

Influence of Green Marketing Strategies on Performance of the Kenyan Tea Sector

Dr. Ofunya Francis Afande, PhD.
Dedan Kimathi University of Technology,P.O. BOX 657 – 10100, Nyeri, Kenya

Abstract
Purpose: The study sought to explore the influence of green marketing strategies on performance of the Kenya tea firms. The performance measure being net income generated over a period of five years. The study was guided by specific objectives which included establishing the extent of adoption of green marketing by the Kenya tea firms; and to assess the influence of green marketing strategies on performance of the Kenya tea firms. Consequently, one hypothesis was tested: adoption of green marketing is positively related to performance of the Kenya tea firms. **Methods:** A descriptive survey was undertaken, the population of study being all tea factories in Kenya operating under East Africa Tea Traders Association, whose number stood at 73 as at June 30th 2010. A sample of 63 tea factories was selected to participate in the study and primary data was collected with the aid of a self-administered questionnaire, targeting environmental management representatives of the selected factories. Data analysis was undertaken using Statistical Package for Social Sciences package version 19.0. Factor analysis was undertaken to explore the underlying variance structure of a set of correlation coefficients. Confirmatory Factor Analyses was used to determine the ability of the adopted conceptual model in fitting the observed set of data. In order to determine the relationship between the adoption of green marketing strategies and performance of the Kenya tea firms, correlation and regression analyses were undertaken. Hypothesis testing, the process of using statistics to determine the probability that a specific hypothesis is true was undertaken. The findings are presented with the aid of bar charts, frequency tables, percentages, standard deviations and mean scores. The information was presented and discussed as per the objectives. **Results:** The findings show that adoption of green marketing is positively related to performance of the Kenya tea firms. It is hopes that findings of the study will contribute several practical tools for the tea sector in order to ensure environmental sustainability.
Keywords: Green marketing, Performance, Tea sector

ABBREVIATIONS AND ACCRONYMS

BVQI	Bureau Veritas Quality International
CFA	Component Factor Analysis
CPDA	Christian Partners Development Agency
EATTA	East Africa Tea Traders Association
ENPD	Environmental new Product Development
GS	Greening Strategies
ISO	International Standards Organization
KTDA	Kenya Tea Development Agency
NEO	Natural Environmental Orientation
NPD	New Product Development
SPSS	Statistical Package for Social Sciences
SSCM	Sustainable Supply Chain Management

1.0 INTRODUCTION

This chapter spells out the need for the study. This study sought to explore the influence of green marketing strategies on performance of the Kenya tea firms (the performance measure being net income generated over a period of five years).

1.1 Background of the study

Environmental issues such as global warming, deforestation, disposal of toxic waste, ozone depletion and reduction of resources have become regular features of everyday life. According to Polonsky and Rosenburger (2001), corporate greening could occur across such activities as market targeting, green design, green positioning, green pricing, green logistics, and green promotions. Menon and Menon (1997) proposed that greening is something that should be integrated into corporate philosophy, which can then be used to leverage the firm's position within the market place.

Review of the literature indicate that marketers are incorporating green marketing strategies into many activities, including: planning (McDaniel and Rylander, 1993); product and package design (Bhat, 1993; Polonsky, Bailey, Baker, Basche, Jepson and Neath, 1997); pricing (McCaughan, 1991; Kapelianis and Strachan, 1996), distribution (Schlegelmilch and Robertson, 1995), retailing (Duff, 1990); promotion (Davis, 1993);

customer segmentation (Balderjahn, 1988); strategic alliances (Mendleson and Polonsky, 1995; Milne, Iyer and Gooding-Williams, 1996; Stafford and Hartman, 1996); industrial marketing (Drumwright, 1994) and overall marketing strategy (Menon and Menon, 1997). While going green may be in fashion, it is unclear why firms are making these changes. Polonsky (1995) asserts that "some reasons, such as matching the competition, might not necessarily mean marketers are concerned with their firms' environmental behavior and thus they may not actually be improving their environmental performance".

Research also indicates that consumers are integrating their concern for the environment into their purchasing behavior in a variety of ways. There is a growing amount of evidence indicating that consumers are choosing products or avoiding others based on their impact on the natural environment (Coddington, 1993, Davis, 1993; McDougall, 1993, Ottman, 1992a; The Roper Organization, 1990). Other studies suggest that consumers not only desire to purchase products that are less environmentally harmful but are willing to pay more to do so (Coddington, 1993, Davis, 1993; Ottman, 1992a).

Though green marketing has been an important academic research topic for at least three decades, most of the studies have been undertaken in the developed countries, as evidenced by (Kassarjian, 1971; Kinnear, Taylor and Ahmed, 1974); Coddington, 1993; Ottman, 1994; Peattie, 1995; Polonsky and Mintu-Wimsatt, 1995; Schlegelmilch, Bohlen and Diamantopoulos,1996; and Kalafatis, Pollard, East and Tsogas, 1999). For instance, Dembkowski and Hanmer-Lloyd (1994) found that 82 per cent of British citizens rated the environment as an immediate and urgent problem, while Worcester (1993) established that 69 per cent of the general public believes that pollution and other environmental damage are impacting on their everyday life.

Studies on green marketing undertaken in Kenya include the following: Kiongera (2003) undertook a survey of green marketing practices in Bamburi cement in Kenya; (Obuya (2003) carried out a survey of the extent to which manufacturing firms in Nairobi practice green marketing; Kalama (2007) undertook a study on the green marketing practices by Kenya Petroleum refineries; Odhiambo (2008) surveyed the extent to which floricultural firms in Kenya practice green marketing; and Thiong'o (2009) undertook an investigation of green marketing practices among pharmaceutical firms in Kenya.

According to Cresswell (2003), "a research problem is the question that exists that leads to a need for the study because no answers were found within the literature reviewed, in theory, or in practice". This study therefore, attempts to bridge the gap.

1.1.1 Green marketing

Green marketing is a broad concept that is applicable to consumer goods, industrial goods and even services. It integrates a wide range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising. Polonsky (1994) observed that no definition of "green marketing" has been universally accepted. It is therefore, difficult to evaluate this issue since all researchers have a different perception of what they are researching. In order to fully comprehend this concept, it is important to review the research of other authors.

Fuller's (1999, p.4) defined green marketing as

> *the process of planning, implementing, and controlling the development, pricing, promotion, and distribution of products in a manner that satisfies the following three criteria: (i) customer needs are met, (ii) organizational goals are attained, and (iii) the process is compatible with ecosystems.*

Peattie and Charter (1994), proposed the definition of green marketing as, "the holistic management process responsible for identifying, anticipating and satisfying the needs of consumers and society, in a profitable and sustainable way".

Polonsky's (1995, p.2) defined marketing as

> *all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these need and wants occurs, with minimal detrimental impact on the natural environment.*

Polynsky's definition not only incorporates the traditional components of the marketing definition, but also includes the protection of the natural environment by attempting to minimize the negative impact that this exchange has on the environment. Polynsky's definition was adopted for purposes of this study.

Prakash (2002) suggested that "firms can 'green' themselves in three ways: value-addition processes (firm level); management systems (firm level) and or products (product level)." Green the value-addition processes could entail redesigning them, eliminating source of them, modifying technology-all with the objective of reducing environmental impact aggravated for all stages (Charter and Polousky, 1999).

Ottman (1993) asserts that green marketing serves two key objectives: to develop products that incorporate consumers' needs for convenience, affordable pricing and performance while having a minimal impact on the environment; and to project an image of high quality, including environmental aspects, both in regards to product attributes and the manufacturer's track record for environmental compliance. For purposes of this study, the definition by Fuller (1999) was adopted.

1.1.2 Firm performance

Hervani, Helms and Sarkis (2005) noted that several studies have investigated the universal principle of performance measurement. These studies came up with a number of conclusions related to performance measurement and their systems, which include: performance measurement systems may have either tangible or intangible measures; measures should be dynamic and present at multiple levels; products and processes need to be included; systems and measures are best developed with a team approach with derivation from and links to corporate strategy; systems must have effective internal and external communications; accountability for results must be clearly assigned and be understood; systems must provide intelligence for decision makers and not just compile data; systems should be capable of linking compensation, rewards and recognition to performance measurement.

Firm performance was developed by Zhu, Sarkis and Lai (2005) with a focus on environmental performance, economic performance and operational performance. In this case, environmental performance includes: reduction of air emission, reduction of waste water, reduction of solid wastes, decrease of consumption for hazardous/harmful/toxic materials, decrease of frequency for environmental accidents, and improvement in a company's environmental situation. Economic performance consist of: decrease of cost for materials purchasing, energy consumption, and fee for waste treatment, waste discharge, and fine for environmental accidents. For purposes of this study the measure of performance was financial performance (Net Income for 2006, 2007, 2008, 2009 and 2010).

1.1.3 Green marketing within the tea firms in Kenya

The environmental impacts of the tea industry are considerable. There is significant biodiversity loss when high biodiversity areas such as forests are converted to tea plantations. Wal (2008) observed that along with habitat conversion, logging for firewood to process tea, in particular, has caused extensive deforestation in countries such as Kenya, Sri Lanka, Malawi and India. Energy consumption for tea processing is also high. In some countries, such as India, Sri Lanka and Vietnam, abundant application of pesticides is also negatively affecting the local and wider environment (water pollution, reduced soil biodiversity).

Most of the tea factories in Kenya are customer focused and committed to continually improving their process. They have ascribed to Information Communication Technology, process automation and International Standards such as ISO (EATTA, 2010). Some of the factories have undergone the certification process, and having met the requirements, they have been recommended for the following certifications: ISO 9001/2001; ISO 9001:2000; ISO 9001: 2008; ISO 9001: 22000; ISO 22000: 2005 (Food Safety Management Systems) certification after audits by Bureau Veritas Quality International (BVQI); and HACCP certification.

1.2 Statement of the problem

Some companies' green strategies include: repositioning products without changing product composition; modifying existing products to be less environmentally harmful; modifying the entire corporate culture to ensure that environmental issues are integrated into all operational aspects; and the formation of new companies that target green consumers only produce green products. Green product attributes may be environmentally sound processes, responsible product uses, or product elimination, which consumers compare with those possessed by competing conventional products. However, implementation of environmental strategies in Kenya is based very much on ad hoc practices and many of them do not actually subscribe to any particular environmental concept.

Though green marketing has been an important academic research topic for at least three decades, most of the studies have been undertaken in developed countries. None of the studies reviewed focused on influence of adoption of green marketing strategies on firm performance, particularly in the tea sector. Hence, there is a need to shed light on the influence of adoption of green marketing on firm performance. This study therefore attempts to: establish the extent of adoption of green marketing by the Kenya tea firms; and assess the influence of green marketing on performance of the Kenya tea firms.

1.3 Objectives of the study

This section presents the objectives of the study.

1.3.1 General objective

This study sought to explore the influence of green marketing strategies on performance of the Kenya tea firms.

1.3.2 Specific objectives

The study was guided by the following specific objectives:

(i) To establish the extent of adoption of green marketing strategies by the Kenya tea firms.
(ii) To assess the influence of green marketing strategies on performance of the Kenya tea firms.

1.4.2 Study hypothesis

Drawing from the conceptual framework of this study, the following hypothesized association is developed:

H0: Adoption of green marketing is positively related to performance of the Kenya tea firms (Financial Performance (Net Income for 2006, 2007, 2008, 2009 and 2010)

1.5 Scope of the study

This study focused on the Kenya tea firms registered with East Africa Tea Trader Association. Reviews of the relevant literature indicate that green marketing strategies may focus on the following areas: corporate focus; suppliers focus; production/processing (manufacturing) focus; product focus; price focus; place (distribution) focus; packaging focus; and promotion focus (Kilbourne, 1998; Menon, Menon, Chowdhury and Jankovich, 1999; and Baker and Sinkula, 2005). For purposes of the study, green marketing strategies are limited to environmental adjustments of the traditional marketing mix elements (product, price, distribution, and promotion).

Review of the relevant literature also reveals many measures of performance. Some of the measures include, but are not limited to: environmental performance; competitiveness; positive and negative economic performance; operational performance; and financial performance. For purposes of this study, the measure of performance is financial performance (Net Income for 2006, 2007, 2008, 2009 and 2010) were considered.

1.8 Regression model

The general purpose of multiple regressions (the term was first used by Pearson, 1908) is to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable. A line in a two dimensional or two-variable space is defined by the equation Y=a + b*X; in full text: the Y variable can be expressed in terms of a constant (a) and a slope (b) times the X variable. The constant is also referred to as the intercept, and the slope as the regression coefficient or B coefficient. In the multivariate case, when there is more than one independent variable, the regression line cannot be visualized in the two dimensional space, but can be computed just as easily. In general then, multiple regression procedures estimate a linear equation of the form. A typical simple regression model in form of:

$Y= \beta 0 + \beta 1\ X1 + Є$
Where:

Y	Dependent variable: Performance of tea firms (environmental performance; competitiveness; operational performance; and financial performance).
X1	Independent variable: Green Marketing Mix (Product, Price, Place and Promotion).
β 0	Is the constant
β 1	Is the slope or change in Y
Є	Is the error

1.9 Definition of key terms

A wide range of terms and concepts have been used in this study, many of which might be regarded as open to different interpretations. The purpose of this section then is to clarify the particular meanings applied in this dissertation, and to justify why it has been deemed appropriate to use them in these particular ways. The key terms used in the dissertation are defined as follows:

Green marketing

Polonsky, 1995 p.2 defined green marketing as

> *all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these need and wants occurs, with minimal detrimental impact on the natural environment*

Performance of tea firms

Positive or negative change realized by the tea firms as a result of adopting green marketing strategies (performance measures being environmental performance, competitiveness, operational performance and net income generated over a period of five years) (Researcher, 2012).

2.0 LITERATURE REVIEW

2.1 Introduction

In order to address the aim of the research, it is of importance to have established a sound literature base around which the study was built. This chapter presents a review of the literature related to the purpose of the study, and is organized according to the following specific objectives: to establish the extent of adoption of green marketing by the Kenya tea firms; and to assess the influence of green marketing on performance of the Kenya tea firms, in order to ensure relevance to the research problem. The review was undertaken in order to eliminate duplication of what has been done and provide a clear understanding of existing knowledge base in the problem area. The literature review is based on authoritative, recent, and original sources such as journals, books and dissertations.

2.2 Environmental issues of the tea sector

This section summarizes the main environmental impacts associated with the tea sector. Discussion of the

general experience with the sector worldwide draws heavily on Clay (2003).

Tea is a high value crop that thrives on acid upland soils that are poorly suited to other crops. In terms of its environmental impact, tea has advantages over other crops grown in these zones, such as coffee or food crops. It is usually produced on terraces, which combined with the ground cover provided by tea plants, results in relatively good soil and water conservation. Although terracing is costly to construct, it is more affordable for high value cash crops such as tea than for lower value food crops. In Kenya terracing is mandatory for anyone wishing to obtain a license to produce tea, but it is less evident on land devoted to low value food crops (Ovuka, 2000).

Tea plants are deep rooted crops which is why they provide good protection against soil erosion once tea is well established. However, when it is being planted or replanted, the soil is vulnerable to erosion. A study of the effects of tea, rubber, and coconut plantations on soil erosion in Sri Lanka found that tea that was replanted on steep slopes had the highest erosion rates, whereas well established tea had relatively low erosion rates (UNESCAP, 2002).

The environmental impacts of the tea industry are considerable. There is significant biodiversity loss when high biodiversity areas such as forests are converted to tea plantations. Along with habitat conversion, logging for firewood to process tea, in particular, has caused extensive deforestation in countries such as Kenya, Sri Lanka, Malawi and India. Energy consumption for tea processing is In some countries, such as India, Sri Lanka and Vietnam, abundant application of pesticides is also negatively affecting the local and wider environment (water pollution, reduced soil biodiversity) (Wal, 2008).

