

**THE RELATIONSHIP BETWEEN ECO-POSITIONING AND
PERFORMANCE OF THE KENYA FLOWER COUNCIL
MEMBER FIRMS**

BY:

JANE B. NYAKANG'O

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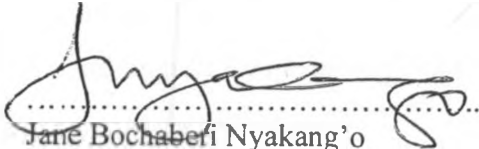


DECLARATION

This Management Research Project Is My Original Work And Has Not Been Presented For The Award Of A Degree In Any Other University

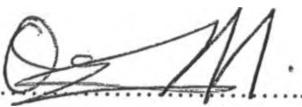
Signed

Date


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Jane Bochaberi Nyakang'o
D61/P/7353/05

24th oct. 2007
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This Management Research Project Has Been Submitted For Examination With My Approval As The University Supervisor

Signed .....
Dr. Martin Ogutu
Lecturer, Department of Business Administration
University of Nairobi

Date 3rd/11/2007
.....

DEDICATION

This research work is dedicated to my two lovely sons, Collins and Elvis who are the reason for my being. Despite my being away from them for long hours doing this research, their love and support for me throughout this study was unwavering.

ACKNOWLEDGEMENT

I would like to appreciate the support given by my supervisor, Dr. Martin Ogutu towards the completion of this study. His patience and readiness to correct and provide insights inspired me to move on even when all seemed impossible.

Many thanks also go the Chief Executive Officer of the Kenya Flower Council, Ms. Jane Ngigi and her staff members who provide me with information to complete this study. I also want to thank my own staff members at the Kenya National Cleaner Production Centre who assisted me in one way or the other in gathering information for this work.

Finally yet importantly, I would like to appreciate all the Kenya Flower Council members who responded to my questionnaire. Without them, this study would not have been.

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ABSTRACT

The cut flower industry is an important economic sector for Kenya, earning over US \$ 400 million annually and leading in exports to the European Union with a 31% global share. However, growing environmental awareness and ethical concerns of consumers in export countries, along with trade unions, are putting pressure on the global floriculture industry to develop and conform to codes of conduct for environment, agro-chemical use, workers' health and safety in order to access their markets. The Kenya Flower Council has developed an Environmental Code of Practice which members must follow with respect to protective clothing for workers, safe agro-chemical and water use. Members who adhere to this Environmental Code are accredited either gold or silver and are expected to enjoy a competitive advantage in accessing foreign market thereby increasing sales. The objective of this study therefore, is to determine the relationship between eco-positioning as measured by these certification levels and business performance of the Council members as measured by sales volume.

To understand the importance of the ecological environment to the success of the Kenya Flower Council member firms, a census survey was carried out between August and September 2007. The results indicate that there is a positive relationship between the certification level and sales volume. Within the sample, this relationship showed up most clearly in the fact that the non-certified company had a significantly lower correlation ($R^2 = 0.7131$) compared to silver and gold. The finding provides support for the conjecture that a higher eco-positioning as evidenced by the certification level increases a firm's abilities to pursue more markets and therefore increase sales. More specifically, a higher certification such as Gold may possibly allow firms to sell "green" flowers at a higher price or in greater quantity, (2) prompts customers who are otherwise indifferent to environmentally responsible efforts to buy "green" goods, (3) improves a firm's overall reputation among customers, and (4) provides the firm with an "early-mover" advantage and status as an "industry leader" (given that the better management practice establishes an industry standard).

The results also indicate that better environmental performance appears to lower costs in the long term since investments in environmental innovations were reportedly paid back within 5 years. This finding supports the conjecture that implementation of a more efficient production technology, which reduces agro-chemical and water consumption as well as pollution, enhances market access.

An important advice to be given to flower firms on the basis of this study is to improve their performance by a better linkage between the ecological environment and strategic planning and to communicate this through a 3rd party certification. The positive effects of a firm's business strategies and its approaches to integrating natural environmental issues into the organisation's long-term planning, defines a new area of possible competitive advantage and therefore better performance. An extension of this research could be an assessment of whether a rising average level of natural environmental development by other productive sectors of industry in Kenya affects the nature of this relationship. If it does, proactive firms might be in the lead on surviving in the competitive globalised arena, and defensive firms will be forced to change their perception on the role of the ecological environment on business performance.

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CHAPTER ONE: INTRODUCTION

1.1 Background

This project investigates the relationship between ecological positioning (“eco-positioning”) and the performance of the members of the Kenya Flower Council (KFC). It comprises a census survey of all the Kenya Flower Council flower firms. The research investigates whether markets can be accessed or customers be won by embracing a proactive environmental strategy as indicated by the level of certification (i.e. gold-, silver- and non-certified).

This positioning as an environmentally conscious company has influenced many companies’ strategy making processes in Kenya. Strategy is about winning. It is a unifying theme that gives coherence and direction to the actions and decisions of an individual or organisation. Johnson and Scholes, (2002) defines strategy as “the direction and scope of an organisation over the long-term, which achieves advantage for the organisation through its configuration of resources within a changing environment and to fulfill stakeholder expectations”. They note that strategic decisions are normally about trying to achieve competitive advantage through effective positioning. These decisions are likely to be concerned with the scope of an organisation’s activities. Strategy therefore is concerned with matching of the resources and activities of an organisation to the environment in which it operates, often known as the strategic fit. Strategic fit is developing strategy by identifying opportunities in the business environment and adapting resources and competences so as to take advantage of these.

Industry, trade and environment are inextricably linked. Because industry is constantly interacting with the environment in terms of inputs, products and pollution, its susceptibility to changes in this ecological environment is therefore inevitable. Both manufacturing and service industry for instance are characterized by stiff competition and stringent, more frequent and complex environmental national and international laws to comply with. In Kenya we have the Environmental Management and Coordination Act of 1999, as well as Multilateral Environmental Agreements such as the Kyoto Protocol in respect of global warming gases, Basel Convention in regard of trans-boundary movement of hazardous waste and Montreal Protocol in respect of ozone-depleting substances (Hoffman, 2004). Other

environmental requirements relate to voluntary codes of practice, product-characteristics and life cycle related requirements.

Traditionally, investments to protect the natural environment have been viewed as a drain on a firm's resources (Palmer et al., 1995). This is true to some extent as firms spend millions of shillings to install technologies that prevent environmental degradation and reporting their significant environmental impacts. US firms for instance, spent more than US\$ 120 billion in 1994 to comply with environmental laws (Konar and Cohen, 2001).

In the last 20 years, however, a growing number of researchers have challenged this assumption. In the field of industrial ecology, scholars argue that there are situations where beyond-compliance behavior by firms is a win-win for both the environment and the firm (Earnhart and Lizal, 2007). That there is a positive relationship between environmental performance and financial performance. Scholars now suggest that firms may be both green and competitive (Porter and van der Linde, 1995).

1.1.1 Eco-positioning and Performance

Growing environmental concerns, as enshrined at the international level in multilateral environmental agreements (MEAs) and at the national and local level in environmental regulations and standards as well as consumer preferences for "greener" products is increasingly influencing production and trade patterns. Other demands that have become so forceful lately include the need to produce goods and services in an environmentally friendly manner, respect for human rights and good returns for shareholders. Products or services produced in an environmentally friendly manner are said to be ecologically produced and therefore referred to as "eco-products". Eco-positioning of a company therefore refers to the levels of environmental performance attained by a facility with respect to environmental management throughout its entire value chain of its business. It starts from the extraction of material inputs, processing, distribution and final disposal in a manner that generation of waste is reduced, and use of less harmful chemicals encouraged. Eco-positioning also includes the manner in which the company manages the health and safety of its workers and the community.

Changing market exigencies are also increasingly making eco-positioning of companies as important in markets as price- and brand positioning (Bagwell and Staiger, 2001b). Discerning consumers are more and more preferring 'green' and 'ethical' products and services. Bagwell argues that effectively responding to, or even better, anticipating ever more stringent environmental and health requirements by consumers is a key challenge for companies. That success or failure in this regard will determine whether market shares can be maintained. The cut flower industry in Kenya is a classic example where the environmental requirements have become so central to their operation.

