Yes
□ No

5 Do you consider your effect on the environment as a consumer before purchasing general day to day products?
□ Yes
□ No

6 Do you consider your purchase correct from the environmental point of view?
□ Yes
□ No

7	Do you consider if the product and its package are designed to be recycled before making a purchase?	□ Yes □ No
8	If the product is green-labeled, would this information change your choice of purchase?	□ Yes □ No
9	Have you bought or considered buying green products available in the market?	□ Yes □ No
10	Do you trust the quality of green products?	□ Yes □ No

CONSUMERS' WILLINGNESS-TO-PAY FOR GREEN PRODUCTS

11	Do you agree that the price of green products is supposed to be higher?	□ Yes □ No
12	Are you willing to pay more for green products?	□ Yes □ No
13	How much are you willing to pay more for green products?	□ < 5% □ 5% - 10% □ 11% - 15% □ 16% - 20% □ > 20%

ATTITUDE SCALE (CONSUMERS' PRO-ENVIRONMENTAL CONCERNS AND GREEN BUYING BEHAVIOUR)

1 = Strongly Disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly Agree

		1	**2**	**3**	**4**	**5**
14	The increasing deterioration of the environment is a serious problem.	□	□	□	□	□

15	Strict global measures must be taken immediately to stop environmental decline.	□	□	□	□	□
16	The environment is one of the most important issues facing the Ghanaian society today.	□	□	□	□	□
17	I would describe myself as environmentally responsible	□	□	□	□	□
18	I am concerned about the current environmental state Ghana is in	□	□	□	□	□
19	I care about buying environmentally friendly products	□	□	□	□	□
20	If I understand the potential damage to the environment that some products can cause, i do not purchase those products	□	□	□	□	□
21	When I purchase products, I try to make efforts to buy products that are low in pollutants.	□	□	□	□	□
22	I make every effort to reduce the use of plastic bags and shop with shopping bags	□	□	□	□	□
23	I have purchased light bulbs that were more expensive but saved energy	□	□	□	□	□
24	I have economic concerns which I consider more important than preserving the environment					
26	Using environmentally-friendly products is for luxury and showing-off not for protecting the environment	□	□	□	□	□
27	I have convinced members of my family or friends not to buy some products which are harmful to the environment	□	□	□	□	□

28	I will not buy a product if the company which sells it is environmentally unfriendly	□	□	□	□	□
29	I trust that companies producing environmentally friendly products are really providing environmentally safe products.	□	□	□	□	□
30	Citizens should recycle their household waste.	□	□	□	□	□
31	Firms should provide a wide array of green products in the market.	□	□	□	□	□
32	Firms should always put profitability before environmental protection	□	□	□	□	□
33	Industries should recycle their wastes to protect the environment	□	□	□	□	□
34	The government should subsidize research on technology for recycling waste products.	□	□	□	□	□
35	Products which pollute the environment during manufacturing or consumption should be heavily taxed by the government.	□	□	□	□	□
36	It is the government's job to worry about environmental issues.	□	□	□	□	□
		□	□	□	□	□
	25 It is of no use worrying about environmental issues: I can't do anything about them.	**1**	**2**	**3**	**4**	**5**
		□	□	□	□	□
37	The government should communicate environmental rules and regulations to the public through the media.	□	□	□	□	□
		1	**2**	**3**	**4**	**5**
38	The government should enforce environmental rules and regulations.	□	□	□	□	□

39	It genuinely infuriates me that the government does not provide more help to control pollution of the environment.	□	□	□	□	□
40	Schools should require all students to take a course dealing with environment and conservation problems.	□	□	□	□	□
41	The benefits of protecting the environment do not justify the expense involved	□	□	□	□	□

SOCIO-DEMOGRAPHICS

42 What is your gender?
- □ Male
- □ Female

43 What is your age?
- □ Below 21
- □ 21 - 30
- □ 31 - 40
- □ 41 - 50
- □ Above 50

44 What educational level have you attained?
- □ None
- □ High School Certificate
- □ HND / Diploma
- □ Undergraduate Degree
- □ Postgraduate Degree

45 What is your monthly household income?
- □ < ¢500
- □ ¢500 - ¢1,000
- □ ¢1,000 - ¢2,000
- □ > ¢2,000