Tea production typically takes place in upland forest regions that are especially rich in biodiversity. Much of the land that is now planted with tea was once tropical forests. Indeed the main environmental impact of tea can be said to be the loss of biodiversity resulting from converting natural forests into tea plantations or smallholder tea plots (Clay, 2003). This has occurred on quite a large scale in Kenya and Uganda in the past. In addition to the direct environmental impact of clearing natural habitats for tea production there are also the indirect effects arising from the development of tea in a given area. Jobs and income generating opportunities draw in new settlers with the attendant risks of encroachment into surrounding forests.

Another cause of deforestation in tea producing areas is the use of wood for drying the tea leaves. For example, in Kenya the tea factories of the Kenya Tea Development Agency (KTDA) have contributed to deforestation in some places in order to fuel this process. This is not however an inevitable outcome. Other fuels such as oil and gas can be used in the drying process and timber can be harvested more sustainably. In other respects tea processing activities do not cause major environmental problems and Sri Lanka tea processing has been categorized as “low polluting” by Sri Lanka’s Central Environmental Authority (UNESCAP 2002).

As with other intensive forms of agriculture there are the usual environmental risks associated with excessive fertilizer and pesticide use. The main external input requirement is nitrogenous fertilizer, which needs to be applied in higher doses than for most other crops. This is because it is the nitrogen bearing leaves that are removed when harvesting tea. Pests and diseases, however, represent less of a threat to tea than to other commercial crops in Sub-Saharan and although tea productivity can benefit from the use of herbicides, it is not economically viable on smallholder plots (Carr, 1993). The reminder of this section summarizes the environmental impacts associated with the tea sector.

Habitat conversion: According to Clay (2003), habitat conversion is seen as the main harmful environmental impact of tea production. The habitat for cultivation is often located in more rugged and remote areas, which tend to be those with the highest biodiversity. Converting such habitats leads to species reduction and due to the slope of the land, among other things; considerable soil is lost before the plantations are fully established to protect the soil. However, even when a plantation is established soil erosion can be high.

Energy use: Tea processing is energy intensive. Withering, drying, grading and packing tea requires 4 to 18 kWh per kg of made tea, which compares to 6.3 kWh for a kilogram of steel. Different types of feedstock and energy are used, such as firewood, oil, natural gas, electricity and sometimes hydroelectricity depending on the country and area. Roughly 85 percent of the total energy used is thermal energy, while the rest is in the form of electricity for the machines (Asian Institute of Technology, 2002). The environmental impact of tea processing depends on such factors as the use of renewable/renewed feedstock and the energy efficiency of the machinery. Drying, the most energy-intensive phase of tea processing, is mainly carried out using firewood from natural forests (Clay, 2003).

Tree logging for the tea sector is also a serious issue in Sri Lanka, Malawi and Kenya (Forestry and Environment Students, 2007). By using high-sulphur rubber wood, the tea industry in Sri Lanka has caused high acid pollution. Some estates, for example in Sri Lanka and Kenya have initiated tree planting schemes for feedstock. Energy efficiency is often low because the machinery used is often old and because energy costs represent only a small portion of total production costs (30 percent at factory level) not much attention has been given to this aspect (Jayasekara and Anandacoomaraswamy, 2008).

Agrochemical use: According to Kadavi (2008), different agrochemicals are used throughout the

growing cycle on tea plantations to protect tea bushes and to enhance productivity. The types and amounts of pesticides (herbicides, insecticides and fungicides) and fertilizers applied will vary considerably between and within countries. Tea is often produced in monoculture and plantations and therefore lack natural enemies and protection by diversity to pests. Therefore sometimes large amounts of pesticides are used to control for pests. For example crop loss is 14 to 50 percent in extreme cases. To combat pest attacks, a huge quantity of pesticides finds its way to the industry and this has led to indiscriminate use instead of integrated pest management (Kadavil, 2008).

Clay (2003) observed that soil fertility is negatively affected by the same plot being used continuously for a single crop and by erosion, which is magnified because tea is often grown on slopes. Both inorganic and organic fertilizers are applied to compensate for this loss. This all leads to a negative spiral in which increasing amounts of agrochemicals are needed in order to maintain production in inverse proportion to the decreasing soil quality. This is especially a problem in older production sites such as in India, where estates are sometimes more than 100 years old (Clay, 2003).

The application of agrochemicals that are listed as hazardous and toxic has negatively affected the local and wider environment: (severely) reduced soil biodiversity and water pollution harming aquatic life and animals and people who depend on the rivers for water. There are studies showing that as much as 70% of soil life has been lost on tea plantations as compared to nearby natural habitat, especially in areas accessed by workers and machinery (Clay, 2003). Some of the tea gardens use pesticides, or did so until recently, which are banned in developed countries, such as DDT (Oxfam, 2003). There are indications that usage is more pronounced in Asia (India, Sri Lanka but also China, Vietnam and Nepal) than in Africa (Centre for Community Empowerment, 2007). Because of high pesticide residue levels, exports from various Asian countries are occasionally restricted (Economic Research Service, 2006).

Environmental impact assessment: Environmental impact assessments are hardly done. National Environment Management Authority has not carried out comprehensive environmental impact assessments on small-scale tea growing and the KTDA factories. Terracing is one method the farmers use for soil conservation and water retention/control. The long term usage of fertilizer has definite effects on the environment and the farmers but remains unknown. No studies have been done to determine the potential impacts. Some farmers are successfully turning to organic production of tea. However most are still forced to collect synthetic chemical fertilizers from the factories (Christian Partners Development Agency (CPDA), 2008).

Solid waste generation: In the withering process, rejected green leaves are the major wastes when the leaves are spread/ loaded on the troughs. Small quantities of leftovers and litter are also generated in the rolling and CTC processes. According to Oxfam (2003), on the average, the tea industry generates about 100 kg of waste green leaves or litter per ton of made tea produced. During drying, tea leaves and fibers could be blown from the dryer. The average blown out is about 2 - 4% of made tea. In heaters, the use of firewood, coal and briquettes generate ashes and clinkers. Coal or firewood-fired heaters produce about 100 kg of ash per ton of made tea on the average. During sifting, fibers (stake) are produced. In some factories, these fibers are pulverized and recycled in process as the re-conditioner (RC powder). Otherwise, these fibers and blown outs are denatured, in which every 25 kg of fibrous waste is mixed with 1 kg of lime and buried in pits. Some portions of the denatured wastes are used as fertilizer for tea plantations (Oxfam, 2003).

Air pollution: Air pollution in the tea industry mainly comes from emissions of harmful gases during combustion of fuel (firewood, coal and fuel oil) in air heaters for the withering and drying processes. Though some fine tea dusts are also emitted from the drying, screening and packaging processes, these are generally settleable dusts and do not pose any major environmental problem. The main pollutants of concern are carbon dioxide (CO_2), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen oxides (NO_x), hydrocarbons, dust, fly ash and particulate matters, which are produced during fuel combustion (Economic Research Service, 2006).

2.3 Green marketing strategies

Review of the literature on green marketing strategies reveals various actions that can be undertaken to enhance environmental sustainability. Some of the possible green marketing strategies are discussed below.

2.3.1 Corporate focus

Fuller (1999), proposed the following green marketing practices: development of a mission statement that explains commitment to the environment; development of an environmental workplace policy; development of achievable environmental goals for all stakeholders; conducting environmental audits at regular intervals; cooperation with groups/authorities on environmental issues; sensitization of key stakeholders on environmental issues; financial support for environmental projects; and investment in research and development for cleaner environment. In addition, and Polonsky and Rosenberger (2001), proposed the following: investing in new technologies for handling waste, sewage and air pollution (for example, in-house paper recycling program); evaluation of processes based on their environmental impact; formation of cross functional teams whose main responsibility is to improve our environmental performance; substitution of environmental questionable

materials; and offering rewards to employees who develop new environmental ideas.

2.3.2 Supplier' focus

Peattie (1992), Grove, Fisk, Pickett and Kangun (1996) and Grundey and Zaharia (2008) proposed the following green marketing practices with respect to suppliers focus: budgetary allocation to assist suppliers purchase equipment for production prevention and waste water recycling; bringing together suppliers in the same industry to share their knowhow and problems; choice of suppliers by environmental criteria; guiding suppliers to establish their own environmental programmes; holding awareness seminars for suppliers/contractors; urging/pressuring suppliers to take environmental actions; developing specific environmental standards for evaluating suppliers; and ensuring that all supplies contain green attributes such as recycled or reusable items

2.3.3 Production/processing (manufacturing) focus

Vasanthakumar (1993) and Baumann, Boons and Bragd (2002), proposed the following green marketing practices with respect to production focus: optimization of processes to reduce waste/ air emissions/ noise; use of cleaner technology processes to make savings; use of environmentally friendly raw materials; use of waste of other companies; utilization of sustainable energy sources wherever possible; recycling of wastes produced during production process; and use of recycled raw materials wherever possible.

2.3.4 Product focus

Around the world there have been an increasing number of firms which have introduced green products (Carson and Fyfe, 1992). For example, 5% of all new products in the US in 1989 were identified as green products, whereas in 1990 this figure increased to 10% (Davis, 1992). The degree to which green marketing has been incorporated into a company's marketing strategies has varied between companies. Some companies' green initiatives include: repositioning products without changing product composition (Davis, 1992); modifying existing products to be less environmentally harmful (Ottman, 1992a); modifying the entire corporate culture to ensure that environmental issues are integrated into all operational aspects (McDaniel and Rylander, 1993); and the formation of new companies that target green consumers only produce green products (CHOICE, 1990).

Peattie (1992), Zeithaml, Parasuraman and Berry (2006), and Grundey and Zaharia (2008), proposed the following green marketing practices with respect to product focus: participation in the design of products for recycling, reuse or disassembly; recovery of the factory's end-of-life products; offering environmental friendly products; and undertaking product standardization to ensure environmentally safe products.

2.3.5 Price focus

Barrett (1991), Peattie (1992), Zeithaml *et al.* (2006) and Bridges and Wilhelm (2008), proposed the following green marketing practices with respect to price focus: the factory be proactive and by focusing on costs, there should be improved cost-effectiveness and a higher competitive edge; and the factory should support adoption of environmental accounting methods to assess costs associated with tea processing.

2.3.6 Place (distribution) focus

Coddington (1993), Isherwood (2000), Bartlett and Howard (2000) and Rogers and Tibben-Lembke (2001), proposed the following green marketing practices with respect to place focus: change for more environmental-friendly transportation; location of the factory products being consistent with the image which the factory wants to project; adoption of "green" distribution, including redesigning physical facilities; converting to a more fuel efficient fleet; and redesigning distribution to minimize transportation.

2.3.7 Packaging focus

Zeithaml *et al.* (2006) proposed the following green marketing practices with respect to packaging focus: redesigned packaging to reduce environmental impact; and use of packaging that is of lighter weight.

2.3.8 Promotion focus

Davis (1993), Carlson, Stephen and Kangun (1993) and Grundey and Zaharia (2008), proposed the following green marketing practices with respect to promotion focus: providing customers with information on environmental friendly products and/or production methods; in their communications, the factories should clearly state their environmental efforts, characteristics and benefits achieved; the factories should use sustainable marketing and communication tools and practices to reinforce environmental credibility; the firms should understand that the key to successful green marketing is credibility, and such, the firm never overstates environmental claims or establish unrealistic expectations; the factories should advertise the expenditures that it has used on the environmental protection; the truthfulness and specificity of the green marketing claims should be monitored and the claims be informative by nature; and the factories should have newsletters communicating environmental actions to all employees.

Implementing a green marketing strategy requires a fundamental, holistic, integrated approach across all functional marketing areas, which include the entire marketing mix of targeting, pricing, design, positioning and promotion (Polonsky and Rosenberger, 2001). According to Fuller (1999, p.109), "only companies that are truly committed to environmental concerns and are willing to translate those concerns into action through marketing mix decisions can develop viable strategies". However, for purposes of this study, only the traditional "4 Ps" of marketing, namely product, price, place and promotion will be considered. These are discussed in the

next section.

2.4 Green marketing mix

Ottman (1993) argues that "like conventional marketers, green marketers must address the 'four Ps' in innovative ways". Bridges and Wilhelm (2008, 39), state that the 4Ps marketing mix is a useful means of categorizing the sustainability concepts and tools relevant to marketing decision making. These are discussed as follows:

2.4.1 Products

Zeithaml, Parasuraman and Berry (2006, p.26), define product by the features of the related physical goods, quality level, accessories, packaging, warranties, product lines and branding. Product can be classified into three levels, which include the core product, actual product and augmented product. *Core product* solves the problem of the customer and is the reason for buying the product. As an example, if the core product is a nature experience in intact natural environment, then the whole service needs to be developed accordingly. The environmental impacts of product can be minimized by effective use of raw materials and energy as well as paying attention to reusing and recycling the related end products

Actual product includes brand name, quality, styling, features and packaging. According to Peattie (1992, 235), "green *brand name* can be created by attaching some environmental meaning to it or something related to a product feature, such as clean or natural, production related, like recycled, or by relating some green symbols, colors or forms to the brand". Grundey and Zaharia (2008, 138), argued that being branded as a green company can potentially be beneficial to business organizations and it might for example enhance the overall perception of product quality. The green quality features of physical products include energy and resource efficiency, minimization of the amount of waste and pollution, product life, reuse and recycling possibilities. With respect to *packagin*g, there are several possibilities to reduce environmental impacts, for example by selling bigger unit sizes, offering products in refillable containers and reducing extra package layers (Peattie 1992, 222; Grove *et al.*, 1996, 57; Grundey and Zaharia 2008, 136).

Augmented product is surrounding the core product and actual product and includes extra benefits and services such as after sales services, delivery and credit, installation and warranty. The aim of the *product* is to increase the lifetime of the product to which they are attached by utilizing maintenance and repair services (Bridges and Wilhelm, 2008, 37).

According to Charter (1992), greening of products could take place in the following ways: "*repair*- extend the life of a product by repairing its parts; *recondition*- extend the life of a product by significantly over handling it; *re - manufacture*- the new product is based on old ones; *re-use* – design a product so that it can be reprocessed and converted into a new material to be used in another or the same product and *reduce*- even though the product uses less material or generates less disposable waste, it delivers benefits comparable to its former version or to competing products".

Although the study of relationship between green products and industry from a marketing perspective is relatively new (Baumann *et al.,* 2002), the literature also recognizes that managers should be aware that green marketing begins with green design (Vasanthakumar, 1993), and that product design constitutes an active interface between demand (consumers) and supply (manufacturers) (Baumann *et al.,* 2002). For example, super-concentrated laundry detergents are associated with energy saving reduced packaging and space, and money (Ottman and Terry, 1998).

Ottman (1992b) concluded that entrepreneurs wanting to exploit emerging green markets either; identify customers' environmental needs and develop products to address these needs; or develop environmentally responsible products to have less impact than competitors. Whatever the product or service, it is vital to ensure that products meet or exceed the quality expectations and is thoroughly tested.

2.4.2 Price

Price consists of flexibility, price level, terms, differentiation, discounts and allowances (Zeithaml *et al.*, 2006, p. 26). Peattie (1992, p. 250) argues that while developing environmentally sustainable practices, extra costs often arise, which normally diminish again with learning, as such, both costs and demand have to be considered in the price. Barrett (1991) observed that most customers are prepared to pay a premium if there is a perception of additional product value. This value may be improved performance, function, design, visual appeal or taste. Environmental benefits are thus an added bonus but will often be the deciding factor between products of equal value and quality.

Bridges and Wilhelm (2008, p. 35), noted that "to practice sustainable marketing, practitioners will need to rethink assumptions and those necessary changes include lengthening corporate time horizons for return on investment and valuing financial continuity over profit". Bridges and Wilhelm thus support the adoption of environmental accounting methods to assess costs associated with product production, ownership, use, and disposal which will ensure that environmental costs are taken into consideration in product pricing decisions. Grundey and Zaharia (2008, p. 141), concluded that marketers need to assess the cost of new laws and

regulations as well as the cost of endless litigation as integral and critical components of an ecological approach. Therefore, companies should be proactive and by focusing on costs they can improve their cost effectiveness and possibly gain competitive edge.