Performance is related to competitiveness. A well performing company in most cases enjoys a better competitive advantage over the rest in the industry and can be able to deliver superior products as well as maintain its market share. There are three models that explain competitive advantage of firms. The first is the "Competitive Advantage Model" developed by Michael Porter. The basic tenet of this model is the need to align the organization with its environment, the key aspect of this alignment being its industry competitors. The competitive rules of the game are strongly influenced by the industry structure coupled by strategies available to the organization (Mintzberg, 1999). According to Porter, there are five forces of competitive strategy, namely, the bargaining power of customers and suppliers, the threats of substitute products and rivalry among existing competitors. In the flower sector in particular, the power of buyers is so strong that it provides an external driver for businesses to become environmentally friendly.

The second model is the "Resource Based View (RBV) of Competitive Strategy" developed by economists (Burnes, 2004). It sees above average profitability as coming from effective deployment of superior or unique resources that allow firms to have lower costs or better products, rather than from tactical manoeuvres or product-market positioning. It explains that competitive advantage is an outcome of the development of valuable organizational capabilities, such as continuous innovation, organizational learning, superior technology, and stakeholder integration, associated with a proactive environmental strategy (Hart and Ahuja, 1996). The cut flower industry members have over time developed specific innovations that have put individual firms ahead of others in terms of the performance.

The third model is the “Strategic Conflict Model” which portrays competition as a war between rival firms (Burns, 2004). Central to this approach is the view that a firm can achieve increased profits by influencing the actions and behaviour of its rivals thereby manipulating the market environment.

This study will limit itself to the application of the first two models in explaining the exogenous factors (e.g. consumer preferences) and the endogenous factors such as production processes that make some companies perform better than others. Resource-based studies in particular, have unpacked the organizational resources and capabilities that link environmental strategy and organizational performance (e.g., Russo & Fouts, 1997). For example, KNCPC (2006) showed that complementary process capabilities contributed to cost advantage when a firm implemented “best practices” for environmental management. Consequently, an important aim of eco-positioning is the implementation of policies and programs, which connect environmental management to improved performance (Rennings et al, 2003). Pollution prevention and the associated re-assessment of firms’ production processes engenders opportunities for firms to innovate by modifying their production “strategically”, such as using renewable energy, reducing the use of toxic chemicals and recycling by-products that would otherwise be released into the environment. In the cut flower industry, such innovations include the use of organic fertilizers, integrated pest management, renewable energy among others. Porter and van der Linde (1995) argue that this innovation may translate to better performance for a firm. Some firms are therefore going beyond regulations and embracing voluntary programs to reduce their pollution levels. Some of the most important voluntary instruments in this respect are standards for environmental management systems (EMS) and practices such as ISO 14001, the Kenya Flower Council Code of Conduct, Cleaner Production and Product Life Cycle Assessments. Implementation of EMS’s are intended to promote process innovations towards improved environmental quality in combination with decreased costs (e.g. energy, water, waste, materials) as well as product innovations in the field of eco-efficient products and services.

1.1.2 The Cut Flower Industry in Kenya

The flower industry in Kenya is relatively young. Flower growing has overtaken coffee and tourism as a source of foreign exchange for Kenya and ranks second only to tea (HCDA, 2006). The Horticultural Development Authority (HCDA) estimates that in 2006, 86,480 tonnes of cut flower worth Ksh. 23,560,567,756 were produced. Flower growing is mainly located in Naivasha, Kericho, Nakuru, Thika, Nyahururu and Athi River. There are approximately 200 flower growing firms in Kenya with about thirteen (13) being medium- to large- scale. The rest are small- and micro- enterprises in which women make a big representation (HCDA, 2006). Most flower growers are represented by the Kenya Flower Council (KFC) whose membership account for 60-70% of the total cut flower production in Kenya. It has 46 flower growing and exporting companies with 66 separate firms spread within the country. Important players in the flower industry include big multi-national growers like Sher, Homegrown, Oserian and Finlay Flowers and local small companies such as Suera, Veg Pro among others.

There are over 2000 hectares of flowers grown under green houses (HCDA, 2006). None of these farms are over 20 years old and more importantly over 80% of their growth has come in the last ten years. The country has seen rapid growth in growing area over the last decade, from a mere 150 hectares ten years ago to well over 1500 hectares in 2005. While cultivated area has grown at 10% annually, exports have increased at a phenomenal 35% per year. This has happened due to rapid investments in growing infrastructure, adoption of the latest technologies, improvements in processing and transporting capabilities.

Over 95% of the Kenyan cut flowers are exported to the European Union (EU) where it does not attract any duty. This is in line with the "Lome Agreement" that gives Kenyan horticultural produce preferential access to the EU until December 2007. The Kenya government is currently negotiating with the EU to have an "Economic Partnership Agreement"(EPA) in place before the end of 2007 to continue or even improve upon the advantages of the Lome agreement. The United Kingdom accounts for 25% of these export destinations.

Such rapid growth however, has hidden costs -- environmental as well as human. For example, pesticides applied by the flower growers threaten Lake Naivasha, around which many plantations are concentrated, and local hippo populations are also under threat. Lake Naivasha is one of Kenya's few freshwater lakes. All these factors raise the potential risk of exposure for workers and the population. These pollution and safety issues continue to be the subject of a lot of international debate (BBC, 2002).

The Kenya Flower Council the main industry association, is trying hard to shake this perception. It has drawn up a strict code of practice for its members which stipulates, among other things, protective clothing for workers, safe agro-chemical and careful use of water. KFC accredits its members either gold or silver for this Code of Conduct. As at March 2007, a total of 7 of the KFC member firms were certified gold, 23 silver and 16 non-certified (KFC, 2007). There are indeed a handful of growers who do not adhere to the Kenya Flower Council 's Code of Practice. These transgressors, extract too much water from the lake, spray their flowers with banned chemicals and pollute the lake (BBC, 2002). According to the Food and Agriculture Organisation (2002), there are 5,500 active women groups in Nyeri alone. They grow high-value flowers such as limonium and tuber rose, which they sell to larger growers as fillers for bouquets. Many of these have not been fully informed about good practices (FAO, 2002). This study limits itself to the Kenya Flower Council members.

In the export destinations, flowers have not, until recently, been held to the same ecological or health standards that pertain to edible agricultural products. Supermarkets such as UK's Sainsbury, Tesco and Marks & Spencer, where cut flowers and bouquets prepared in the country of origin are increasingly being sold, there are now exacting cosmetic and environmental standards that exporters must comply with. The supermarkets in 2005, developed a system of food handling and soil treatment requirements known as Euro Retailer Produce Working Group (Eurep) that formulated a framework on Good Agricultural Practice (GAP), now known as Eurepgap (Daily Nation, 25/3/2007).

As environmental awareness and ethical concerns of consumers in European countries continue to grow, pressure continue to be exerted in the flower firms to continuously

innovate their environmental performance. They, along with trade unions, are putting pressure on the global floriculture industry to develop and conform to codes of conduct for environment, workers' health and safety. On the other hand, these environmental and ethical concerns of consumers are offering firms, both large and smallholders in Kenya a chance to create a lucrative niche market without degrading their environment or their health. The Kenya Flower Council Code of Conduct which fosters responsible and safe production of flowers has been accredited by the European Union and given Eurepgap recognition. It has also been given Provisional Sector Scheme Recognition by Tesco supermarket chain.

Compliance with International Agreements such as the Montreal Protocol on ozone-depleting substances that prohibits the use of methyl bromide for soil fumigation and the Kyoto Protocol on global warming is providing additional challenge to the floriculture industry. The World Health Organisation has also classified those agro-chemicals that should or should not be used. In the light of this growing international concern over the consumption of chemicals that persist in the environment the need to reduce or do away with them has become a global concern.

Most multi-national flower firms such as Oserian, James Finlay and Homegrown realized the benefits of environmental positioning (ecological positioning) much earlier compared to their local counterparts. This realisation coupled with the changing regulatory and social environment has led flower firms to adopt strategic responses that give them a competitive position with respect to how they extract and use water, pesticides, fertilizers and energy as well as manage the resultant waste. Differences in strategic responses within firms, corporate environmental policies and efforts made at least potentially constitute one determinant of comparative advantage. This is evident from the different certification levels attained by various flower firms.

1.2 The Research problem

The cut flower industry is an important economic sector for Kenya earning over US \$ 400 million annually (KFC, 2006). Flower export ranks second to tea in terms of foreign exchange earning (HCDA, 2006). Kenya is the leading exporter to the EU, with a 31% share mainly through Amsterdam auctions but with a growing trend in direct sales. In the United

Kingdom, supermarkets are the main outlets, where according to KFC, 255 of the flowers are delivered directly, providing an opportunity for adding value at source through sleeving, labelling and bouquets production.

With over 2000 hectares of flowers currently grown the issue of environmental damage arising from the use of agro-chemicals and water for irrigation is a key concern (HCDA, 2006). Pesticides, fertilizers and herbicides applied by the flower growers threaten the ecological and human environment. The growing environmental awareness and ethical concerns of consumers in export countries, along with trade unions, are putting pressure on the global floriculture industry to develop and conform to codes of conduct for environment, workers' health and safety in order to access their markets. The KFC Code of Practice which members must follow stipulates among other things, protective clothing for workers, safe agro-chemical and water use. Members who adhere to this Code are accredited either gold or silver (KFC, 2006). Gold is the highest certification a flower firm can achieve. This study therefore shall help us understand if this certification status in any way has enhanced the performance of sales volume.

Several studies have analyzed empirically the effect of corporate environmental performance on competitiveness as measured by financial performance (Earnhart and Lizal, 2007) and posted a positive relationship between the two. But these studies have mainly been done in the developed countries. Studies done in the USA employ regression analysis to examine a sample of firms from the Standard and Poor 500 using environmental data from the Investor Responsibility Research Centre (IRRC) Corporate Environmental Profiles Directory. First, Austin et al. (1999) demonstrate that good environmental performance, as captured by certain measures (e.g. toxic emissions and hazardous waste corrective actions), positively affect financial rates of return. Russo and Fouts (1997) demonstrate that good environmental ratings, as assigned by the Franklin Research and Development Corporation, positively impact a firm's return on assets (ROA).

In Europe, the study of Rennings et al. (2003) deals with the influence of the European Union Environmental Management and Audit Scheme (EMAS) on financial performance. The study concluded that EMAS certification improves the financial performance of a

company. The study does not however, look at the influence of the strategic importance of EMAS on the facilities' market success. In the Czech Republic a study done by Earnhart and Lizal (2007) using regression analysis, concluded that good environmental performance, in the form of lower air pollutant emissions, appeared to undermine future revenues, while lowering costs to a greater extent, thus, improving profitability.

Most of these studies have been done outside Africa (OECD, 2000a). The influence of environmental performance or eco-positioning on performance in developing countries has not been studied systematically until recently (Rennings et al, 2003). In contrast, this study examines the relationship between eco-positioning as measured by the level of the Kenya Flower Council certification on a firm's performance as measured by sales volume. To the researcher's best knowledge, no previous study examines this relationship within the Cut Flower Industry in Kenya.

The context of Kenya is interesting because for a long time, environmental issues have not taken centre stage and it is now that firms are struggling to restructure themselves to remain competitive in a globalised economy. Environmental issues in export market destinations regarding energy, natural resources, health and safety, pollution and waste and the search for "green products" offer both competitive opportunities and constraints, and are changing the competitive landscape in the cut flower industry. In Kenya, the influence of ecological environment on performance has not been studied systematically. This research therefore seeks to determine if eco-positioning as measured by the certification level of a firm (gold-, silver-, non-certified) improves performance of firms within the members of KFC with respect to sales volume. In doing so, it seeks to answer the following question: Is there any relationship between eco-positioning and environmental performance?

1.3 Research objective

The objective of this study is to determine the relationship between eco-positioning and performance of firms who are members of the Kenya Flower Council (KFC).

1.4 Importance of the Study

This study contributes to the literature by examining the link between corporate ecological positioning and performance of firms amongst the members of KFC with respect to sales volume in a developing economy. Similar studies have been done in the developed countries but non in a developing country (Earnhart and Lizal, 2007). Secondly, the results of this research will contribute to the understanding of the importance of environmental management to the success of enterprises. That the ecological environment has become as important as price and quality in determining performance and therefore firms need to eco-position themselves strategically to succeed in the market.

1.5 The structure of the Report

The first chapter of this report comprises the introduction containing background, research problem, objectives and scope of the study. The second chapter represents the literature review whilst the research methodology is covered in chapter 3. The results are analysed and discussed in chapter 4. Chapter 5 deals with conclusions and recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Competitive strategy and Positioning

Strategy is a unifying theme that gives coherence and direction to the actions and decisions of an individual or organisation. Johnson and Scholes, (2002) define strategy as “the direction and scope of an organisation over the long-term, which achieves advantage for the organisation through its configuration of resources within a changing environment and to fulfil stakeholder expectations”. There are three basic types of models of strategy that organisations do adopt in practice: the Competitive Forces Model, the Resource-Based Model and the Strategic Conflict Model. The first two models are considered relevant in this study and explain the exogenous factors (e.g. consumer preferences) and the endogenous factors such as production processes that lead to a better performance by firms in the cut flower industry.

The competitive advantage model whose architect was Michael Porter, stems from the Positioning school, which has become the dominant approach to strategy. The basic tenet of this approach is the need to align the organisation with its environment. Porter argues that strategic success is determined by the interaction of five sets of forces: the bargaining power of customers and suppliers, the threat of potential substitute products and new entrants, and rivalry among existing competitors (Mintzberg, 1999). The Positioning school has had a huge influence in strategy formulation and practice in organisations (Johnson and Scholes, 2002). The essence of strategy formulation is coping with competition. Porter and van der Lind (1995b) argue that ‘strategy is concerned with positioning a business to maximize the value of its capabilities that give it a distinguishing mark from its competitors’.

The strategist, wanting to position his company to cope with its industry environment or to influence the environment in the company’s favour, must learn what makes the environment tick. The corporate strategist’s goal is to delve deeper into the surface and find the root cause of each competitive force. Knowledge of these underlying sources of competitive pressure provides the groundwork for a strategic agenda of action. They highlight the critical strengths and weaknesses of the company, animate the positioning of the company in its

industry, clarify the areas where strategic changes may yield the greatest payoff and highlight the places where industry trends promise to hold the greatest significance as either opportunities or threats (Mintzberg *et al*, 1999).

In the context of the cut flower industry, the dominant force is the power of customers. Firms in the cut flower industry must take into account this factor when developing strategy. Environmental standards are dictated by the flower buyers in Europe. For example environmental codes have originated from Europe since here consumers are concerned with quality management. The UK Supermarkets for example, are now adding social and environmental requirements to their supplier codes of practice. Most large firms expect up to two monitoring visits a year from each of their major UK retail buyers to check compliance levels with their standards. These demands are helping shape the prices firms can charge, the costs they must pay for resources and the level of investment in environmental technology that would be needed to compete. A flower firm's choice of buyer groups to sell to is viewed as a crucial strategic decision. Porter in Mintzberg (1999) argues that a company can improve its strategic posture by finding buyers who possess the least power to influence it adversely.