2.4.3 Place (distribution)

Place involves ensuring that goods are available to consumers in convenient ways. Distribution choices include decisions of channel type, exposure, intermediaries, outlet location, transportation, storage and managing channels (Zeithaml *et al.*, 2006, 26). Green distribution activities include (i) redesigning physical facilities; (ii) implementing reverse logistics (Bartlett and Howard, 2000); and (iii) converting to a more fuel efficient fleet; and redesigning distribution to minimize transportation (Rogers and Tibben-Lembke, 2001).

According to Imballagio (2002), green distribution should be considered because product distribution systems can constrain green design solutions since they must guarantee the tangible "ecological nature" of the products on the market. Additionally, distribution often increases the environmental impact of products, and is constantly regulated for environmental compliance. This is a common situation in the United States (Isherwood, 2000).

However, it is generally less clear if consumers can or will be able to objectively assess the environmental implications of distribution since many distribution activities are not typically known by consumers. Coddington (1993), argued that very few customers go out of their way to buy green products merely for the sake of it and concluded that location of the products must be consistent with the image which a company wants to project, and that the location must differentiate a company from its competitors.

2.4.4 Promotion

Promotion includes advertising, public relations, sales promotion and direct marketing among others. According to Davis (1993), the key to successful green marketing is credibility, and as such, marketers should never overstate environmental claims or establish unrealistic expectations. Grundey and Zaharia (2008, 130) suggest that the company should advertise the expenditures that it has used on the environmental protection and note that the green products probably require special attention.

Carlson *et al*. (1993) suggested that there are four types of environmental information that can be included in environmental advertising: *Product orientation*: the claim focuses on the environmentally friendly attributes that a product possesses. (Biodegradable is an example of such product); *Process orientation:* the claim deals with an organization's internal technology, production technique and/or disposal method that yields environmental benefits. (For example, 20 per cent of the raw materials used in producing this good are recycled.); *Image orientation:* the claim associates an organization with an environmental cause or activity for which there is broad-based public support. (For example "we are committed to preserving our forests"); *Environmental fact:* the claim involves an independent statement that is ostensibly factual in nature from an organization about the environment at large, or its condition.

2.5 Benefits derived from adoption of green marketing strategies

Being branded a green company can be potentially beneficial to business organizations. Review of the literature on green marketing reveals several benefits that marketers can derive from its adoption. According to Ottman and Terry (1998), "a green image may enhance the overall perception of product quality and when coupled with the environmental benefits inherent in a product and/or its use may provide the added value that consumers would favor". Other benefits of green marketing adoption include the following: increased credibility; access to information; access to markets; better publicity; and enhanced public education. These benefits of green marketing are discussed below:

2.5.1 Increased credibility

Research by Australian National Opinion Polls (1992) indicated that consumers find claims made by environmental groups to be four times as credible as those of manufacturers and twice as credible as governmental claims. Therefore it can be assumed that if an environmental group supports a firm or product, consumers are more likely to believe the product's environmental claims.

2.5.2 Access to information

When thinking of an environmental group's activities, one of the first things that come to mind is their advocacy role. Environmental groups also have access to extensive environmental information networks as most groups are either international or belong to international information networks. Manufacturers facing environmental problems may turn to their strategic partners for advice and information. In some cases environmental partners may actually have technical staffs that can be used to assist in solving organizational problems or implementing existing solutions. For example, McDonald's relied on the scientific expertise of the Environmental Defense League when it wanted to replace its clamshell packaging (Hume, 1991).

2.5.3 Access to markets

Most environmental groups have an extensive support base, which in many cases receives newsletters or other group mailings. Environmental group members represent a potential market that can be utilized by consumer

goods producers, even if these groups do not produce specialized catalogs (Mendleson, 1994). Environmental groups must maintain their impartiality; once this is lost the group is no longer a valuable alliance partner.

2.5.4 Better publicity and less criticism

Forming strategic alliances with environmental groups allows the firm to overcome many potential problems that may be faced with a developing product, besides stimulating increased publicity. For instance, when the Sydney Olympic Bid Committee announced that Greenpeace was the successful designer for the year 2000 Olympic Village (Sydney 2000, 1993a, 1993b) the story appeared in all major newspapers and on the national news. It is highly unlikely that this publicity would have been generated if a more conventional architect had been named as the designer of the Village. In this case, the publicity associated with the alliance was positive and credible.

2.5.5 Public education

Environmental groups are valuable sources of environmental education information and materials. The groups educate consumers and the general public about environmental problems and also inform them about potential solutions. Marketers can also play an important role as providers of environmental information through their marketing activities. For instance, in Norway, companies educated consumers and promoted its environmental concern by placing environmental information on the packaging of its cereals relating to various regional environmental problems (World Wide Fund for Nature, 1993). By attaching themselves to environmental causes, producers not only educate consumers, but may improve their environmental image.

2.5.6 Cost/profit issues

Certain firms use green marketing to address cost/profit related issues. Dersken and Gartrell (1993) observed that when attempting to minimize waste, firms are often forced to re-examine their production processes so as to reduce waste and cut down on the quantity of raw materials used. This serves as a double cost savings, since both waste and raw materials are reduced. Brown and Wahlers (1998) noted that in some cases, it has been found that firms find end-of-pipe solutions, instead of minimizing waste. In these situations firms try to find markets or uses for their waste materials, where firm's waste becomes another firm's input of productions.

2.6 Influence of green marketing on firm performance

This section presents a review of literature on green marketing and firm performance.

2.6.1 Green marketing and firm performance

Klassen and McLaughlin (1996) proposed a theoretical model linking environmental management to lower costs and increased income. Carter, Kale and Grimm (2000) proved the proposal of Klassen and McLaughlin, and showed empirical evidence that links environmental marketing and firm performance. Carter (2005) made a suggestion that organizations with higher levels of green marketing as a social responsibility initiative are more likely to have higher levels of organizational learning so that they can accurately find the causes of their problems in order to improve performance. Moreover, it is proved that environmental collaboration with customer contributed to a relatively wide range of competitive benefits (Vachon and Klassen 2008).

Min (2007) also discussed the role of green marketing in many aspects such as source reduction by recycling and reuse, waste elimination and green packaging. While green marketing does have a positive effect on firm performance, still, marketing professionals have not realized the importance of it.

Review of the relevant literature reveals various measures of performance. These are summarized and presented below.

Environmental performance: the performance indicators being reduction of air emissions; reduction of solid/liquid waste; decrease of consumption for hazardous/harmful/toxic materials; decrease of frequency for environmental accidents; improvement of environmental situation; and improvement of compliance.

Competitiveness: the performance indicators being product quality improvement; increased efficiency; productivity improvement; and Cost saving.

Positive and negative economic performance: the performance indicators for positive economic performance being new market opportunities; product price increase; profit margin; market share; increased sales; decrease of cost for materials; decrease of cost for energy consumption; decrease of fee for waste treatment/discharge; and Decrease for fine for environment accidents. The performance indicators for negative economic performance are: increase of investment; increase of operational cost; increase of training cost; and increase of cost for purchasing environmentally friendly material.

Operational performance indicators include increase amount of good delivered on time; decrease inventory levels; increase scrap rate; promote product's quality; increase product line; and improve capacity utilization.

Financial performance indicators include net profit; market share; assets growth; and increased revenue.

For purposes of this study, the measures of performance are: environmental performance; competitiveness; operational performance; and financial performance (Net Income for 2006, 2007, 2008, 2009 and 2010) were considered.

2.6.2 Empirical review on environmental marketing strategy and firm performance

Klassen and McLaughlin (1996) focused on environmental management and firm performance. The study proposes and tests (based on sample of 96 publicly traded firms from the Nexis and UPI Databases) an empirical model that links strong environmental management to improved perceived future financial performance. The study found positive returns for strong environmental management and significant negative returns for weak environmental management.

Russo and Fouts (1997) focused on corporate environmental performance. Drawing on the resourced-based view, it is argued that environmental performance and economic performance are positively linked with industry growth acting as a moderator. A study of 477 (243 in the analysis) firms with environmental ratings revealed that the decision of a firm to use corporate environmental behavior benefits the firm. However, the industry growth moderates the level of these benefits.

Sharma and Vredenburg (1998) focused on environmental responsiveness. The study examined the applicability of the resource-based view of the firm within the domain of environmental responsiveness. The study revealed that proactive responsiveness to the uncertainties inherent at the interface between the business and ecological issues were associated with the emergence of unique organizational capabilities, which sequentially affect firm competitiveness.

Langerak, Peelen and Veen (1998), developed and tested a model of antecedents and consequences of the integration of environmental issues in marketing. A study of 138 Dutch tea firms indicated that environmental regulation is still the most important reason for marketers to adopt an environmentally friendly approach in their marketing strategy. Firms that voluntarily adopt green marketing are given the ability to exploit green opportunities and improve performance.

Banerjee *et al.* (2003) focused on corporate environmentalism, environmental orientation, and industry type. Using stakeholder theory, the authors identified four antecedents of corporate environmentalism and its relationship with the strategy of the firm. A study of 243 firms, from a variety of industries, showed that corporate environmentalism is related to public concern, regulatory forces, competitive advantage and top management commitment. The type of the industry was found to moderate some of these relationships.

Baker and Sinkula (2005) focused on operationalization of enviropreneurial marketing, where they examined its relationship with firm performance by adopting a resource-based view and dynamic capabilities approach. A study of 243 manufacturing and service organizations in which market turbulence was not found to have an impact on enviropreneurial marketing. Furthermore, enviropreneurial marketing formation was found to be driven by internal rather than external factors. Megnuc and Ozanne (2005) focused on Natural environmental orientation. By taking a natural resource-based view stance, the authors define the concept of Natural Environmental Orientation (NEO) and test its impact on firm performance.

Pujari, Wright and Peattie (2003), undertook a study of environmental new product development (ENPD) within British manufacturers. A major contribution of this study is the attempt to integrate new product development (NPD) and environmental management philosophies in order to develop and empirically test a theoretical framework for ENPD and performance. As such, it is one of the first studies to go beyond the anecdotal evidence in the extant literature, to empirically research ENPD activities and their impacts. This contributes to the debate about the potential for firms to be "green and competitive" by examining the relationship between ENPD activities and market and eco-performance for environmental new products. Contrary to the popular perception, the results suggest that there is more synergy than conflict between the conventional and environmental product development paradigms.

Stone and Wakefield (2000), focused on the effect of a market orientation toward environmental issues and threats on business performance. The importance of corporate environmental responsibility is considered. A series of hypotheses are presented. The authors then go on to outline the methodology used before presenting their results and discussion.

2.7 Theoretical framework

Marketing theory has long ignored the influence of the natural environment in marketing strategy formulation. However, recent pressures by consumers, government regulators, and other stakeholders have been responsible for companies examining the potential of adopting a more environmentally friendly approach in their marketing activities (Kickpatrick, 1990; Mason, 1993; Drumwright, 1994). As a result, a growing body of research has emerged in the last few decades, aiming to understand the forces shaping this need for environmentally-friendly based marketing strategies, as well as their impact on marketing performance (Menon and Menon, 1997; Sharma and Vredenburg, 1998; Menon *et al.,* 1999; Banerjee, Iyer and Kashyap, 2003; Baker and Sinkula, 2005).

Although valuable knowledge has been accumulated as a result of these research efforts, little empirical work has so far been conducted in this area, thus limiting theory advancement and practice development (Banerjee *et al*., 2003; Megnuc and Ozanne, 2005; Baker and Sinkula, 2005). Hence, there is a need to shed light on the influence of adoption of green marketing strategies on performance of the tea sector.

2.7.1 Theoretical discussions on environmental marketing strategy

This section reviews some of the theoretical discussions on environmental marketing strategy.

Miles and Munilla (1993) focused on Eco-marketing orientation and introduced the green orientation, as a response by some organizations to the turbulent, social and natural environment. The authors conclude that eco-orientation can be adopted by companies as a strategic competitive advantage. In a later study, Menon and Menon (1997) focused on enviropreneurial marketing and developed a model of antecedents and consequences of enviropreneurial marketing strategy.

Kilbourne (1998) focused on green marketing, dominant social paradigm: a theoretical view of the issue of green marketing and discussion of the failure of green marketing to move beyond limitations within the dominant social paradigm.

Menon *et al.* (1999) focused on environmentally- based marketing programs. The study led to the development and discussion of the concept of environmentally-based marketing programs, the implementation of these programs, and the effects on firm performance.

Miles and Covin (2000) focused on Importance of a reputational advantage's impact on marketing mix. They explored the relationship between corporate reputation, environmental performance and financial performance and focus on the contingencies that impact environmental policy-making. The authors concluded that being a good environmental steward helps create a reputational advantage that leads to enhanced marketing and financial performance.

Aragon-Correa and Sharma (2003) focused on Proactive corporate environmental strategy. Drawing from the natural resource-based view and dynamic firm capabilities, shows how dimensions of the general competitive environment will influence the proactive corporate environmental strategy.

2.8 Conceptual framework

Green marketing is seen as the guiding philosophy of the tea sector as well as a practical tool to implement environmental sustainability into environmentally sustainable businesses. Consumers can be seen as moral actors, because their behavior is affected by ability, motives and personal resources. Similarly, governments not only by law and regulation, but also by education and incentives, affect consumers and companies. With the help of green marketing mix, companies can incorporate green marketing strategies into their product offering and practices. The conceptual framework for this study is depicted in figure 2.2 below.

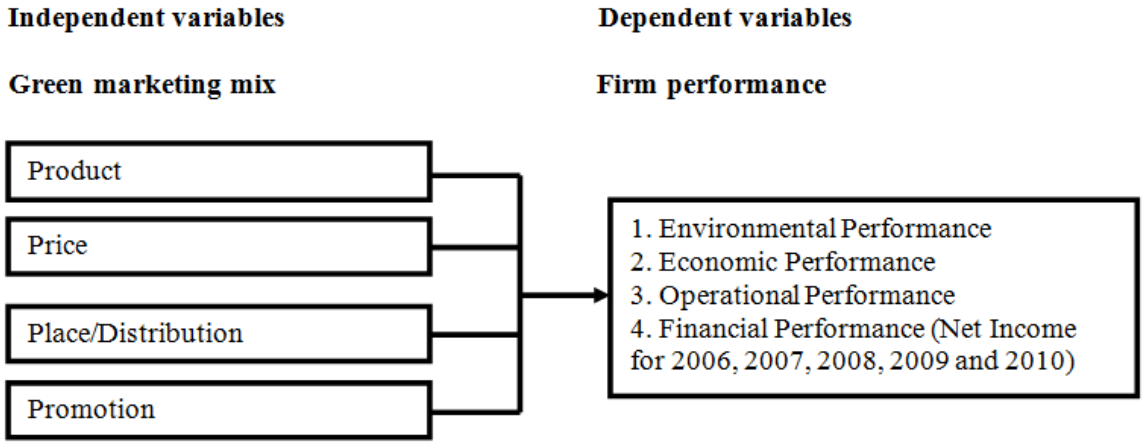

Figure 2.2: Conceptual framework

2.8.1 Independent variables

Independent variables are those factors influencing performance of tea firms, which comprise of environmental adjustments of the traditional marketing mix elements (product, price, distribution, and promotion) to a specific target market setting. These are discussed below.

The quality of the actual *product* can be developed in a way that the efficiency of resource use is maximized. The core product is the reason for buying the service, like a nature experience, and it has to be delivered. Augmented product, like repair service, can be used to increase the product lifetime.

Price can be very effective tool to create more sustainable services because by the aid of price, for example demand can be pursued to direct towards more environmentally sustainable practices. Environmental accounting methods should be adopted to ensure that environmental costs are taken into account in product pricing decisions. Cost savings occur for example because of effective use of inputs as well as reuse and recycling of resources.

Place as marketing mix component include some important features such as location, intermediaries and transport. Most of the sustainability impacts take place in the supply chain and therefore greener marketing

practices can be developed by utilizing sustainable supply chain management (SSCM).