According to Porter (1980), there are only three basic generic strategies a firm can adopt in order to outperform competitors: cost leadership, product differentiation and specialisation by focus. Overall industry "cost leadership" implies taking a dominant market share position in terms of delivering competitively-priced goods and services. "Differentiation" involves creating a product or service perceived on an industry-wide basis as having unique characteristics and for which the customer is prepared to pay a premium price. The gold and silver certification of the Kenya Flower Council members provides the differentiation between firms in terms of the extent of their eco-positioning as it is an indication of the levels of environmental management and corporate social responsibility realised. The third strategy is the "focused strategy" in which a company focuses on a particular segment of the market only. It might seek to achieve cost leadership in that segment or alternatively to differentiate its product or service within that particular segment. In the cut flower industry, firms seeking to retain a certain niche market in the European Union must continuously

maintain a high certification level and in most cases acquire other certifications of the destination market.

2.2 Competences

The Resource-Based View (RBV) of Competitive Strategy has unbundled a set of competences that a firm must have to out compete its peers. Developed by economists the model looks at internal core competences to explain superior performance. It argues that above average profitability comes from effective deployment of superior or unique resources that allow firms to have lower costs or better products rather than from tactical manoeuvres or product-market positioning (Burnes, 2004). This school of thought explains that a firm that performs much better than its peers in the industry, has developed valuable organizational capabilities, such as continuous innovation, organizational learning, superior technology, and stakeholder integration, associated with a proactive environmental strategy (Hart and Ahuja, 1996).

Proponents of the RBV argue that real competitive advantage and therefore better performance comes from the ability to build at lower cost and more speedily than competitors those core competences that spawn unanticipated products. They also argue that senior managers should spend a significant proportion of their time developing a corporation-wide architecture for establishing objectives for competence building. As cited in Burnes (2004), Hax and Majluf state that “the essence of the resource-based model is that competitive advantage is created when resources and capabilities that are owned exclusively by the firm are applied to developing unique competences. Moreover, the resulting advantage can be sustained due to the lack of substitution and imitation capabilities by the firms competitors”. Organisations should therefore “stick to the knitting” and discard those activities that are not part of their business and which do not build on their core competences. Indeed, the KFC member firms have over time, developed specific innovations that have put individual firms ahead of others in terms of their performance.

2.3 Competitive Advantage

Performance and competitive advantage are inextricably linked. A company that is competitive often enjoys a better performance than one that is not. The essence of strategic management is the development and maintenance of meaningful assets and skills and the selection of strategies and competitive arenas such that those assets and skills form sustained competitive advantage (Aaker, 1993). These competences must be core to be able to confer a comparative and competitive advantage to the organisation. For sustained competitive advantage, focus is in the long-term as opposed to short-term profitability measures such as promotions that are fast-payoff projects. KFC members have invested in management of skills and assets that are providing an alternative the foundation for long-term success.

2.4 Eco-Positioning

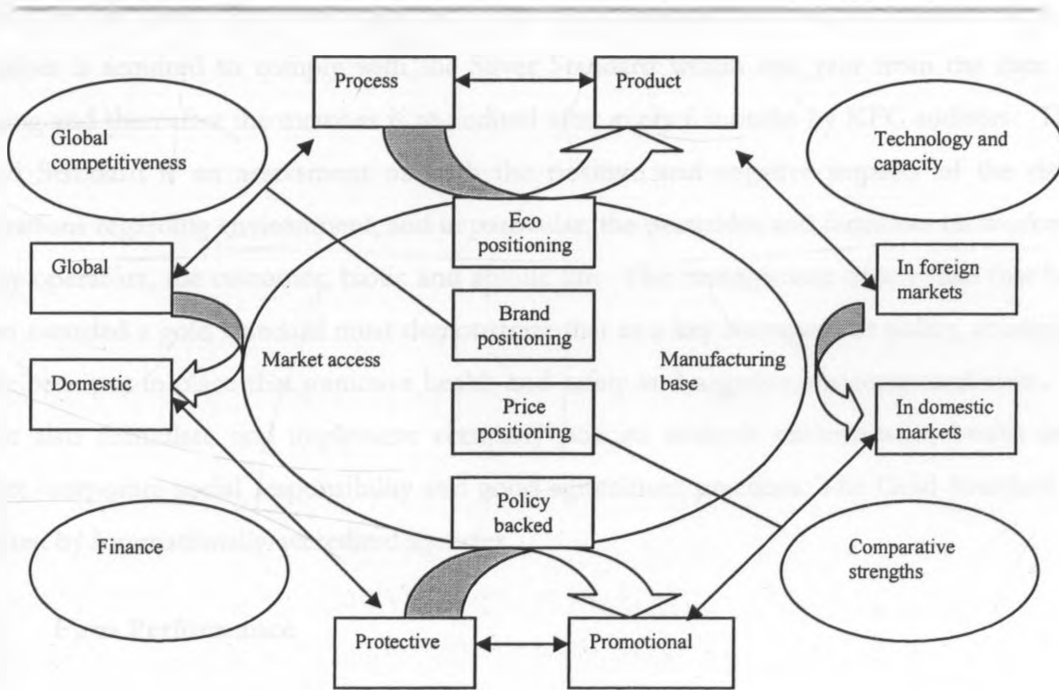
Growing environmental concerns at local, national and international level as well as consumer preferences for “greener” products is increasingly influencing production and trade patterns. This is providing powerful drivers for enterprises to produce goods and services in an environmentally friendly manner, respect for human rights and good returns for shareholders. The traditional perspective views environmental improvements as a drain on a firm’s resources. However, this is being overtaken by the current trends that indicate that pollution prevention and re-evaluation of a firm’s production processes engenders opportunities for firms to innovate by modifying their production “strategically”, such as recycling water, by-products that would otherwise be discharged into the natural environment (Earnhart and Lizal, 2007).

The important aim of this environmental modernization in an organization is the implementation of policies and programs that connect environmental management to improved firm performance. To ensure that this is communicated effectively to third parties such as regulators and customers, firms are going for 3rd party certifications of their environmental performance. This ensures that they position themselves as environment-friendly (or “eco-friendly”) companies producing products or services through processes that respect the environment and human health. In this way they are able to capture and sustain markets with discerning customers and therefore foster “green consumerism”. Their

products are preferred because they are ecologically (or “eco-”) friendly. This eco-positioning implies that a company has maintained high levels of environmental performance with respect to environmental management of its activities throughout its entire value chain. The eco-positioning starts from the extraction of material inputs, processing, distribution and final disposal in a manner that generation of waste is reduced, and use of less harmful chemicals encouraged. It also includes the manner in which the company uses energy, manages the health and safety of its workers and the community.

The World Trade Organisation (WTO, 2002), agrees that the complexity of environmental and health standards increasingly requires strategic and proactive response by exporting countries as well as companies, rather than a piecemeal reactive and short-term approach. It ranks the importance of eco-positioning of companies in international markets as important as price- and brand-positioning (Fig.1)

Fig. 1: Importance of Eco-Positioning



Source: World Trade Organisation, 2002

The cut flower industry in Kenya is a classic example where the environmental requirements have become central to their operations. Changing market exigencies are also increasingly making eco-positioning of flower firms as important in markets as price- and brand positioning (Bagwell and Staiger, 2001b). Discerning consumers in Europe and other export countries are more and more preferring 'green' and 'ethical' products and services. Bagwell argues that effectively responding to or even better, anticipating more stringent environmental and health requirements by consumers is a key challenge for companies. That success or failure in this regard will determine whether market shares can be maintained.

Realising that if Kenya has to become and remain an international player, then firms have to comply with and indeed exceed international standards, the Kenya Flower Council developed a code of conduct for its members, which has received various international accreditations. This code of conduct provides an eco-rating criterion for certifying a company gold or silver thus giving the differentiation between eco-positions achieved by each member firm. The silver standard is the basic requirement for all members. A new member is required to comply with the Silver Standard within one year from the date of joining and thereafter the member is re-audited after every 6 months by KFC auditors. The Gold Standard is an assessment of both the positive and negative impacts of the daily operations regarding environment, and in particular, the pesticides and fertilizers on workers, spray operators, the customer, biotic and abiotic life. The management of any firm that has been awarded a gold standard must demonstrate that as a key management policy, strategies have been put in place that minimize health and safety and negative environmental risks. It must also formulate and implement company policies towards environment, health and safety, corporate social responsibility and good agricultural practices. The Gold Standard is audited by internationally-accredited agencies.

2.5 Firm Performance

Well performing companies often enjoy a competitive advantage over the rest in the industry and can be able to deliver superior products as well as maintain its market share. Studies that have been done have mostly measured firm performance using accounting-based

indicators of financial performance such as profits and operating profits (Earnhart, 2007). Firm performance has also been measured using sales volume. Sales volume strongly and positively affects either profits or costs.

According to the Resource-Based view of strategy, high environmental performance is associated with the deployment of unique resources or capabilities that allow firms to employ profitable environmental strategies that are difficult to imitate. This view avers that, superior ability to manage environmental problems relative to others in the industry may lead to higher returns. On the other hand, the competitive advantage model indicates that high performance is achieved by strategic positioning of a company to attain a fit with its environment and in this case, the changing consumer needs. Several studies have provided evidence that higher environmental performance is associated with better financial performance (Porter and van der Linde 1995).

2.6 Eco-positioning and Firm Performance

According to Aaker (1993), “a business strategy involves the way you compete”—what you do, the product strategy, positioning strategy, distribution strategy, global strategy, manufacturing strategy among others. It also involves the selection of the competitive arena, the markets and the competitors. Competing the right way in the right arena can be extremely profitable, but only for a limited time. The core assets and skills of the business, which are the basis of competition, provide the foundation of a sustainable competitive advantage and long-term performance.” Unless there is an advantage over competitors that is not easily duplicated or countered, long-term profitability is likely to be elusive.

Porter, notes that Strategic decisions are normally about trying to achieve better performance through effective positioning (Mintzberg, 1999). These decisions are likely to be concerned with the scope of an organisation’s activities. Strategy therefore is concerned with matching of the resources and activities of an organisation to the environment in which it operates, often known as the strategic fit. Strategic fit is developing strategy by identifying opportunities in the business environment and adapting resources and competences so as to take advantage of these.

In the cut flower industry, eco-positioning is evidenced by the certification levels by KFC. Much less consumption of agro-chemicals and the associated re-assessment of firms' production processes is expected of a gold-certified member. This is realized by a combination of approaches such as integrated pest management (IPM), reducing the use of toxic chemicals through use of computerized irrigation systems or employing spot spraying of pesticides and recycling by-products that would otherwise be released into the environment.

The gold and silver certification provides the differentiation between firms in terms of the levels of eco-positioning and performance realised. A member must be certified Silver standard before applying for Gold standard. The Gold certification voluntarily takes a firm's eco-positioning to a higher level. The KFC Silver and Gold standards have been benchmarked against EUREPGAP for which they have received recognition. They have also received mutual recognition from the Swiss label Maxhaavelar, UK Tesco's Nature's Choice, Marks and Spencer's Field to Fork and Ethical Trading Initiative. In Germany, the standard has been given provisional equivalent of the local standard (KFC, 2007). Market access to these regions therefore depends on whether a company has a certification recognized in this region or country. This means that the products of the members of the Council would have to meet international ethical and environmental standards. Firms market themselves using the accreditation given. In the auctions where flowers are normally sold, no buyer will touch flowers that have no certification. Therefore performance of a flower firm is greatly influenced by the eco-positioning strategies in place for recognition in export markets.

As competitive marketing strategies, firms have taken to making elaborate labels describing their environmental, health and safety stewardship on flowers as they pass through the auction line. Certification status such as silver or gold confers status and a distinction from the rest. Labels on the sleeves of a flower provides an innovative way of communicating a firm's ecological position.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

The research design was a census survey to examine the effect of corporate eco-positioning on performance as measured by sales volume of the Kenya Flower Council member firms. Such a survey was considered suitable for this study because it is possible to gather a large amount of data that is useful for comparison purposes among various firms.

3.2 The Target Population

The population of interest in this study were flower firms who were members of the Kenya Flower Council as at June 2007. According to the KFC (2007) there were 46 members located all over Kenya; seven of these had a gold certification, twenty three had silver and sixteen had none. This choice was due to the fact that the Kenya Flower Council (KFC) members constitute approximately 70% of the total cut flowers grown in Kenya. Secondly, unlike non-members KFC has developed a Code of Practice for its members that covers in detail their environmental performance, health and safety and corporate social responsibility which is the determinant of their eco-positions. Membership is in three levels; gold-certified, silver-certified and non-certified. The list of the flower firms was obtained from the Kenya Flower Council (Appendix A). The respondents for the questionnaire were the Environment, Health and Safety Managers in these firms.

3.3 Data Collection

This study used both primary and secondary data. Primary data was collected by self-administered semi-structured questionnaire (Appendix B). The Environment Health and Safety (EHS) manager was the target of the electronic survey. This is because the questionnaire was environmental in nature and these group of personnel were thought to be the most competent in this area of study. The questionnaire was sent electronically to the firms. Part 1 of the questionnaire collected general information about the firm. Part 2 collected data on those factors that constitute eco-positioning strategies while part 3 dealt with firm performance. Data and information on explanatory variables for eco-positioning and performance were covered in part 4.

Secondary information included sales volume for cut flowers in the study period obtained from the Kenya Flower Council after firms declined to provide these data. The attached form (Appendix C) was used to collect this secondary data.

3.4 Data Analysis

The research design was a census survey. However, since not all firms responded to the survey, data analysis of the respondents was done using descriptive statistics (i.e. means, frequencies, percentage and inferential statistics) and population values were derived. To test the relationship between certification level (eco-positioning) and performance of a company, regression analysis was done. Sales volume as a measure of performance, was the dependent variable whilst certification level was the independent variable.

3.5 Operationalisation of Concepts and Variables

3.5.1 Eco-positioning

The levels of firm membership (gold-, silver- and non-certification) to the Kenya Flower Council provided the determinant of eco-positioning. These certification levels are associated with different environmental performances with respect to impacts on air, water or land pollution. There is also natural resource effects associated with water use and energy leading to either higher or lower resource depletion or environmental degradation, depending on the scale and resource efficiency of enterprises. Thus, the certification levels define the position that a firm lies with respect to its environmental performance and natural resource consumption. Gold certified companies are considered as having a higher environment performance than silver and therefore have a higher ecological rating (eco-rating) or eco-position. Environmental performance and eco-position are therefore used interchangeably in this study.

Variables associated with high certification levels include organizational and technological changes in place to support high environmental performance. In a similar study, Renning et al. (2003), defines environmental innovations as techno-economic, institutional and social

changes leading to an improved quality of the environment and therefore the eco-position of a firm.

Different levels of environmental performance are achieved by gold-certified and silver-certified firms as they seek to consolidate their positions in the market. These differences are due to the levels of technological innovations, organisational changes, environmental management systems, skills and knowledge that each firm has developed over time. The aim is to promote process innovations towards improved environmental quality in combination with decreased costs (e.g. energy, water, waste, fertilizer, pesticides, herbicides) as well as product innovations in the field of eco-efficient products and services. Previous research has measured environmental innovation of a firm using Table 1 (Renning et al., 1996). We create a similar measure for this study.

Table 1: Environmental Innovations Associated with Eco-positioning

● Environmental employee suggestion schemes
● Environmental, health and safety teams
● Environmental planning
● Environmental management systems
● Customer and supplier surveys
● Research & development corporations
● Waste treatment
● Process recycling
● Energy production and use

Adapted from: Renning et al., 1996

3.5.3 Firm Performance

As variables to explain firm performance, the researcher selected the sales volume over the study period 2004-2006. Other studies (e.g. Earnhart and Lizal, 2006) have mostly used financial indicators derived from balance sheets, such as assets, and information taken from firms' income statements, such as profits to determine competitiveness. This was possible because data could be obtained from a private data vendor, the Aspekt, whose database includes all firms traded on the primary market – Prague Stock Exchange. In the context of the cut flower industry in Kenya, individual firm financial indicators were difficult to get

from the respondents since these are held in high secrecy. Therefore sales volume was used as a measure of firm performance. It is expected that a gold-certified company has a better eco-positioning strategy and therefore enjoy better performance as will be evidenced by higher sales volume.