Promotion can be used to direct demand towards more sustainable practices. Environmentally sustainable promotion should be informative, motivate and consumer opportunities should be communicated. In environmentally sustainable *promotion,* the communication is informative and motivational, consumer opportunities to make a difference with their choices are emphasized and attention is paid to the resources needed.

2.8.2 Dependent variable

The adoption of green marketing will lead to enhanced firm performance. For purposes of this study, the measure of performance is financial performance (Net Income for 2006, 2007, 2008, 2009 and 2010).

3.0 METHODS

3.1 Introduction

This chapter articulates methodology for the research. In the previous chapter, literature pertaining to the study was reviewed, the theories and models used when conducting the study were discussed and research gaps identified. This chapter discusses the criteria for determining the appropriate methodology for the study. The chapter explains the construct measurement of research constructs and hypothesis to be tested. Finally, the research design, including the target population, data collection methods, research procedures, data analysis, interpretation and presentation are described. The following sections provide a detailed description of the research methodology used in the study.

3.2 Research design

Brown, Askew, Baker, Denvir and Millett (2003) observed that *"research design provides the glue that holds the research project together".* A design is used to structure the research, to show how all of the major parts of the project, which include the samples or groups, measures, treatments or programs, and methods of assignment that work together to try to address the central research questions. In order to undertake the study a descriptive survey was used. According to Mugenda and Mugenda (1999) descriptive statistics enable meaningful description of a distribution of scores or measurements using a few indices or statistics. Descriptive statistics help to simplify large amounts of data in a sensible way. Each descriptive statistic reduces lots of data into a simpler summary. Measures of central tendency give the expected score or measure from a group of scores in a study. Measures of variability, such as standard deviations inform about the distribution of scores around the mean of the distribution. Frequency distributions show a record of the number of times a score or record appears.

Descriptive designs result in a description of the data, whether in words, pictures, charts, or tables, and whether the data analysis shows statistical relationships or is merely descriptive. Surveys based on a carefully selected representative sample can produce results that are broad, credible and generalisable to the whole population. The researcher preferred the survey since it focused on data rather than theory besides the financial constraints. In this case, it was possible to administer the data collection tools to the respondents in their business premises with relative ease, and this plated a great role in increasing the response rate. The study involved conducting a survey to obtain the categorical data for statistical testing of the formulated hypothesis. The survey was conducted using a questionnaire, which was hand delivered to the respondents. Factor analysis was performed by examining the pattern of correlations (or covariance's) between the observed measures. Measures that are highly correlated (either positively or negatively) are likely influenced by the same factors, while those that are relatively uncorrelated are likely influenced by different factors. Presentation of the information was done using frequency tables and percentages.

3.3 Population of the study

Cooper and Schindler (2005) define a population as the total collection of elements about which the researcher wishes to make some inferences. Zikmund (2003, p.739) defines a population as "a complete group of entities sharing some common set of characteristics". The population of this study was all tea factories in Kenya that are members of East African Tea Trade Association (EATTA), whose number at 17 as at 30th June 2010 (EATTA, 2010). Kenya Tea Trading Agency Ltd has a total of 57 factories, which operate independently and were all included in the study. In total, the study targeted a total of 73 tea factories. A sample of 63 organizations was conducted (the 10 tea firms that participated in the pre-testing of the questionnaires were excluded). The unit of analysis of the study was the individual tea factory. The study respondent in each of the factories was the environmental management representative.

3.4 Data Collection

In order to investigate the research objectives stated in chapter 1, both secondary and primary data were collected and analyzed. The first stage of the research process was an extensive search of articles, reports and professional information concerning green marketing strategies in general and the international dimension of

these strategies in particular, using the internet and academic databases. Secondary data was collected in order to ensure relevance to the research problem, eliminate duplication of what has been done and provide a clear understanding of existing knowledge base in the problem area. The analysis of secondary information provided the general context for initiating the collection, analysis and the interpretation of primary data.

In the second stage, primary data was collected. Saunders, Lewis and Thornhill (2003) argued that primary data is needed to thoroughly answer the research question and is collected specifically for the research project being undertaken. Hair, Black, Babin, Anderson and Tatham (2006, p. 64) defined primary data as "gathering of first-hand, new information by the researcher". Saunders *et al.* (2003 p. 245) concluded that "use of interviews and questionnaires help to collect valid and reliable data relevant to the research questions and objectives.

3.4.1 Data collection instrument

Primary data was collected with the aid of a detailed questionnaire that was completed by the environmental management representative. According to Neuman (1997), a questionnaire is a written document in quantitative research that has set of questions directed at respondents. It is used by an interviewer to pose questions to respondents and to record the answers. The questionnaire was designed to answer the questions identified in the problem statement.

Structured questions were presented on a likert scale. The likert scale, commonly used in business research was used because it allows participants to respond with degrees of agreement or disagreement. The ratings were on a scale from 1 (lowest impact or least important) to 5 (highest impact or most important). The advantage of closed questions is that it is easier and quicker for respondents to answer. Furthermore, the answers of different respondents are easier to compare code and statistically analyze. There are also fewer irrelevant or confused answers and replication is easier. Closed questions are an appropriate means of asking questions that have a finite set of answers of a clear-cut nature. Sometimes this is factual information, but closed questions are also used for obtaining data on attitudes and opinions (Anon, 2003d).

The questionnaire included questions that were relevant to the study and followed a logical sequence to ensure that accurate answers were given and that misunderstandings were avoided. The questionnaire was based on a quantitative method of data collection. The advantage of this method, as observed by Respini (2000), is that the researcher is able to collect all the data before analysis and to convert it into numerical values, which are then manipulated in order to discover patterns or relationships.

The structure of the questionnaire was based on the specific objectives of the study and was divided into three major sections as follows: the first section addressed the extent of adoption of green marketing by the Kenya tea firms; the second section focused on the issues pertaining to the influence of green marketing on performance of the Kenya tea firms; and the third section of the questionnaire incorporated questions concerning the demographic characteristics of the factories. Demographic questions such as age and gender were at the last section of the questionnaire to enable the interviewer to have built rapport with the interviewees that allowed honest responses to such personal questions. Additional space was left at the end of the questionnaire titled "Other Comments" for any comments by the interviewees.

3.4.2 Data collection procedure

Prior to launching a full-scale study, the questionnaire was pre-tested on 10 tea factories to ensure its workability in terms of structure, content, flow, and duration. According to Cooper and Schindler (2005) a pre-test is "the testing of the questionnaire on a small sample of respondents, preferably 10 or more". After the pre-testing of the questionnaire, modifications were made in the questionnaire to reduce the possibility of ambiguity of some of the questions before delivering them to the respondents. Experts and colleagues who are experienced in research were also requested to examine the questionnaire to check whether there were any items that needed to be changed or rephrased, as well as the appropriateness of the time set for completing it. At the end of the exercise, the items in the questionnaires were considered to be satisfactory in term of both wording and format.

The researcher administered the questionnaires by drop-and-pick method after explaining the purpose of the study and agreeing on the time frame for the completion of the questionnaires. The questionnaires were then delivered by hand to the selected respondents, excluding the 10 pilot tested factories. The researcher collected the questionnaires and had discussion with some of the respondents who were available. The sessions were used to clarify certain issues that may not have been covered in the questionnaire.

3.5 Validity and reliability of measures

3.5.1 Validity

Validity refers to the extent to which the data collection instrument measures what it is supposed to measure. Zikmund (2003) defines validity as the ability of a measuring instrument to measure what was intended to be measured. According to (Sekaran, 2003), content validity is a judgmental act where experts check whether the items represent the construct which is being studied as well as the wording, formatting and scoring of the instrument. Two steps were taken to ensure validity. Firstly, wherever possible, research questions from prior

studies were used to improve the validity of the research instrument, in particular (Hall, 2000). Secondly, the questionnaire was sent to selected academicians as well as 10 randomly selected members of EATTA for perusal and to assess the structure, length, and appropriateness of the questions used.

3.5.2 Reliability

Reliability is the degree to which measures are free from error and therefore yield consistent results (Zikmund, 2003). The researcher relied on the guidance of the supervisors for reliability of the data collection tool. Factor analysis was performed for testing the validity of measures used in measuring the drivers for green marketing. According to Sekaran (2003), "reliability analysis is conducted to ensure that the measures of variables have internal consistency across time and across the various items that measure the same concept or variable". Reliability evaluates accuracy of the measures through assessing the internal stability and consistency of items in each variable (Hair, Anderson, Tatham and Black, 1998). Reliability was measured in this study using Cronbach's alpha coefficients.

3.6 Data analysis and presentation

This section presents the methods used in analysis of primary data and presentation.

3.6.1 Data analysis

The following is a brief description of the statistical methods that were employed for this study. According to Marshall and Rossman (1999), data analysis is the process of bringing order, structure and interpretation to the mass of collected data. The data collected with the aid of questionnaires was systematically organized in a manner to facilitate analysis. Data analysis involved preparation of the collected data - coding, editing and cleaning of data in readiness for processing using Statistical Package for Social Sciences (SPSS) package version 19.0. The coded data was keyed into the SPSS program where it was developed into a database and hence analyzed. SPSS was preferred because it is very systematic and covers a wide range of the most common statistical and graphical data analysis.

3.6.2 Presentation

Presentation of information was done with the aid of bar charts, frequency tables, percentages, standard deviations and mean scores. The information was presented and discussed as per the objectives of the study.

4.0 RESULTS AND ANALYSIS

4.1 Introduction

The aim of this chapter is to provide a summary of the data collected through the use of questionnaires. General trends are explained using percentages, tables, figures and descriptions of data as a way to present the findings of the investigation. The primary data was collected using questionnaires. A total of 63 questionnaires were hand delivered to respondents (the 10 factories that were used for pre-testing the questionnaire were omitted from the study), out of which 58 were returned completed (92.1%) return). The data collected was then analyzed using the Statistical Package for Social Science (SPSS) – version 19.0. The findings are presented as per the objectives, research questions and hypotheses of the study.

The study results are presented in two sections, namely: descriptive analysis and test of hypotheses. The first stage involved reporting all the information related to each of the respondents' personal profiles. This was followed by data analysis in relation to the research objectives outlined in chapter one. Descriptive analysis was done to report on the respondents including the results of the measurement variables. Next the reliability tests of measurement scales are presented and explained. This depicts the results of factor loading, the evaluation of the item-to-total correlation, cumulative explanation, and Cronbach's Alpha. Finally, the results of regression to test the relationships between constructs are reported in detail. A summary of this data was then used to test the hypotheses. This Chapter concludes by highlighting the main findings obtained from the quantitative data. The next chapter presents the results of the empirical analysis, discusses the findings and interpretations.

4.2 Descriptive data analysis

In this section, descriptive statistics were used to describe in quantitative terms the main features of the collected data.

4.2.1 Profile of respondent factories

Tea factories information: This section presents information on the tea factories that participated in the study.

Representation of sampled factories: The survey had targeted to interview 63 tea factories' Environmental Management Representatives, out of which 58 participated. This translates to 92.1% response rate. All the respondents were factory unit managers, who are also the environmental management representatives (93.1% Kenyans and 6.9% foreigners).

Number of registered tea growers: The study sought to establish the size of the tea factories that participated in the study. The number of registered tea growers was considered in determining the factory size. The findings are summarized and presented in figure 4.1 below.

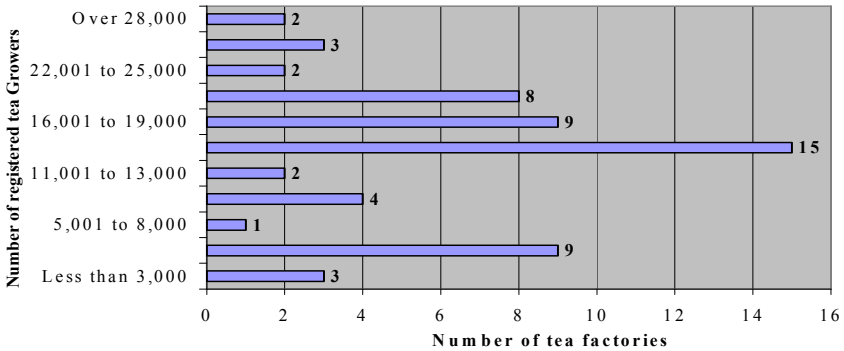

Figure 4.1: Size of the factory (number of registered tea growers)

The findings in figure 4.1 above show that majority of the tea factories (39) had more than 13,000 registered tea growers.

Period of operation in Kenya: Age of an enterprise is critical in assessing patterns of its growth in terms of implementation of relevant business management systems, which in turn influence its growth. Research indicates that mortality rate of enterprises in Kenya is high, since out of ten enterprises started; only 1 survives to celebrate the first birthday due to various reasons. The findings are summarized and presented in figure 4.2 below.

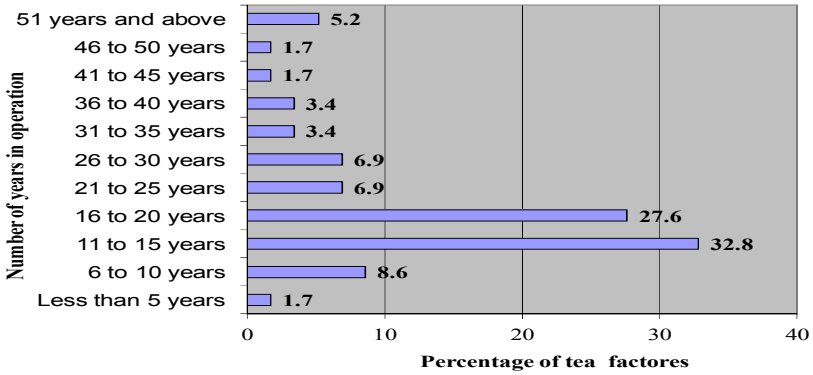

Figure 4.2: Size period of operation in Kenya

The findings in figure 4.2 above show that the oldest tea factories have been in operation in Kenya for a period exceeding 50 years (5.2%) while the most recent factory has been operation in Kenya for a period of less than 5 years (1.7%). Majority (32.8%) of the factories have been in operation in Kenya for a period between 11 and 15 years, followed by (27.6%) of the factories that have been in operation in Kenya for a period between 16 and 20 years. This means that most surveyed factories are old enough to have implemented most business management systems and have the varied information.

ISO 9000 certification status: ISO 9000 is the most popular and widely adopted meta-standard for quality and operational improvements. The respondents were asked to indicate whether their factories were ISO 9000 certified. The responses are summarized and presented in figure 4.3 below.

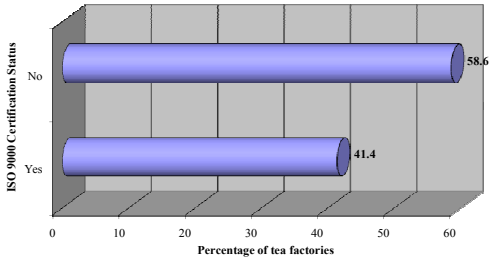

Figure 4.3: ISO 9000 certification status

The findings in figure 4.3 above show that majority of the tea factories (58.6%) were not ISO 9000 certified while (41.4%) were ISO 9000 certified. Discussions with management revealed that some of the factories without ISO 9000 certification were qualified but had either not been assessed, or had been assessed and were awaiting certification.

ISO 14001certification status: ISO 14001 is associated with environmental management. Respondents were asked to indicate whether their factories were ISO 14001certified. The responses are summarized and presented in figure 4.4 below.