CHAPTER 4: DATA ANALYSIS AND INTERPRETATIONS

4.1 Introduction

The objective of this study was to examine the relationship between eco-positioning and performance of the Kenya Flower Council member firms. Initially it was designed that primary data derived from a census survey as well as secondly data from the KFC would be used. However, out of the 46 members of the Kenya Flower Council, only 21 responded which represents about 46%. The reason why many of them did not respond is that in the past, the industry has been vilified on its environmental record and therefore there is a lot of fear that information given can land in wrong hands. Because of this general concern within most of the industry members and the need for confidentiality of the information given, the names of the companies are withheld in this document. The respondents cut across the Kenya Flower Council certification levels and are therefore considered to be representative of the KFC-participants.

4.2 Response Rate

Not all the Kenya Flower Council Members responded to the questionnaires. As indicated in Table 2, a total of 21 firms responded to the questionnaire representing 46% of the response rate. Even for those that responded, the question requesting information on sales volume was provided by only 4 firms. This necessitated that for this particular question that formed the basis of the correlation between eco-positioning and performance, secondary data derived from KFC be used. The findings and conclusions are thus based on the 46% of the responding firms. A variety of reasons were given for failure of some of them to respond. Several cited being too busy, others feared that the information might be used for non-academic purposes. For some it was quite clear that they lacked a corporate policy on communicating information to the public while for those who do not have any certification from the KFC clearly were not interested.

Table 2: Survey response rates

Response	Number of facilities	Share of all notified facilities
Facilities notified (population)	46	100%
Responded	21	46%
Failed to respond	26	54%

4.3 Firm Background Information

The background information include the name of the company, age of facility, its size in terms of employees and percentage of cut flowers exported. About 66% of all companies that responded to the questionnaire were established between 5 and 15 years ago. All the flower firms export 100% of their produce.

Table 3: Age of flower firms

No. of years of existence	Frequency	Percent (%)
Less than 5	3	14.3
Between 5-10	7	33.3
Between 10-15	7	33.3
Between 15-20	4	19.1
Total	21	100

4.4 Eco-positioning

These part of the study looked at certification level that a company has attained as well as environmental innovations that it has developed over time to explain this certification. The innovations can be organisational, product or environmental process related as detailed in sub-section 3.5.1.

4.4.1 Importance of Environment

The ecological environment was regarded as an important factor for doing business by all the firms that responded. A total of 83% of the firms reported that the ecological environment is very important for their cut flower business. This is consistent with the study of Rennings et al (2003) that found out that companies certified the European Union Environmental Management and Audit Scheme (EMAS) found the ecological environmental an important factor of business.

4.4.2 Certification level

4 indicates that majority of the companies that responded are silver certified. Only one gold and one non-certified member responded. Age seemed to play a role in the certification level as those that are gold certified appear to have been established as early as 1988. Older companies are expected to have established environmental management systems and safeguards for effective management of their businesses and should therefore should have a better environmental performance.

Table 4: Firm certification level

Number of Companies	Years of existence	Certification level
6	10-20	Gold
14	5-10	Silver
1	4	Non-certified

A total of 89% of the firms indicated that silver or gold certification has improved their access to export markets mainly in Europe, Asia, and USA. Likewise nearly the same percentage of firms (90%) validate the strategic importance of the KFC certification. That certification induced long-term environmental planning and has resulted to strong participation (56%) of all departments and executives in further development of

environmental management systems. The positive impression about the influence of the certification on markets has driven many firms to acquire other certifications required by market destinations such as those of UK supermarkets, the British Ornamental Plant Producers and the European Good Agricultural Practices.

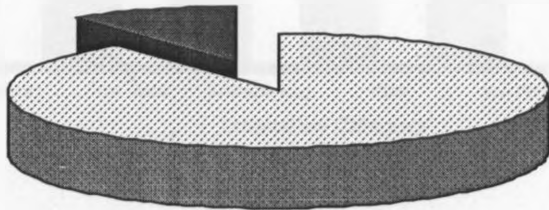
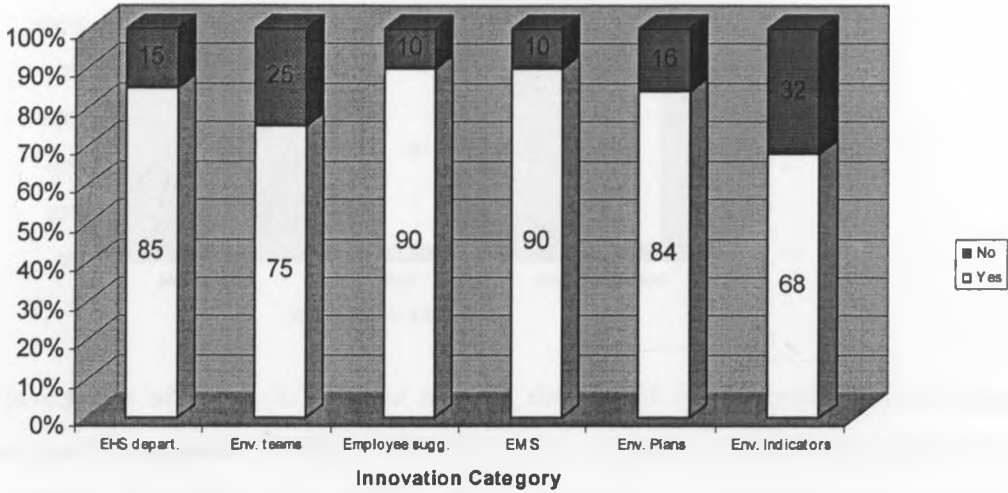


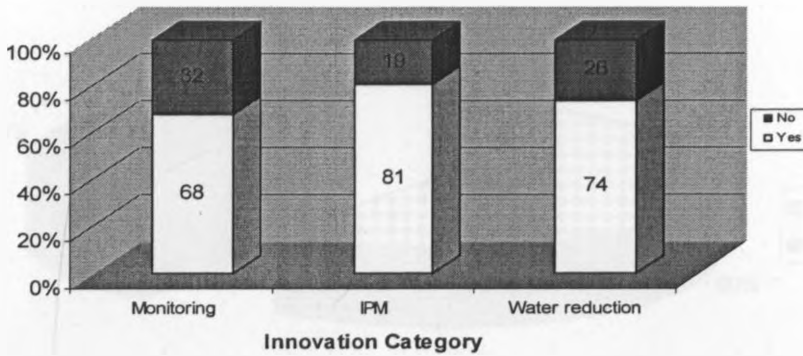
Fig. 3: Environmental Organisational Innovations



This finding is consistent with the study of Rennings et al (2003) that found out that the EU Environmental Management and Auditing Scheme (EMAS) directly and indirectly has an influence on environmental innovations.

Although a little lower, 68% of the firms reported monitoring the use of chemicals and water. This is done through use of a special drip irrigation method called the “hydroponic system” that is computerised and feeds flowers with only the water and chemicals that are necessary. Before carrying out the irrigation, the physical wetness of the soil is taken into consideration using machines called tensiometers located in strategic positions. This gives an indication of the amount of water to apply per square meter.

Fig. 4: Explaining Environmental Performance



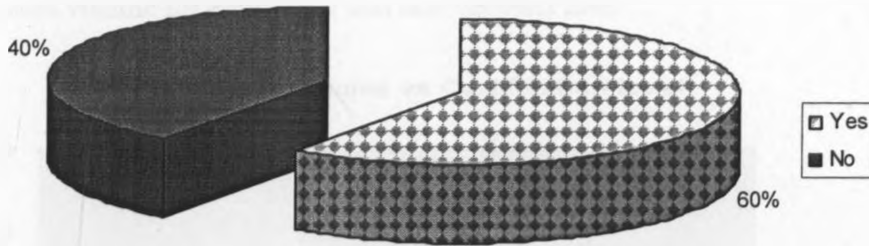
A high percentage of firms (81%) have reduced the use of agro-chemicals by practising integrated pest management (IPM). IPM means that companies use natural organisms to predate against the pests. In an event that a pesticide is introduced for example, environmental and human safety is considered as well as its World Health Organisation (WHO) class. Firms that are Kenya Flower Council Gold certified reported not to be using Class 1 and almost all of class 2. These are considered harmful. Mainly class 3 and 4 are used. Silver certified firms do not use Class 1 chemicals although class 2 may be used. The study shows that the certification level determines the type of agro-chemicals that can be used on a firm. The higher the certification level, the more environmentally friendly chemicals are used.

4.4.4 Research and Development Co-operation

A total of 60% of the firms reported that they undertake supplier and customer surveys as well as research and development co-operations for environmental activities. This involves programs leading to more pest-resistant species of flowers or consumption of less energy.

About half of the firms (49%) reported to have had their investments in environmental improvements and research pay back within a 5 year period.

Fig.5: R & D Co-operations



4.5 Firm Performance

This section looked at variables that explain how a company is performing in the market with respect to sales. Due to non-responsiveness of the firms on this question, analysis was done based on secondary data given by the Kenya Flower Council for sixteen companies covering the period 2004-2006. Out of the sixteen companies, one was gold-certified, fourteen silver and one non-certified. Means were calculated for the three categories after controlling for firm size by dividing by acreage of flowers grown. As indicated in Table 5 the mean sales for the three years was highest for gold-certified and lowest for non-certified. This however, must be interpreted with caution as there was only one firm in the gold and silver category.

Table 5: Mean sales of flowers per hectare, 2004-2006

Certification level	No. of firms	2004	2005	2006	Means (x)
Gold	1	47	49	61	52
Silver	14	32	36	39	36
Non	1	11	7	7	9

4.6 Eco-positioning and Performance

On the relationship between eco-positioning and performance, a correlation analysis was done of sales volume for gold, silver and non-certified firm.

Fig. 6: Sales Volume vs Certification level

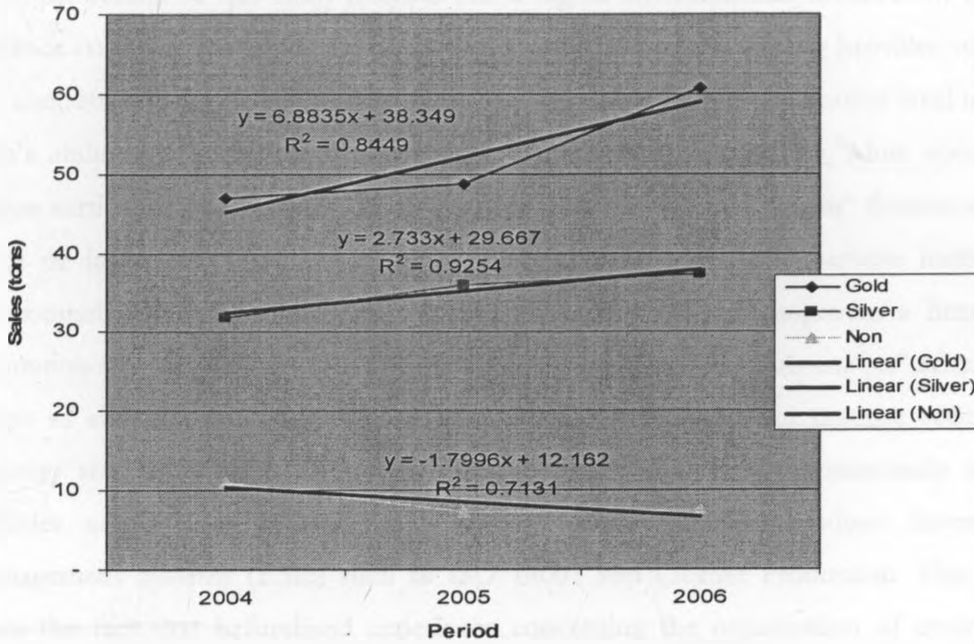


Table 6: Regression Statistics

Certification level	R ²	Growth Sales (sales/ha/yr)
Gold	0.8449	6.8835
Silver	0.9254	2.733
Non-certified	0.7131	1.7996

From the regression statistics, the sales volume and certification level are strongly correlated as indicated by the high values of R². However, the growth in sales is highest for gold followed by silver certified companies.

CHAPTER FIVE: SUMMARY, DISCUSSIONS AND CONCLUSIONS

5.1 Summary, Discussions and Conclusions

First, the results of this study indicate that a higher environmental certification appears to enhance company performance in terms of sales volume. This finding provides support for the conjecture that a higher eco-positioning as evidenced by the certification level increases a firm's abilities to pursue more markets and therefore increase sales. More specifically, a higher certification such as Gold may possibly allow firms to sell "green" flowers at a higher price or in greater quantity, (2) prompts customers who are otherwise indifferent to environmentally responsible efforts to buy "green" goods, (3) improves a firm's overall reputation among customers, and (4) provides the firm with an "early-mover" advantage and status as an "industry leader" (given that the better management practice establishes an industry standard). It is also to be taken into account that environmentally innovative facilities could have a more than average propensity to introduce Environmental Management Systems (EMS) such as ISO 14001 and Cleaner Production. This is drawn from the fact that beforehand experience concerning the organisation of environmental protection often has a positive influence on environmental innovations and therefore better economic performance.

Second, the results of this study indicate that better environmental performance appears to lower costs in the long term since investments in environmental innovations were reportedly paid back within 5 years. This finding supports the conjecture that implementation of a more efficient production technology, which reduces agro-chemical and water consumption as well as pollution, enhances market access.

Flower firms invested in new production technologies over this period with pollution prevention stemming from the installation of better and cleaner production processes being prevalent among the certified companies. These technologies include systems that give flowers just enough of the water and nutrients that they require. Some firms reduced water pollution by installing constructed wetland technologies to clean the water before discharge

into a natural water course. Regulatory scrutiny from the Kenya Flower Council (KFC) as well as countries of export seems to get stronger by day. Gold certified companies undergo monitoring for compliance by KFC twice a year while those that are silver certified are monitored once a year. In addition, if the firm has other certifications such as those of the UK supermarkets get inspected almost once a month.

From the regression analysis, it turned out that there is a significant relationship between firm's certification level and sales. Within the sample, this relationship showed up most clearly in the fact that the non-certified company had a significantly lower correlation $R^2=0.7131$) compared to silver and gold.

In conclusion, the results positively support the research question "Is there any relationship between eco-positioning and environmental performance?". The ability of certified environmental management systems performance is a finding of this study and the protection of public goods and of benefits to society should be taken into account. The study shows as well that certification has led to firm innovations that in a way depend on the maturity of the certification (measured as age of certification and beforehand experience concerning the organisation of environmental protection). A decisive factor of success regarding the KFC certification is its organisational scope and the way firms position themselves towards competitors with quality of products rather than low prices.

5.2 Limitations of the Study

Interpretation of the results presented is subject to a number of limitations. There may be a potential bias posed by survey non-response on the section of performance. All except four of the 21 firms provided data on sales volume. Therefore the regression analysis was based on the secondary data provided by the Kenya Flower Council (KFC) for only 16 firms. Out of the 16 firms, 14 were silver and only one in the gold and non-certified category. This sample makes us to interpret the results of the regression analysis with caution. The small number of the firms used for this regression means that the results cannot accurately describe the flower industry but is valid for verifying the generalizing potential of the relationship proposed. The problem of heterogeneity was partly solved by standardization using the acreage of flowers grown.

5.3 Recommendations for Further Research

This study focussed on Kenya Flower Council members because of the existence of a strong code of practice that governs their operations. For a future study, samples of the universe of flower firms would be desirable which would allow for comparisons between Kenya Flower Council members and other facilities. Further, environmental consciousness amongst consumers of other products such as fish, fruits, vegetables, textile, leather products among others is also increasing. Manufacturers and processors are more and more integrating environmental considerations into product design, manufacture, packaging and distribution. Thus, comparative studies between industry sectors would also be useful.