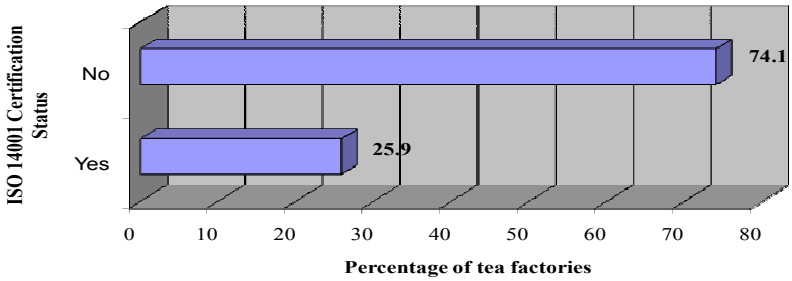

Figure 4.4: ISO 14001 certification Status

The findings in figure 4.4 above show that majority of the tea factories (74.1%) were not ISO 14001 certified while (25.9%) were ISO 14001 certified. Discussions with management revealed that some of the factories without ISO 14001 certification were qualified but had either not been assessed, or had been assessed and were awaiting certification.

4.2.2 Extent of adoption of green marketing by Kenya tea firms

The first objective of this study was to establish the extent of adoption of green marketing by the Kenya tea firms. This was done in order to answer the first research question "to what extent has green marketing been adopted by the Kenya tea firms?" Objectives and decision making criteria; green policies and practices adopted; greening strategies adopted; environmental actions; and green marketing strategies adopted, were assessed. This section presents details of the findings.

Objectives and decision making: The respondents were asked to indicate the basis upon which their respective factories set their business objectives and decision making by ticking one alternative from a given list. The responses are summarized and presented in tables 4.3a and 4.3b below.

Table 4.3a: Objectives and decision making criteria (All respondents)

Criteria for objective setting and decision making	Response		Mean score	Standard deviation	Ranking
Economic Prosperity	Frequency	11			3
	Percentage	19.0			
Social equity	Frequency	5			4
	Percentage	8.6			
Environmental protection	Frequency	13			2
	Percentage	22.4			
Combination of 1,2,3	Frequency	29			1
	Percentage	50.0			
Average Rank (N= 58)			3.03	1.169	**2.50**

Findings in table 4.3a above show that the main basis upon which the tea factories set their objectives and decision making was a combination of "economic prosperity", "social equity", and economic prosperity" as indicated by (50.0%) of the respondents, followed by "environmental protection", as indicated by 22.4% of the respondents. Social equity was the least ranked criteria upon which the tea factories set the business objectives and decision making. The Standard Deviation is 1.169 and mean is 3.03.

Table 4.3b: Objectives and decision making criteria (ISO 9000 and ISO 14001 Certified tea factories)

Criteria for objective setting and decision making	Response		Mean score	Standard deviation	Ranking
Economic Prosperity	Frequency	1			3
	Percentage	6.7			
Social equity	Frequency	0.0			4
	Percentage	0.0			
Environmental protection	Frequency	5			2
	Percentage	33.3			
Combination of 1,2,3	Frequency	9			1
	Percentage	60.0			
Average Rank (N= 15)			3.47	0.834	**2.50**

Findings in table 4.3b above show that the main basis upon which the tea factories that had obtained both ISO 9000 and ISO 14001 Certification set their objectives and decision making was a combination of "economic prosperity", "social equity", and economic prosperity" as indicated by (60.0%) of the respondents, followed by "environmental protection", as indicated by 33.3%% of the respondents. "Economic prosperity" scored only 6.7% whereas social equity was ranked by any of the respondents. The Standard Deviation is 0.834 and mean is 3.47.

Policies and practices: Respondents were asked to indicate the extent to which their tea factories had incorporated the 4-Rs (Recycle, Refill, Reuse and Reduce), which are the cornerstones of the green marketing strategy in their policies and practices. The responses are summarized and presented in tables 4.4a and 4.4b below.

Item code

PP 1: *Recycle* – the factory collects all types of packaging for recycling
PP 2: *Refill* – all outlets provide product refill service
PP 3: *Reuse* – the factory encourages reuse of promotional materials such as posters
PP 4: *Reduce* – the factory eliminates all unnecessary packaging

Table 4.4a: Cornerstones of the green marketing strategy (4-Rs) (All respondents)

The cornerstones of the green marketing strategy (4 - Rs)		Much	Very much	Total	Mean score	Standard deviation	Rank
PP 1	Frequency	30	17	47	4.10	0.693	3
	Percentage	51.7	29.3	81.0			
PP 2	Frequency	32	19	51	4.21	0.642	2
	Percentage	55.2	32.8	88.0			
PP 3	Frequency	34	21	55	4.31	0.568	1
	Percentage	58.6	36.2	94.8			
PP 4	Frequency	16	29	45	4.28	0.812	4
	Percentage	27.6	50.0	77.6			
Average Rank (N = 58)							**2.50**

Findings in table 4.4a above indicate that "*Reuse"* was the highest ranked green marketing strategy incorporated by the tea sector factories in their policies and practices, as indicated by all (100%) response. "*Refill* "was ranked 2nd, as indicated by (88%) of the respondents. "*Reduce"* was the least ranked", as indicated by (77.6%) of the respondents.

Table 4.4b: Cornerstones of the green marketing strategy (4-Rs) (ISO 9000 and ISO 14001 Certified tea factories)

The cornerstones of the green marketing strategy (4 - Rs)		Much	Very much	Total	Mean score	Standard deviation	Rank
PP 1	Frequency	9	2	11	3.87	0.640	4
	Percentage	60.0	13.3	73.3			
PP 2	Frequency	9	4	13	4.13	0.640	2
	Percentage	60.0	26.7	86.7			
PP 3	Frequency	12	3	15	4.20	0.414	1
	Percentage	80.0	20.0	100.0			
PP 4	Frequency	5	7	12	4.27	0.799	3
	Percentage	33.3	46.7	80.0			
Average Rank (N = 15)							**2.50**

Findings in table 4.4b above indicate that "*Reuse"* was the highest ranked green marketing strategy

incorporated by the tea sector factories that had obtained both ISO 9000 and ISO 14001 Certification in their policies and practices, as indicated by (94.8%) of the respondents. "*Refill"* was ranked 2nd, as indicated by (86.7%) of the respondents, "*Recycle",* as indicated by (73.3%) of the respondents.

Greening strategies: The respondents were asked to indicate the extent to which they agreed/disagreed that their respective tea factories had adopted each of the three listed greening strategies. The responses are summarized and presented in tables 4.5a and 4.5b below.

Item codes

GS 1: *Value-addition processes (firm level)* - redesigning processes with the objective of reducing environmental impact aggravated.

GS 2: *Management systems (firm level)* – adoption of management systems that create conditions for reducing the environmental impact of value-addition processes.

GS 3: *Products (product level)* – adoption of new technologies

Table 4.5a: Relative importance of the greening strategies adopted by the tea sector (All respondents)

Item Codes for Greening Strategies		Agree	Strongly agree	Total	Mean	Standard deviation	Rank
GS 1	Frequency	23	21	44	4.10	0.810	3
	Percentage	39.7	36.2	75.9			
GS 2	Frequency	33	18	51	4.19	0.634	1
	Percentage	56.9	31.0	87.9			
GS 3	Frequency	19	29	48	4.31	0.799	2
	Percentage	32.8	50.0	82.8			
Average Rank (N = 58)							**2.0**

The findings in table 4.5a above indicate that majority of the tea factories (87.9) had adopted the "*Management systems (firm level)* - adoption of management systems that create conditions for reducing the environmental impact of value-addition processes". "*Value-addition processes (firm level)* - redesigning processes with the objective of reducing environmental impact aggravated" was the least ranked greening strategy (75.9%) adopted by the tea sector in Kenya.

Table 4.5b: Relative importance of the greening strategies adopted by the tea sector (ISO 9000 and ISO 14001 Certified tea factories)

Item Codes for Greening Strategies		Agree	Strongly agree	Total	Mean	Standard deviation	Rank
GS 1	Frequency	5	6	11	4.13	0.834	3
	Percentage	33.3	40.0	73.3			
GS 2	Frequency	8	5	51	4.20	0.676	2
	Percentage	53.3	33.3	86.6			
GS 3	Frequency	5	9	14	4.53	0.640	1
	Percentage	33.3	60.0	93.3			
Average Rank (N = 58)							**2.0**

The findings in table 4.5b above indicate that majority of the tea factories that had obtained both ISO 9000 and ISO 14001 Certification (93.3%) had adopted the "*Products (product level)* – adoption of new technologies (for instance, a steel firm may install a state-of-the art of furnace)". "*Value-addition processes (firm level)* - redesigning processes with the objective of reducing environmental impact aggravated" was the least ranked greening strategy (73.3%) adopted by the tea factories that had obtained both ISO 9000 and ISO 14001 Certification in Kenya.

Relative importance of green marketing activities undertaken in the tea sector in Kenya

This section presents findings related to the relative importance of green marketing activities undertaken in the tea sector in Kenya.

Products

Respondents were asked to indicate the extent to which they agreed/disagreed that their factories had taken environmental actions in each the listed product areas. The responses are summarized and presented in tables 4.6a and 4.6b below.

Item code

PDF 1: Design of products for recycling, re-use or disassembly

PDF 2: Recovery of the factory's end-of-life products

PDF 3: Offering environmental friendly products
PDF 4: Undertaken product standardization to ensure environmentally safe products

Table 4.6a: Product focus (All respondents)

5 = Extremely Important 1 = Not important		Agree	Strongly Agree	Total	Mean	Standard deviation	Rank
PDF 1	Frequency	30	22	52	4.28	0.643	6
	Percentage	51.7	37.9	89.6			
PDF 2	Frequency	23	24	47	4.19	0.826	12
	Percentage	39.7	41.4	81.1			
PDF 3	Frequency	25	27	52	4.36	0.667	5
	Percentage	43.1	46.6	89.7			
PDF 4	Frequency	23	30	53	4.43	0.652	3
	Percentage	39.7	51.7	91.4			
Average Rank (N = 58)							**6.50**

The findings in table 4.6a above indicate that "product focus" was the highest ranked overall, with an average ranking of (6.50). The item that was highest ranked for product focus in terms of percentage was "undertaken product standardization to ensure environmentally safe products", with a mean score of 4.43 and a total percentage of (91.4%) of the respondents indicating either "agree" or "strongly agree". The least ranked item was "recovery of the factory's end-of-life products", with a mean score of 4.19 and a total of (81.1%) of the respondents indicating "agree" or "strongly agree".

Table 4.6b: Product focus (ISO 9000 and ISO 14001 Certified tea factories)

5 = Extremely Important 1 = Not important		Agree	Strongly Agree	Total	Mean	Standard deviation	Rank
PDF 1	Frequency	9	5	14	4.27	0.594	7
	Percentage	60.0	33.3	93.3			
PDF 2	Frequency	5	9	14	4.53	0.640	2
	Percentage	33.3	60.0	93.3			
PDF 3	Frequency	8	6	14	4.33	0.617	6
	Percentage	53.3	40.0	93.3			
PDF 4	Frequency	4	10	14	4.60	0.632	1
	Percentage	26.7	66.7	93.4			
Average Rank (N = 15)							**4.0**

The findings in table 4.6b above indicate that "product focus" was the highest ranked overall, with an average ranking of (4.0). The item that was highest ranked for product focus in terms of percentage was "undertaken product standardization to ensure environmentally safe products", with a mean score of 4.60 and a total percentage of (93.4%) of the respondents indicating either "agree" or "strongly agree". The least ranked item was "design of products for recycling, re-use or disassembly", with a mean score of 4.27 and a total of (93.3%) of the respondents indicating "agree" or "strongly agree".

Price

Respondents were asked to indicate the extent to which they agree/disagree that their factories had taken environmental actions in each of the listed price areas. The responses are summarized and presented in tables 4.8a and 4.8b below.

Item code

PRF 1: The factory is proactive and by focusing on costs, there is improved cost-effectiveness and a higher competitive edge
PRF 2: The factory supports adoption of environmental accounting methods to assess costs associated with tea processing

Table 4.7a: Price focus (All respondents)

5 = Extremely Important 1 = Not important		Agree	Strongly Agree	Total	Mean	Standard deviation	Rank
PRF 1	Frequency	35	14	49	4.09	0.629	16
	Percentage	60.3	24.1	84.4			
PRF 2	Frequency	26	23	49	4.24	0.709	9
	Percentage	44.8	39.7	84.5			
Average Rank (N = 58)							**12.50**

Findings in table 4.7a above show that, overall, price focus was the least ranked of the 4 Ps of marketing, with an average ranking of (12.50). The item that was highest ranked for price focus in terms of percentage was "the factory supports adoption of environmental accounting methods to assess costs associated with tea processing", with a mean score of 4.24 and a total percentage of (84.5%) responses for either "agree" or "strongly agree", while second ranked was "the factory is proactive and by focusing on costs, there is improved cost-effectiveness and a higher competitive edge", with a mean score of 4.09 and a total of (84.4%) of the respondents indicating "agree" or "strongly agree".

Table 4.7b: Price focus (ISO 9000 and ISO 14001 Certified tea factories)

5 = Extremely Important 1 = Not important		Agree	Strongly Agree	Total	Mean	Standard deviation	Rank
PRF 1	Frequency	13	2	15	4.13	0.352	13
	Percentage	86.7	13.3	100.0			
PRF 2	Frequency	6	8	14	4.47	0.640	4
	Percentage	40.0	53.3	93.3			
Average Rank (N = 15)							**8.5**

Findings in table 4.7b above show that, overall, price focus was the 2nd ranked of the 4 Ps of marketing, with an average ranking of (8.60). The item that was highest ranked for price focus in terms of percentage was "the factory supports adoption of environmental accounting methods to assess costs associated with tea processing", with a mean score of 4.47 and a total percentage of (93.3%), while second ranked was "the factory is proactive and by focusing on costs, there is improved cost-effectiveness and a higher competitive edge", with a total of (100%) of the respondents indicating "agree" or "strongly agree".

Place

Respondents were asked to indicate the extent to which they agreed/disagreed that their factories had taken environmental actions in each on the listed place/distribution areas. The responses are summarized and presented in tables 4.8a and 8b below.

Item code

PLF 1: Change for more environmental-friendly transportation
PLF 2: Location of the factory products is consistent with the image which the factory wants to project
PLF 3: Adoption of "green" distribution, including redesigning physical facilities
PLF 4: Converting to a more fuel efficient fleet
PLF 5: Redesigning distribution to minimize transportation

Table 4.8a: Place (distribution) focus (All respondents)

5 = Extremely Important 1 = Not important		Agree	Strongly Agree	Total	Mean	Standard deviation	Rank
PLF 1	Frequency	29	19	48	4.16	0.696	14
	Percentage	50.0	32.8	82.8			
PLF 2	Frequency	21	29	50	4.38	0.718	4
	Percentage	36.2	50.0	86.2			
PLF 3	Frequency	27	23	50	4.26	0.690	8
	Percentage	46.6	39.7	86.3			
PLF 4	Frequency	16	34	50	4.45	0.730	1
	Percentage	27.6	58.6	86.2			
PLF 5	Frequency	23	24	47	4.22	0.750	11
	Percentage	39.7	41.4	81.1			
Average Rank (N = 58)							**7.60**

Findings in table 4.8a above indicate that place (distribution) focus was the 2nd ranked overall, with an average ranking of (7.60). The item that was highest ranked for place focus was "converting to a more fuel efficient fleet" with a mean score of 4.45 and a total percentage of (86.2%) of the respondents indicating either "agree" or "strongly agree". The least ranked item was "redesigning distribution to minimize transportation", with a total of (81.1%) of the respondents indicating "agree" or "strongly agree".

Table 4.8b: Place (distribution) focus (ISO 9000 and ISO 14001 Certified tea factories)

5 = Extremely Important 1 = Not important		Agree	Strongly Agree	Total	Mean	Standard deviation	Rank
PLF 1	Frequency	9	3	12	4.00	0.655	15
	Percentage	60.0	20.0	80.0			
PLF 2	Frequency	6	8	14	4.47	0.640	4
	Percentage	40.0	53.3	93.3			
PLF 3	Frequency	9	5	14	4.27	0.594	7
	Percentage	60.0	33.3	93.3			
PLF 4	Frequency	2	8	10	4.20	0.941	10
	Percentage	13.3	53.3	66.6			
PLF 5	Frequency	5	7	47	4.27	0.799	7
	Percentage	33.3	46.7	80.0			
Average Rank (N = 15)							**8.60**

Findings in table 4.8b above indicate that place (distribution) focus was the 3rd ranked overall, with an average ranking of (8.60). The item that was highest ranked for place focus in terms of percentage was "location of the factory products is consistent with the image which the factory wants to project", with a mean score of 4.47 and a total percentage of (93.3%) of the respondents indicating either "agree" or "strongly agree" for each item. The least ranked item was "change for more environmental-friendly transportation", with a mean score of 4.00 and a total of (80.0%) of the respondents indicating "agree" or "strongly agree".

Promotion

Respondents were asked to indicate the extent to which they agreed/disagreed that their factories had taken environmental actions in each of the listed promotion areas. The responses are summarized and presented in tables 4.9a and 9b below.

Item code

PRMF 1: The factory provides customers with information on environmental friendly products and/or production methods

PRMF 2: In its communications, the factory clearly states environmental efforts, characteristics and benefits achieved.

PRMF 3: The factory uses sustainable marketing and communication tools and practices to reinforce environmental credibility.

PRMF 4: The factory understands that the key to successful green marketing is credibility, and such, the factory never overstates environmental claims or establish unrealistic expectations.

PRMF 5: The factory advertises the expenditures that it has used on the environmental protection

PRMF 6: The truthfulness and specificity of green marketing claims are monitored and the claims are informative by nature

PRMF 7: The factory has a newsletter communicating environmental actions to all employees

Table 4.9a: Promotion focus (All respondents)

5 = Extremely Important 1 = Not important		Agree	Strongly Agree	Total	Mean	Standard deviation	Rank
PRMF 1	Frequency	37	9	46	3.95	0.605	18
	Percentage	63.8	15.5	79.3			
PRMF 2	Frequency	24	21	45	4.14	0.760	15
	Percentage	41.4	36.2	77.6			
PRMF 3	Frequency	26	17	43	4.03	0.748	17
	Percentage	44.8	29.3	74.1			
PRMF 4	Frequency	24	22	46	4.17	0.752	13
	Percentage	41.4	37.9	79.3			
PRMF 5	Frequency	30	22	52	4.28	0.643	6
	Percentage	51.7	37.9	89.6			
PRMF 6	Frequency	22	31	53	4.45	0.654	1
	Percentage	37.9	53.4	91.3			
PRMF 7	Frequency	22	25	47	4.24	0.757	9
	Percentage	37.9	43.1	81.0			
Average Rank (N = 58)							**11.29**

The findings in table 4.9a above indicate that promotion focus was the 3rd ranked overall, with an

average ranking of (11.29). The findings also show that "the truthfulness and specificity of the green marketing claims are monitored and the claims are informative by nature" was ranked highest with a mean score of 4.45 and a total of (91.3%) of the respondents either indicating "agree" or "strongly agree".

Table 4.9b: Promotion focus (ISO 9000 and ISO 14001 Certified tea factories)

5 = Extremely Important 1 = Not important		Agree	Strongly Agree	Total	Mean	Standard deviation	Rank
PRMF 1	Frequency	12	1	13	3.93	0.458	17
	Percentage	80.0	6.7	86.7			
PRMF 2	Frequency	5	5	10	4.00	0.845	15
	Percentage	33.3	33.3	66.6			
PRMF 3	Frequency	9	2	11	3.87	0.640	18
	Percentage	60.0	13.3	73.3			
PRMF 4	Frequency	6	6	12	4.20	0.775	10
	Percentage	40.0	40.0	80.0			
PRMF 5	Frequency	11	3	14	4.13	0.516	13
	Percentage	73.3	20.0	93.3			
PRMF 6	Frequency	3	10	13	4.53	0.743	2
	Percentage	20.0	66.7	86.7			
PRMF 7	Frequency	4	7	11	4.20	0.862	10
	Percentage	26.7	46.7	73.4			
Average Rank (N = 15)							**12.14**

The findings in table 4.9 above indicate that promotion focus was the least ranked overall, with an average ranking of (12.14). The findings also show that "The truthfulness and specificity of the green marketing claims are monitored and the claims are informative by nature" was ranked highest (91.3%) and "The factory advertises the expenditures that it has used on the environmental protection" was ranked 2nd with (89.6%) of the respondents indicating a total of "agree" and "strongly agree". The overall findings of the study with respect to the relative importance of green marketing activities undertaken in the tea sector in Kenya are summarized and presented in table 4.10 below.

Table 4.10: Summary of findings with respect to the relative importance of green marketing activities undertaken in the tea sector in Kenya

Status of ISO Certification	Ranking of relative importance of green marketing activities			
	1st ranked	2nd ranked	3rd ranked	4th ranked
All tea factories irrespective of ISO 9000 and ISO 14001 Certification (N = 58)	Product focus (6.5)	Place/ Distribution (7.60)	Promotion focus (11.29)	Price focus (12.50)
Only the tea factories that were both ISO 9000 and ISO 14001 Certified (N = 15)	Product focus (4.0)	Price focus (8.50)	Place/Distribution (8.60)	Promotion focus (12.40)

Findings in table 4.10 above indicate that the relative importance of green marketing activities undertaken in the tea sector in Kenya (irrespective of ISO 9000 and ISO 14001 Certification) is as follows in terms of average rank: 1st ranked was product focus with an average rank of (6.50); 2nd ranked was place (distribution focus), with an average rank of (7.60); 3rd ranked was promotion focus, with an average rank of (11.29); and the least ranked was price focus, with an average rank of (12.50).

Further, the findings in that table above also indicate that the relative importance of green marketing activities undertaken by the tea factories that were both ISO 9000 and ISO 14001 Certified in Kenya is as follows in terms of average rank: 1st ranked was product focus with an average rank of (4.50); 2nd ranked was price focus, with an average rank of (8.50); 3rd ranked was Place/Distribution focus (average of 8.60); and the least ranked was Promotion focus (average of 12.40).

4.3 Results of factor analysis and reliability tests

This section presents the results of factor analysis and reliability tests.

4.3.1 Factor analysis for green marketing mix items

Factor analysis was conducted to identify the dimensionality of each research construct, to select questionnaire items with higher factor loadings, and to compare the selected items with items suggested by theory. Item – to total correlation was assessed to identify the internal consistency and reliability of the construct. Latent roots (Eigen values) and other criteria were employed to determine the number of dimensions to be extracted from the principle component factor analysis. The primary objective of principal Component Factor Analysis (CFA) is to

determine the ability of a predetermined factor model to fit an observed set of data. Some common uses of CFA are to establish the validity of a single factor model; compare the ability of two deferent models to account for the same set of data; test the significance of a specific factor loading; test the relationship between two or more factor loadings; test whether a set of factors are correlated or uncorrelated; and assess the convergent and discriminant validity of a set of measures. In this study, the following criterions were used: Factor loadings > 0.5; Eigen value > 1; and communality > 0.5. The results of factor analysis are summarized and presented in table 4.20 below.

Table 4.20: Results for green marketing mix items

Green Marketing Mix Variable	Item Code	Factor Loading	Communality
Product	PDF 1	0.671	0.640
	PDF 3	0.711	0.545
Price	PRF 1	0.732	0.596
Place	PLF 1	0.709	0.662
	PLF 2	0.547	0.703
	PLF 4	0.709	0.632
	PLF 5	0.715	0.752
Promotion	PRMF 2	0.717	0.571
	PRMF 5	0.746	0.625
	PRMF 6	0.797	0.741
	PRMF 7	0.609	0.702

The findings in table 4.20 above show that items for green marketing mix satisfied all criterions set for this study, the criterion being Factor Loadings > 0.5 and Communality > 0.5.

4.3 Regression analysis

In order to test the hypotheses proposed in the study, multiple regression analysis was employed. Multiple regressions are a statistical technique that allows for prediction someone's score on one variable on the basis of their scores on several other variables. Forward selection method was employed, whereby SPSS enters the variables into the model one at a time in an order determined by the strength of their correlation with the criterion variable. The effect of adding each variable is assessed as it is entered, and variables that do not significantly add to the success of the model are excluded. Regression was run to test the relationship between green marketing as the independent variable and financial performance (net profits over a period of five years - 2006, 2007, 2008, 2009 and 2010) as the dependent variable. The findings are presented below.

4.3.1 Influence of green marketing on performance of Kenya tea firms

The second objective of the study sought to assess the influence of green marketing on performance of the Kenya tea firms. Regression analysis was run with Green Marketing as the Independent variable and financial firm performance over a period of five years (2006, 2007, 2008, 2009 and 2010) as the dependent variable. The regression results between adoption of green marketing and performance of Kenya tea firms are summarized and presented in table 4.30 below.

Table 4.30: Summary of regression results between adoption of green marketing and firm performance (2006 – 2010)

Independent variables – Green marketing mix	Dependent variable – Firm performance (2006 – 2010)				
	2006	2007	2008	2009	2010
R Square	0.159	0.261	0.264	0.248	0.233
Adjusted R Square	0.144	0.247	0.251	0.234	0.219
Std. Error of the Estimate	2.761	2.048	1.842	1.774	1.662
F – Value	10.615	19.738	20.079	18.422	16.973
P – Value	0.002	0.000	0.000	0.000	0.000

The findings illustrate high value for F and very low values for p (< 0.05). The Ho is supported if p < or = 0.05.

The findings therefore indicate that study hypothesis: H0 = Adoption of green marketing is positively related to performance of the Kenya tea firms, measured by net profit is supported.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The findings were presented and discussed in the previous chapter. This chapter presents the summary, conclusions and recommendations of the study. The conclusions of the study are presented in the next section.

5.2 Conclusions

Based on the findings of the study, this section presents the conclusions.

The ideas conveyed in this study are in response to the research questions set forth. This study achieved its primary objectives which were: to establish the extent of adoption of green marketing by the Kenya tea firms; and to assess the influence of green marketing on performance of the Kenya tea firms. As discussed above, the hypothesized relationship between adoption of green marketing strategies and financial performance of the tea firms studied tested positive. This result shows that there are relationships existing among the constructs of the study, and it confirms proposed ideas in the first three chapters. Hence, it is concluded with some contributions to the literature.

The first significant contribution of this study is that green marketing was researched from a different approach; hence a broader and deeper picture of marketing was investigated. Previously, many researches on green marketing were often conducted in Western countries such as Germany and United States. An argument supported by Carter and Carter (1998). In this study, the ideas of green marketing were brought to an emerging economy (Kenya). This study's purpose was not to compare between these two groups of countries, it was to put the research concepts in different situations and environments in order to see the reactions of managers toward environmental issues.

The results offer evidence for green marketing as an important role to improve firms' performance. Bearing this in mind, firms' managers can work on researching efficient solutions to reduce negative effects as well as increase positive effects of green marketing activities. Companies that develop virgin and improved products and services with environment inputs in mind give themselves access to new markets, increase their profit and enjoy competitive advantage over the companies which are not concerned for the environment. The advantages of green marketing are specified below.

Green marketing saves money in the long run, though initially the cost is more; It helps in accessing the new market and enjoying competitive advantage; Green marketing ensures sustained long term growth along with profitability; It helps companies market their products and services keeping the environment aspects in mind; As resources are limited and human wants are unlimited, it is important for the marketers to utilize the resources efficiently without waste and to achieve organization's objectives; and Green marketing helps to protect the ozone and whole the environment (Chopra, 2007).

5.5 Recommendations

In view of the findings of the study, the following recommendations for policy and practice are made:

Like conventional marketers, green marketers must address the 'four Ps' in innovative ways.

Product: Businesses wanting to exploit emerging green markets either: (a) identify customers' environmental needs and develop products to address these needs; or (b) develop environmentally responsible products to have less impact than competitors. The increasingly wide variety of products on the market that support sustainable development and are good for the triple bottom line include: products made from recycled goods; products that can be recycled or reused; efficient products, which save water, energy or gasoline, save money and reduce environmental impact; products with environmentally responsible packaging; products with green labels, as long as they offer substantiation; organic products, which offer promise of quality; and certified products, which meet or exceed environmentally responsible criteria. Whatever the product or service, it is vital to ensure that the product meets or exceeds the quality expectations of customers and is thoroughly tested.

Price: Pricing is a critical element of the marketing mix. Most customers are prepared to pay a premium if there is a perception of additional product value. This value may be improved performance, function, design, visual appeal or taste. Environmental benefits are usually an added bonus but will often be the deciding factor between products of equal value and quality. Environmentally responsible products, however, are often less expensive when product life cycle costs are taken into consideration.

Place: The choice of where and when to make a product available has a significant impact on the customers being attracted. Marketers looking to successfully introduce new green products should, in most cases, position them broadly in the market place so that they are not just appealing to a small green niche market. The location must also be consistent with the image which a company wants to project. The location must differentiate a company from its competitors. This can be achieved by in-store promotions and visually appealing displays or using recycled materials to emphasize the environmental and other benefits.

Promotion: Promoting products and services to target markets includes paid advertising, public relations, sales promotions, direct marketing and on-site promotions. Smart green marketers will be able to reinforce environmental credibility by using sustainable marketing and communications tools and practices. For example, many companies in the financial industry are providing electronic statements by email. E-marketing is rapidly replacing more traditional marketing methods, and printed materials can be produced using recycled materials and efficient processes, such as waterless printing. Retailers, for example, are recognizing the value of alliances with other companies, environmental groups and research organizations when promoting their

environmental commitment. The key to successful green marketing is credibility. The marketers should never overstate environmental claims or establish unrealistic expectations, and communicate simply and through sources that people trust.

Implementing a green marketing strategy requires a fundamental, holistic, integrated approach across all functional marketing areas, including the entire marketing mix of targeting, pricing, design, positioning and promotion. For successful implementation, it is critical that green marketing is integrated across all organizational areas and activities. Thus, the role of green marketing in environmental sustainability development is to offer the common philosophy and practical tools for implementing environmental sustainability into the company practices.

Although a large number of firms are using green marketing, there are a number of potential problems which need to be addressed. Green marketing claims of a firm must: clearly state environmental benefits; explain environmental characteristics; explain how benefits are achieved; ensure comparative differences are justified; ensure negative factors are taken into consideration; and only use meaningful terms and pictures.

Consumer marketers need to develop strategies to develop strategies which will allow them to overcome three problems associated with green marketing: poor credibility; consumer cynicism; and consumer confusion. The problem of consumer cynicism is also related to green marketing's past history, as many producers simply jumped on the green marketing bandwagon without considering the full ramifications of their actions. If these problems cannot be overcome, it is questionable whether environmental marketing, as a whole, will be effective.

The benefits searched for by buyers of green products include improvement of the environment in which they live. In some cases direct benefits can be obtained, such as perceived health advantages of organic food, the savings on domestic heating and lighting budgets, or the sometimes quite returns on investments in environmental technologies. The marketer's best strategy will consequently be to deliver detailed information to consumers about the environmental credentials of a product or service, or the consequences of advocated forms of behavior. Thus marketers should typically emphasize the efficiency of cognitive persuasion strategies, assuming the consumers' high involvement regarding environmental issues to be a consequence of a growing environmental consciousness.

Going green is not an easy undertaking for most businesses, it is a process. Not only do you have to examine every aspect of operations in order to pinpoint areas of waste and pollution, but a responsible business owner will also check out the supply chain for harmful practices and then try to implement eco-friendly standards along every step of the way. While some companies never make it beyond installing recycling bins around the office or switching to recycled paper products, there are plenty that go the extra mile by conserving energy and water, using chemical-free products and processes, working with eco-friendly vendors, and even securing a LEED certified office space.