5.4 Implications for Policy and Practice

This study has demonstrated that business performance in the flower industry is positively correlated to the level of environmental management. An important advice to be given to flower firms on the basis of this study is to improve their performance by a better linkage between the ecological environment and strategic planning and to communicate this through a 3rd party certification. The organisational implementation of environmental and innovation management as well as the practical introduction of new and changed environmental processes and products is relevant in this regard. In the case of environmental innovations, there is an additional "external" benefit to society, which is an improved quality of the environment and safety of the workers.

The positive effects of a firm's business strategies and its approaches to integrating natural environmental issues into the organisation's long-term planning, defines a new area of possible competitive advantage and therefore better performance. This competitive advantage will result from consistency among strategic approaches to the natural environment, and other organizational characteristics (such as contextual, structural, and strategic factors). An extension of this research could be an assessment of whether a rising average level of natural environmental development by other productive sectors of industry in Kenya affects the nature of this relationship. If it does, proactive firms might be in the lead on surviving in the competitive globalised arena, and defensive firms will be forced to change their perception on the role of the ecological environment on business performance.

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APPENDIXES

Appendix A: KFC Member Firms

Item	Company	Contact Person	Physical Address
1	Bawan Roses Ltd	Betty Ann Mboche 020 724843/724912	P. O. Box 46037 Nairobi P. O. Box 235 Thika
2	Beverly Flowers Ltd	Mr. M. Kabuyah 0722 777215	P. O. Box 53836 Nairobi
3	Black Petals Ltd.	Mr. Govindarajan Jayaraj 0722 961246	P. O. Box 19246 Nairobi
4	Charm Flowers Ltd	Mr. Ashokkumar Patel	P. O. Box 42417 Nairobi
5	Countrywide Connections Ltd	Mr. Richard Fernandes	P.O Box 1076, Nanyuki -10400
6	Dave Roses	Mr. P J Dave	P. O. Box 18436 Nairobi
7	Elbur Flora Ltd	Mr. Peter Kairu	P. O. Box 54 Elburgon
8	Enkasiti Flowers Ltd	Mr. Manshukh Patel	P. O. Box 50315 Nairobi
9	Finlay Flowers Ltd	Mr. Chris Mclean	P. O. Box 1966 Kericho
10	Florema (K) Ltd.	Mr. Peter Maina	P. O. Box 124 – 20117 Naivasha
11	Hamer (K) Ltd	Mr. Eddy Verbeek	P. O. Box 1896 Naivasha
12	Hamwe Limited	Mr. Richard Fernandes	P.O Box 791-20117 Naivasha
13	Harvest Limited	John H.A Williams Farai Madziva – General Manager	P.O. Box 60158 Nairobi Location: Kinani Road
14	Homegrown Ltd	Mr. Rod Evans	P. O. Box 10222 - 00400
15	Isinya Flowers	Mr. Rajesh P. Dave	P. O. Box 18436 – 00500 Nairobi
16	Kariki Ltd.	Mr. Richard Fernandes	P.O Box 6038-00100 Thika
17	Kongoni Ltd.	Mr. Umang Patel	P. O Box 32931 Nairobi

18	Kreative Roses	Mr. Bas Smit	P. O. Box 868-00502 Nairobi
19	Lobelia Farms Limited	J.P Viljoen	P. O. Box 227 TIMAU-60203
20	Longonot Horticulture Ltd	Mr. Umang Patel	P. O. Box 1271 Naivasha P. O. Box 32931 Nairobi
21	Liki River Farm	Mr. Umang Patel	P. O. Box 32931 Nairobi
22	Magana Flowers	Santosh Gholkar	P. O. Box 14618 Nairobi
23	Matasia Valley Roses	Mr. Kephlar Lencin Tende Mr. George Omondi (FM)	P.O Box 62677-00200 Nairobi
24	Mt. Elgon Flowers Ltd	Mr. Bob Anderson	P. O. Box 124 Kitale
25	Mweiga Growers Ltd	Mrs. Wangari Wambugu	P. O. Box 1017 Nyeri
26	Nini Ltd	Mr. Mike Higgins	P. O. Box 569 Naivasha
27	Ol-Njorowa Ltd	Mr. Paris Issaias	P. O. Box 18156 - 00500 Nairobi P. O. Box 879 Naivasha
28	Oserian Dev. Co. Ltd	Mr. Ron Fasol	P. O. Box 43340, Nairobi P. O. Box 209 Naivasha
29	P. J. Dave Flower Ltd	Mr. P J Dave	P. O. Box 18436 Nairobi
30	Pollen Limited	Mr. Iain Morrel	P. O. Box 1037 Ruiru
31	Primarosa I Flowers Ltd.	Mr. Naren Patel	P. O. Box 540 Athi River
32	Primarosa II Flowers Ltd.	Mr. Naren Patel	P. O. Box 255 Ol Njororok
33	Redlands Roses	Mrs. I. Spindler	P. O. Box 10 Ruiru
34	Sande (K) Ltd	Mrs. Colete Groenewegen	P. O. Box 709 Village Mrkt.
35	Sarkish Flora Limited	Mr. Darjit Singh Kondola	P. O. Box 65 Nakuru
36	Shalimar Flowers (K) Ltd	Mr. Dennis Wedd	P. O. Box 781 Naivasha
37	Sian Roses	Mr. Jos Van Der Venne	P. O. Box 15139-00509 Nairobi
38	Simbi Roses	Mrs. Nyachae & Mr Karue	P. O. Box 769 Thika
39	Subati Ltd	Mr. Homer Combos	P. O. Box 42480-00100 Nairobi
40	Suera Flowers Ltd	Mr. Erustus. Mureithi	P. O. Box 62599 Nairobi
41	Terra Fleur Ltd	Mr. Tiku Shah	P. O. Box 1092 Thika
42	Tambuzi Ltd	Mrs. Maggie Hobbs	P. O. Box 1148 Nanyuki
43	Valentine Growers Co. Ltd	Mr. Eliud Njenga	P. O. Box 18755 Nairobi
44	Waridi Ltd	Mr. Jeremy Mott	P. O. Box 19294 Nairobi
45	Wildfire Ltd	Mr. Peter Szapary	P. O. box 379 Naivasha
46	Windsor Flowers	Mr. D. F Shah	P. O. Box 746 Thika

Appendix B: Research Questionnaire

Part 1: Company Background

1. Name of Company and physical location of company (Please use A, B, C...for name)

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2. Year of establishment.....

3. Total acreage of flowers grown.....

Part 2: Eco-positioning (Environmental positioning)

This section looks at environmental innovations that are responsible for the firm's certification level.

4. Is Environment an important factor of performance? Yes/No

5. Do you have a Kenya Flower Council certification?.....Yes/No.....

6. If yes, which one? (i) Gold..... (ii) Silver (iii) None.....

7. In which year did you first get this certification?.....

.....

8. Do you have an environmental department? Yes/No

8. Do you have environmental employee suggestion schemes? Yes/No.

If yes describe it (Please attach a sheet if necessary).....

.....

10. Do you have environmental teams. Yes/No. If yes describe them.....

.....

11 Are environmental issues part of your yearly or long-term planning? Yes/No

12. Do you take into account the impact of each stage of production on the company's environmental performance? Yes/No

13. Describe environmental management programs that you have in place (e.g. reducing pesticides, fertilizers and herbicides use, optimizing water consumption, wastewater treatment etc)

.....
.....

Part 3: Performance

This section is looking at how firm's have performed in relation to certification level

13. What percentage of your flowers are exported?.....

14. To which countries are you exporting?.....

.....

15. Give quantitative estimates of your export volume.

Year	Export Volume (Please specify units)
2004	
2005	
2006	

Part 4: Eco-positioning and performance

The section links the certification level and performance of your firm

15. How has the Kenya Flower Council certification increased or decreased the quantities of flowers exported?

.....

16. What other environmental programs do you have for increasing your flower sales?

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