Presented below are some of the green marketing best practices from other industries that the tea sector could adopt:

General sustainability: Sustainability can help cut costs as well as build sales. The marketers should therefore be transparent about green marketing claims by ensuing that they are verifiable by an independent, third party. The marketers should also include their colleagues in their sustainability efforts; often the best ideas come from the bottom up, rather than from the top down. The marketers should spread the word about the sustainability efforts their organizations are taking. Simple changes in the offices can have a huge impact: use energy efficient light bulbs and put recycling bins at every desk. Old batteries, light bulbs and other household materials should be recycled for free. Employee education is key, and sustainability must be part of the company culture. If so, it is much easier to implement (and less likely to be cut). The marketers should also make sure that they back up their green marketing efforts with truly sustainable business practices throughout their organizations (Chopra, 2007).

Green Printing: The tea sector should either share or recycle the printed piece. Sustainability is more than the materials used, and it involves the lifecycle of the items. The stakeholders should consider using chlorine-free paper. The best papers to use are bleached using an oxygen-based process, thus avoiding the creation of chlorine-related pollution. Vegetable -based inks should be used when possible. Not only are they generally refined in the United States, but they also reduce our use of petroleum, the majority of which comes from foreign sources. Consider papers with a high degree of post-consumer content, as they require fewer resources (energy, water, etc.) to produce. When using eco-friendly papers, make sure to explain the environmental benefits derived from these choices. These calculations should come from a third-party source rather than a calculation from an industry source. (Grundey & Zaharia, 2008). The tea sector should also use renewable energy (like wind or solar power) in the production process.

Best Practices in marketing

Green Design: When designing products, the organizations should consider how the products are produced. When sustainability is important, colors that works well with vegetable-based inks on recycled paper.

By designing a lighter, smaller piece, you can save energy, freight costs, as well as reduce the amount of paper used. This can also help keep postage costs down if the piece is being mailed (Murphy & Poist, 2003).

Green promotional products: Corn plastic is practically indestructible. Choosing promotional corn plastic coffee mugs is a wise decision for the office since you can be sure that if they are dropped they will not break. They are also practical, attractive and economical as well as biodegradable. Recycled grocery bags can carry twice as many items as plastic shopping bags and are easier and more comfortable to carry. In addition, they are made from strong fabric that will last for many years, keeping your brand top-of-mind. Not only is organic cotton chemical and pesticide-free, but it is also softer and more comfortable to the touch than blended cotton. The tea sector should consider alternative materials as a way to send a sustainable message. These include recycled fabrics, bamboo, biodegradable substrates, and solar-powered items (Zhu *et al.,* 2005).

Perception: The 5th P – moving beyond Product, Price, Place and Promotion: allow consumers to contribute to a solution, make sustainability a part of your value proposition and make sure goals are easy to locate and articulated. When goals are achieved, let it be known; be pro-active: form a partnership or sponsor an event; Internal Marketing: boost employee morale through education and empowerment; Involve them in a dialogue on strategies with committees, giving them tools and resources; Downstream stakeholder relations; and Work with key customers whose initiatives overlap with both operations (Zeithaml *et al.,* 2006).

5.4 Limitations of the study and recommended areas for further study

The following limitations could affect the generalisability of the study results:

To date literature on the extent of adoption influence of green marketing initiatives on firm performance in Kenya is scarce. There is thus limited empirical data for comparison. In addition, the sample size of the study is relatively small (58 tea factories) to draw generalized conclusions on factors driving the decision to adopt green marketing strategies and explore the influence of adopting such strategies on performance of firms across different industries in Kenya. Therefore, there is a need to replicate this study using managerial samples from other countries with different cultural characteristics and/or levels of economic development to allow for comparison of findings which can then be generalized across diverse sectors.

The following areas are suggested for further study:

(i) As opposed to industry wide generalization of the current results, a new study could be replicated in specific industry settings. Some industry sectors such as chemicals and health care services usually deal with more hazardous materials than others and consequently may view green marketing as a more integral part of marketing strategy. Therefore, it would be intriguing to see how significant a role industry differences, corporate culture, and financial capacity play in the adoption and maturity of green marketing; and (ii) Consider time dimension through comparing green marketing between different stages of adoption, such as innovators, early adopters, late adopters and laggards. This comparison may facilitate the identification of the drivers of each stage of adoption, which in turn, may enrich knowledge about these drivers.

REFERENCES

Anon (2003d): *Questionnaire Implementation*. http://www.economics.ltsn.ac.uk/handbook/questionnaires/21.htm

Aragon-Correa, J. & Sharma, S. (2003). "A contingent resource-based view of proactive corporate environmental strategy", *Academy of Management Review*, Vol. 28 No. 1, pp. 71-88.

Australian National Opinion Polls (ANOP) Research Services (1992). *The Environment and the EDS Process: An Attitude Research Analysis*, Department of ASET and the ESD Secretariat, Sydney.

Baker, W.E. & Sinkula, J.M. (2005). "Market orientation and the new product paradox", *The Journal of Product Innovation Management*, Vol. 22 No. 6, pp. 483-502.

Balderjahn, I. (1988). "Personality variables and environmental attitudes as predictors of ecologically responsible consumption patterns", *Journal of Business Research*, Vol. 17, pp. 51-6.

Banerjee, S.B., Iyer E.S. & Kashyap, R.K (2003). "Corporate Environmentalism: Antecedents and Influence of Industry Type", *Journal of Marketing*, 67 (April), pp.106-122.

Barrett, S. (1991). Environmental regulations for competitive advantage. *Business Strategy Review* 2: 1–15.

Bartlett, E. & Howard, N. (2000). Informing the Decision Makers on the Cost and Value of Green Building. *Building Research and Information*, 28(5-6), 315-324.

Baumann, H., Boons, F. & Bragd, A. (2002). "Mapping the green product development field: engineering, policy and business perspectives", Journal of Cleaner Production, Vol. 10, pp. 409 25.

Bhat, V.N. (1993). "Green marketing begins with green design", *Journal of Business & Industrial Marketing*, Vol. 8 No. 3, pp. 26-31.

Bridges, C. M. & Wilhelm, W. B. (2008). Going Beyond Green: The "Why and how" of Integrating Sustainability into the Marketing Curriculum. *Journal of Marketing Education*, 30 (1), 33-46.

Brown, J.D. & Wahlers, R.G. (1998). The environmentally concerned consumer: an exploratory study. *Journal*

of Marketing Theory and Practice 6: 39 - 47.

Brown, M., Askew, M., Baker, D., Denvir, H. & Millett, A. (2003). 'Is the National Numeracy Strategy Research-Based?' *British Journal of Educational Studies*, 46, 4, 362-385.

Carlson, L., Stephen, J.G. & Kangun N. (1993). A content analysis of environmental advertising claims: a matrix approach. *Journal of Advertising* 22: 27–40.

Carr, S.B. (1993). *Improving cash crops in Africa: factors influencing the productivity of cotton, coffee and tea grown by smallholders*. World Bank.

Carter, C.R. (2005). Purchasing social responsibility and firm performance: The key mediating roles of organizational learning and supplier performance. *International Journal of Physical Distribution and Logistics Management*, 35(3), 177-194.

Carter, C.R., Kale, R. & Grimm, C.M. (2000). *Environmental purchasing and firm performance: an empirical investigation*. Transportation Research Part E, 36, 219-228.

Charter, M. & Polonsky, M.J. (eds). (1999). *Greener Marketing: a Global Perspective on Greening Marketing Practice*, 2nd edn. Greenleaf: Sheffield.

Charter, M. (1992). *Greener Marketing: A Responsible Approach to Business*, Greenleaf Publishing, Sheffield.

CHOICE (1990). "Green cleaners", *CHOICE,* September, pp. 10 – 4.

Chopra, S.L. (2007). "*Turning Over a New Leaf*", Indian Management, Vol. 64, April 2007.

Clay, J. (2003). *World Agriculture and the Environment: A Commodity-by-commodity Guide to Impacts and Practices.* Island Press.

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

Cooper, D. R. & Schindler, P.S. (2005). *Business Research Methods*, 8th edition, Mc Graw-Hill, New Delhi, India.

Cresswell, J. (2003). *Research design*. USA: Sage Publications.

Davis, J.J. (1993). Strategies for environmental advertising. *Journal of Consumer Marketing* 10: 19–36.

Dembkowski, S. & Hanmer-Lloyd, S. (1994). "*The environmental attitude-system model: a framework to guide the understanding of environmentally conscious consumer behavior*", in Carson, D. *et al*. (Eds), Marketing: Unity in Diversity. Proceedings of the Annual Conference of the Marketing Education Group, Coleraine, 4-6 July, pp. 232-41.

Derksen, L. & Gartrell J. (1993). The social context of recycling. *American Sociological Review* 58: 434–442.

Drumwright, M. E. (1994). "Socially Responsible Organizational Buying: Environmental Concern as a Non-economic Buying Criterion", *Journal of Marketing*, 58 (July), pp. 1-19.

Duff, M. (1990). "Springtime in marketing: will supermarkets find gold in the "green" issue? Loblaw's, Wal-Mart, and others are betting they can", *Supermarket Business*, Vol. 45 No. 4, pp. 15-24, 45.

Economic Research Service/USDA, Amber Waves, Food Safety Improvements Underway in China, November 2006 < http://www.ers.usda.gov/AmberWaves/November06/PDF/FoodSafety.pdf> (11 April 2006)

Fuller, D.A. (1999). *Sustainable Marketing: Managerial-ecological issues*. Thousand Oaks, C.A: SAGE Publications.

Grove, S.J., Fisk, R.P., Pickett, G.M. & Kangun, N. (1996). "Going green in the service sector: social responsibility issues, implications and implementation", *European Journal of Marketing*, Vol. 30 No. 5, pp. 56-66.

Grundey, D. & Zaharia, R. M. (2008). Sustainable incentives in marketing and strategic greening: the cases of Lithuania and Romania. *Technological and economic development Baltic Journal on Sustainability*, 14 (2), 130–143.

Hair, J.F. Jr, Anderson, R.E., Tatham, R.L. & Black, W.C. (1998). *Multivariate Data Analysis*, Prentice-Hall, Englewood Cliffs, NJ.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. & Tatham, R.L. (2006). *Multivariate Data Analysis*, 6th ed., Pearson Prentice-Hall, Upper Saddle River, NJ.

Hall , J . (2000). "Environmental supply chain dynamics", *Journal of cleaner production* , Vol, .8 No.6 , pp.455-71.

Hervani, A.A., Helms, M.M. & Sarkis, J. (2005). Performance measurement for green supply chain management. *Benchmarking: An International Journal*, 12(4), 330-353.

Hume, S. (1991). "*Green marketing: consumer doubletalk makes companies wary*", Advertising Age, 28 October, p. GR4.

Imballagio, I. (2002). "*Ecology and distribution*", The Magazine for Packaging, March, available at: www.italiaimballaggio.it/italiaimballaggio/03 02/sezioni/04 envir/art2 envir.html

International Tea Committee (ITC), 2007), *Annual Bulletin of Statistics*.

Isherwood, K. (2000). Mineral Fertilizer Distribution and the Environment, *International Fertilizer Industry Association*, UNEP, Paris, March.

Kadavil, S.M. (2008). *Indian Tea Research* (Partners in Change, April 2008).
Kalafatis, S.P. Pollard, M. East, R. & Tsogas, M.H. (1999). "Green marketing and Ajzen's theory of planned behavior: a cross-market examination", *Journal of Consumer Marketing*, Vol. 16 No. 5, pp. 441-60.
Kalama, E. (2007). *Green marketing practices by Kenya petroleum refineries. A study of the perception of management of oil companies in Kenya*: Unpublished University of Nairobi, Kenya. MBA Project.
Kapelianis, D. & Strachan, S. (1996). "The price premium of an environmentally friendly product", *South African Journal of Business Management*, Vol. 27 No. 4, pp. 89-95.
Kassarjian, H.H. (1971). "Incorporating ecology into marketing strategy: the case of air pollution", *Journal of Marketing*, Vol. 35, July, pp. 61-5.
Kickpatrick, D. (1990). "Environmentalism: The New Crusade", *Fortune*, (February 12), pp. 44-54.
Kilbourne, W.E. (1998). "Green Marketing: A Theoretical Perspective", *Journal of Marketing Management*, 14, 641-655.
Kinnear, T.C., Taylor, J.R. & Ahmed, S.A. (1974). "Ecologically concerned consumers – who are they?", *Journal of Marketing*, Vol. 38 No. 2, pp. 20-4.
Kiongera, F.N. ((2003). *Green marketing practices in cement industry in Kenya*: Unpublished University of Nairobi, Kenya. MBA Project.
Klassen, R.D. & McLaughlin, C.P. (1996). The impact of environmental management on firm performance. *Management Science*, 42, 1199-1214.
Langerak, F., Peelen, E., & Veen, M.V.(1998). "Exploratory Results on the Antecedents and Consequences of Green Marketing", *Journal of the Market Research Society*, 40 (4) (Oct), pp.323-335.
Marshall, C. & Rossman G. (1999). *Designing qualitative research* 3rd Ed., Thousand Oaks-CA: Sage.
Mason, J.C. (1993). "What Image Do You Project?", *Management Review*, 82 (11), pp. 10-11.
McCaughan, D. (1991). "*The 'green' saturation point*", The Sydney Morning Herald, 30 May, p. 26.
McDaniel, S.W. & Rylander, D.H. (1993). "Strategic green marketing", *Journal of Consumer Marketing*, Vol. 10 No. 3, pp. 4-10.
McDougall, G.H.G. (1993), "The green movement in movement in Canada: implications for marketing strategy", *Journal of International Consumer Marketing,* Vol. 15 No. 3, pp. 69 – 87.
Megnuc, B. & Ozanne, L.K. (2005). "Challenges of the Green Imperative: A Natural Resource-based Approach to the Environmental Orientation-business Performance Relationship", *Journal of Business Research*, 58, pp.430-438.
Mendleson, N. & Polonsky, M.J. (1995). Using strategic alliances to develop credible green marketing. *Journal of Consumer Marketing* 12: 4–18.
Mendleson, N. (1994). "*Environmental marketing business partnering at AFC-developing strategic alliances*", Environmental Marketing: Critical Success Strategies for Reaching the Green Consumer. Proceedings of the 1994 Conference, February 22-23, Sydney, pp. 87-103.
Menon, A. & Menon, A. (1997). "Enviropreneurial Marketing Strategy: The Emergence of Corporate Environmentalism as Market Strategy", *Journal of Marketing*, 61 (1), pp. 51 – 67.
Menon, A., Menon, A., Chowdhury, J. & Jankovich, J. (1999). "Evolving paradigm for environmental sensitivity in marketing programs: a synthesis of theory and practice", *Journal of the Marketing Theory and Practice*, Vol. 7 No. 2, pp. 1-15.
Miles, M.P. & Covin, J.G. (2000). Environmental marketing: A source of reputational, competitive, and financial advantage. *Journal of Business Ethics* 23, 299-311.
Miles, M.P. & Munilla, L.S. (1993). "The eco-orientation: An emerging business philosophy?", *Journal of Marketing Theory and Practice*, Vol. 1 No. 2, pp. 43-50.
Milne, G.R., Iyer, E. & Gooding-Williams, S. (1996). "Environmental organization alliance relationships within and across nonprofit, business and government sectors", *Journal of Public Policy and Marketing*, Vol. 15 No. 2, pp. 203-15.
Min, C.Y . (2007). "An adoption of green supply practices of US firms", *International Journal of production and operations management,* Vol21 No. 9 pp 1222-38.
Mugenda O.M. & Mugenda, A.G. (1999). *Research methods: Quantitative and Qualitative Approaches*, African Centre of technology studies, Nairobi.
Murphy, P.R. & Poist, R.F. (2003). "Green perspectives and practices: a 'comparative logistics' study", *Supply Chain Management*, Vol. 8 No. 2, pp. 122-31.
Neuman, W.L. (1997). *Social Research Methods: Qualitative and Quantitative Approaches*, 3rd ed., Allan & Bacon, Needham Heights, MA.
Obuya, E.N. (2003). *A Survey of the Extent to Which Manufacturing Firms in Nairobi Practice Green Marketing*: Unpublished University of Nairobi, Kenya. MBA Project.
Odhiambo, S.A. (2008). *A Survey of the Extent to Which Floricultural Firms in Kenya Practice Green Marketing*: Unpublished University of Nairobi, Kenya. MBA Project.

Ottman, J. & Terry, V. (1998). "Strategic marketing of greener products", *The Journal of Sustainable Product Design,* Vol. 5, April, pp. 53-7.
Ottman, J. (1992a). "*Green Marketing: Challenges and Opportunities for the New Marketing Age,* NTC Business Books, Lincolnwood, IL.
Ottman, J. (1992b). "*Sometimes, consumers will pay more to go green*", Marketing News, Vol. 26 No. 6, p. 16.
Ovuka, G. (2000). *Globalization, Poverty and the Environment in West Africa: Too Poor to Pollute*? Global Environmental Politics, 3, 42-60.
Oxfam (2003). *The tea market, a background study*, 2003.
Peattie K. (1995). *Environmental Marketing Management: Meeting the Green Challenge*. Pitman Publishing: London.
Peattie, K. & Charter, M. (1994), "*Green marketing*", in Baker, M. (Ed.), The Marketing Book, Butterworth Heinneman, Oxford.
Peattie, K. (1992). "*Green marketing*", The M & E Handbook Series, Longman, London.
Peng, Y.S. & Lin, S.S. (2008). "Local responsiveness pressure, subsidiary resources, green management adoption and subsidiary's performance: evidence from Taiwanese manufactures", *Journal of Business Ethics*, Vol. 79 No. 1, pp. 199-212.
Perry, M. & Singh, S. (2002). "*Corporate environmental responsibility in Singapore and Malaysia: the potential and limits to voluntary initiatives*", in Utting, P. (Ed.), of Business in Developing Countries: Rhetoric, Reality and Prospects, Zed Books, London, pp. 97-131.
Polonsky, M. (1995). "A stakeholder theory approach to designing environmental marketing strategy", *Journal of Business and Industrial Marketing*, Vol. 10 No. 3, pp. 29-46.
Polonsky, M.J. & Mintu-Wimsatt, A.T. (Eds) (1995). *Environmental Marketing: Strategies, Practice, Theory, and Research*, The Haworth Press, New York, NY.
Polonsky, M.J. & Rosenberger III, P.J. (2001). "Re-evaluating green marketing: a strategic approach". *Business Horizons*, 44 (5), 21-30.
Polonsky, M.J., Bailey, J., Baker, H., Basche, C., Jepson, C. & Neath, L. (1997). "Communicating environmental information: are marketing claims on packaging misleading?", *Journal of Business Ethics*, Vol. 16.
Prakash, A. (2002). "*Factors in firms and industries affecting the outcomes of voluntary measures*," in T. Dietz and P. Stern (eds.) New Tools for Environmental Protection: Education, Information and Voluntary Measures (Washington DC: National Academy Press) pp. 303-310.
Pujari, D., Wright, G. & Peattie, K. (2003). Green and Competitive: Influences on Environmental New Product Development Performance. *Journal of Business Research,* 56(8), August, pp. 657-671.
Respini, L. (2000). *The Corporation and the Triple Bottom L*ine. http://www.dow.com/dow-news/speeches/10-18-00.htm
Rogers, D.S. & Tibben-Lembke, R.S. (2001). An overview of reverse logistics practices. *Journal of Business Logistics* 22 (1).
Russo M.V. & Fotus P.A. (1997). A resource-based perspective on corporate environmental performance and profitability, *Academy of Management Journal*, 40(3): 534-559.
Saunders, M., Lewis, P. & Thornhill, A. (2003). *Research Methods for Business Students*, Fourth Edition, Prentice Hall, Pearson Education, London.
Schlegelmilch, B.B. & Robertson, D. (1995). "The influence of country and industry on ethical perceptions of senior executives in the US and Europe", *Journal of International Business Studies*, Vol. 26 No. 4, pp. 852-81.
Schlegelmilch, B.B., Bohlen, G.M. & Diamantopoulos, A. (1996). "The link between green purchasing decisions and measures of environmental consciousness", *European Journal of Marketing*, Vol. 30 No. 5, pp. 35-55.
Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach*, Wiley, Singapore.
Sharma, S. & Vredenburg, H. (1998). "Proactive Corporate Environmental Strategy and the Development of Competitively Valuable Organizational Capabilities", *Strategic Management Journal*, 19, pp. 739-753.
Sharma, S. (2000). "Managerial Interpretations and Organizational Context as Predictors of Corporate Choice of Environmental Strategy", *Academy of Management, Journal*, 43 (4), pp. 681-697.
Stafford, E.R. & Hartman, C.L. (1996). "Green alliances: strategic relations between businesses and environmental groups", *Business Horizons*, Vol. 2, pp. 50-59.
Stone, G.W. & Wakefield, K.L. (2000). Eco-Orientation: An Extension of Market Orientation in an Environmental Context. *Journal of Marketing Theory and Practice,* 8(3), Summer, pp.21-32.
Sydney 2000 (1993a). *Sydney 2000 Environmental Guidelines*, Sydney 2000, Sydney.
Sydney 2000 (1993b). *Sydney's Olympic Village Plan Wins Support from Greenpeace*, Sydney 2000, Sydney.
Thiong'o, S.M. (2009). *An Investigation of Green Marketing Practices among Pharmaceutical Firms in Kenya*:

Unpublished University of Nairobi, Kenya. MBA Project.

Vachon, S. & Klassen, R.D. (2008). Environmental management and manufacturing performance: The role of collaboration in the supply chain. *International Journal of Production Economics*, 11(1), 299-315.

Wal, S. (2008). *Sustainability Issues in the Tea Sector. A Comparative Analysis of Six Leading Producing Countries*, Amsterdam.

Worcester, R. (1993). *Public and Elite Attitudes to Environmental Issues*, MORI, London.

Zeithaml, V.A., Parasuraman, A. & Berry, L.L. (2006). "Problems and strategies in services marketing", *Journal of Marketing*, Vol. 49, Spring, pp. 33-46.

Zhu,Q., Sarkis, J., & Lai, K.H. (2005). Green supply chain management: Pressures, practices and performance within the Chinese automobile industry. *Journal of Cleaner Production*, 15, 1041-1052.

Zikmund, W. (2003). *Business research methods*, USA: South - Western.

APPENDIX I: LISTING OF TEA FACTORIES THAT ARE MEMBERS OF EAST AFRICAN TEA TRADE ASSOCIATION (EATTA)

No.	Tea Company
1	Ceres Estates
2	Eastern Producers Kenya
3	James Finlay Kenya Ltd
4	Kaisugu Ltd
5	Karirana Tea Estates
6	Kenya Tea Development Agency Ltd
7	Keritor Ltd
8	Kipkebe Ltd (Sasini Tea & Coffee Ltd)
9	Kiptagich Tea Estates Ltd
10	Koisagat Tea Estate Ltd
11	Maramba Tea Factory Ltd
12	Nandi Tea Estates Ltd
13	Ngorongo Tea Factory Ltd
14	Sotik Highlands Tea Estates
15	The Sotik Tea Company
16	Tinderet Tea Estates Ltd
17	Unilever Tea Kenya Ltd

Source: East African Tea Trade Association (EATTA, 2011)

LISTING OF KENYA TEA DEVELOPMENT AGENCY LTD (KTDA) FACTORIES

Zone	Name	Physical Location	No. of registered tea growers
1	Kambaa tea factory co. Ltd	Githunguri Division, Kiambu County	5473
	Mataara tea factory co. Ltd	Chania Division, Kiambu County	3,485
	Gachege tea factory co. Ltd	Thika District, Kiambu County	3451
	Theta tea factory co. Ltd	Gatundu Division, Kiambu County	6924
	Kagwe tea factory co. Ltd	Lari division, Kiambu County	5345
2	Makomboki tea factory co. Ltd	Kigumo division, Murang'a County	4157
	Nduti tea factory co. Ltd	Thika, Kiambu County	5448
	Gacharage tea factory co. Ltd	Kigumo division, Murang'a County	4650
	Ikumbi tea factory co. Ltd	Kigumo division, Murang'a County	5,263
	Ngere tea factory co. Ltd	Gatanga division, Kiambu County	6737
	Njunu tea factory co. Ltd	Gatanga division, Kiambu County	3440
3	Gatunguru tea factory co. Ltd	Mathioya Division, Murang'a County	6872
	Githambo tea factory co. Ltd	Kahuro, Murang'a County	8349
	Kanyenyaini tea factory co. Ltd	Kangema Division, Murang'a County	8724
	Kiru tea factory co. Ltd	Mathioya Division, Murang'a County	6048
4	Iriaini tea factory co. Ltd	Othaya Division, Nyeri County	5747
	Chinga tea factory co. Ltd	Othaya Division, Nyeri County	4684
	Gathuthi tea factory co. Ltd	Othaya Division, Nyeri County	7158
	Gitugi tea factory co. Ltd	Othaya Division, Nyeri County	5433
	Ragati tea factory co. Ltd	Mathira Division , Nyeri County	5960
5	Mununga tea factory co. Ltd	Kirinyaga County	8246
	Ndima tea factory co. Ltd	Kirinyaga County	8202
	Kangaita tea factory co. Ltd	Kerugoya, Kirinyaga County	3,700
	Kimunye tea factory co. Ltd	Gichugu Division, Kirinyaga County	7302
	Thumaita tea factory co. Ltd	Gichugu Division, Kirinyaga County	10,785
6	Kathangariri tea factory co. ltd	Manyatta division, Embu County	8,387
	Rukuriri tea factory co. ltd	Embu-Meru highway, Embu County	6075
	Mungania tea factory co. Ltd	Runjenyes North Division, Embu County	9,160
7	Kiegoi tea factory co. ltd	Igembe Division, Meru County	11520
	Kionyo tea factory co. Ltd	Near Meru town, Meru County	7,746
	Michimikuru tea factory co. Ltd	Nyambene Hills, Meru County	9849
	Imenti tea factory co. Ltd	Meru Central, Meru County	5189
	Githongo tea factory co. Ltd	Meru Central, Meru County	4,985
	Kinoro tea factory co. Ltd	Igoji division, Meru County	5680
	Weru tea factory co. Ltd	Meru South, Meru County	9500
8	Tegat tea factory co. Ltd	Belgut division, Kericho County	16,175
	Litein tea factory co. Ltd	Near Kericho town, Kericho County	9475
	Kapkatet tea factory co. Ltd	Kapkatet Division, Kericho County	7596
	Momul tea factory co. Ltd	Sigowet division, Kericho County	9,611
	Kobel tea factory co. Ltd	Near Kericho town, Kericho County.	19, 293
	Tirgaga Tea Factory Company Ltd	Bomet, Kericho County.	9,666
9	Mogogosiek tea factory co. Ltd	Konoin Division, Kericho County.	18,572
	Kapset tea factory co. Ltd	Near Kericho town, Kericho County.	7500
	Kapkoros tea factory co. Ltd	Bomet, Kericho County.	11,299
10	Kebirigo Tea Factory Co.Ltd	Nyamira division, Nyamira County	10,000
	Gianchore tea factory co. Ltd	Near Kisii Town, Kisii County	10,913
	Tombe tea factory co. Ltd	Nyamira County	20,186
	Nyankoba tea factory co. Ltd	Borabu division, Kisii County	13,600
	Nyansiongo tea factory co. Ltd	Borabu division, Kisii County	10750
	Sanganyi tea factory co. Ltd	Ekerenyo Division, Nyamira County	18617
11	Nyamache tea factory co. ltd	Nyamache Division, Kisii County	25300
	Kiamokama tea factory co. Ltd	Nyaribari Central, Kisii County	15,989
	Ogembo tea factory co. Ltd	Gucha, Kisii County	28,500
12	Kapsara tea factory co. Ltd	Kaplamai Division, Trans- Nzoia County	1,619
	Chebut tea factory co. Ltd	Kapsabet Division, Nandi County	7915
	Mudete tea factory co. Ltd	Mudete township, Vihiga County	13,514
	Kaptumo tea factory co. Ltd	Near Eldoret, Uasin Gishu County	15,000

Source: Kenya Tea Board (June, 2011)

BIOGRAPHICAL SKETCH

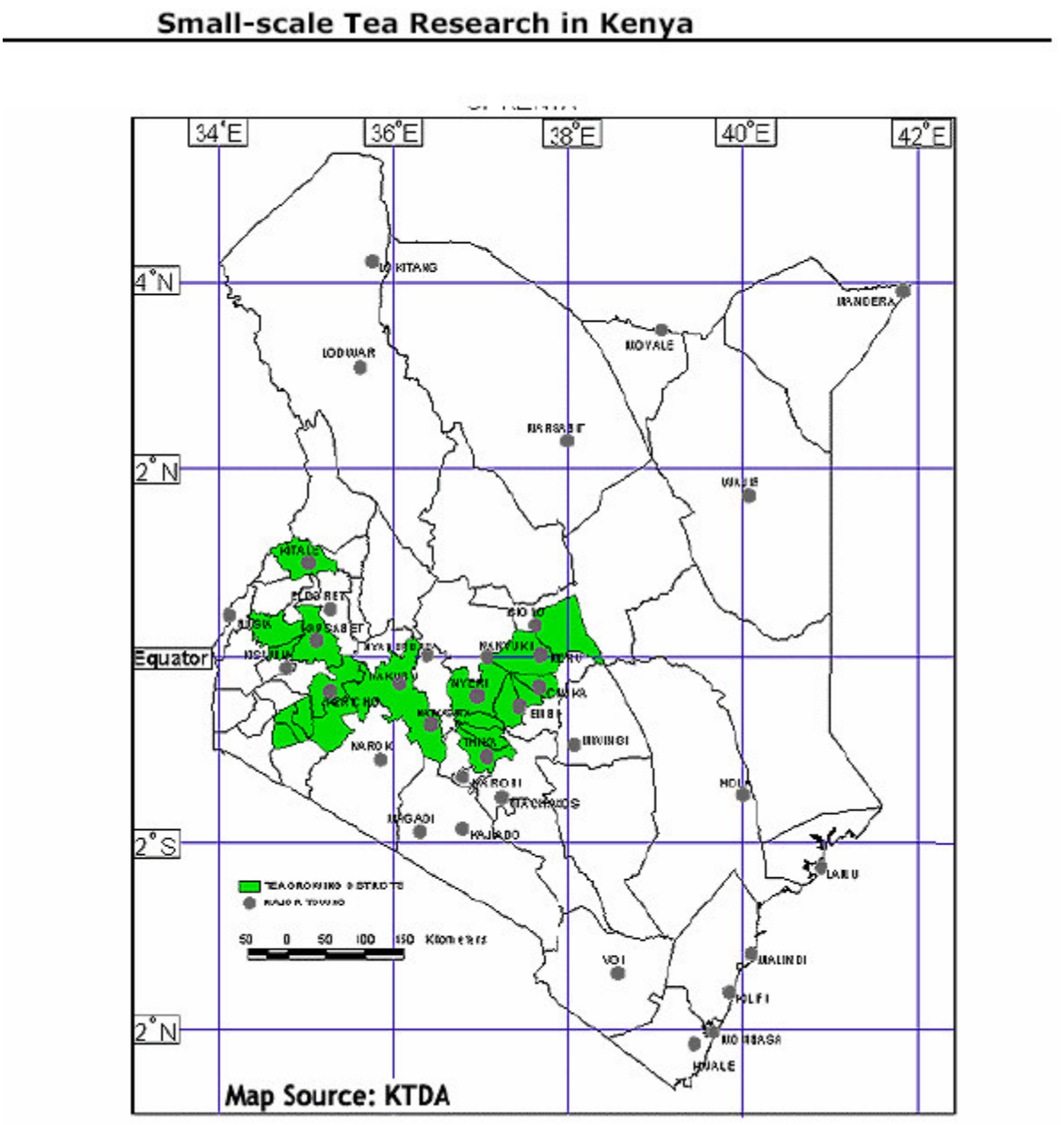

Figure 1: Map of Kenya showing tea growing areas (Source KTDA, 2006)

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar