THE ROLE OF INNOVATION IN BUILDING COMPETITIVE ADVANTAGE IN HORTICULTURAL PROCESSING AND EXPORT COMPANIES IN NAIROBI KENYA

LILIAN ONONG’NO AUMA

RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA) DEGREE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

OCTOBER, 2014
DECLARATION

I, the undersigned, declare that this is my original work and has not been presented for a degree in any other university.

Signature ........................................ Date.........................................................

LILIAN ONONG’NO AUMA

D61/68673/2011

This project has been submitted for examination with my approval as University Supervisor.

Signature........................................ Date.........................................................

DR. JACKSON K. MAALU

Senior Lecturer, Department of Business Administration

University of Nairobi
DEDICATION

To my parents the late George James Auma and Grace Anyango Auma, who taught me the importance of education. And to my loving husband Mordecai Kere Omenda for his patience, encouragement and tireless support during the entire MBA study.
ACKNOWLEDGEMENTS

Most of all thanks to God the Almighty who continues to make the impossible possible. It is his will that I have been able to come this far. This project would not have been possible without the support of many people. A number of people have contributed in many ways to the success of this project to which I feel deeply indebted. It may not be possible to mention all by name, I extend my gratitude and sincere thanks to them. I acknowledge HCDA, the regulatory body in the horticultural industry and its stakeholders specifically the horticultural processors for allowing me to carry out research in their organization. Many thanks to the respondents who took time to fill in the questionnaire despite the short notice period. You provided rich data that has made comprehensive analysis possible.

I would like to express my deepest gratitude to my supervisor, Dr. Jackson Maalu for his excellent guidance, constructive criticism and assistance in shaping my research idea. His assistance and speed made it possible for me to complete the research. Further I appreciate the precious support I received from my lecturers during the entire study. Finally, thanks to my husband, parents, and numerous friends who endured this long process with me, always offering support and love. God bless you all abundantly.
The objective of this project is to determine the role of innovation in building competitive advantage in the horticultural processing and export firms in Kenya. The objective of this paper was to determine the innovation activities adopted by various horticultural firms, assess the role of these activities in augmenting competitive advantage, and identifies the factors that may impede or facilitate innovation. Specifically, surveys assessing the above factors are given to 49 companies in the horticultural processing and export industry. Competitive advantage is operationalized by a survey question which tracks the percentage of turnover accounted for by innovation in each firm. Multiple linear regression analysis is performed on the relationship between the percentage of turnover accounted for by innovation and innovations in organizational structure, marketing, product development, and process changes. The regression analysis finds that only product and marketing innovations have a statistically significant effect on the percentage turnover accounted for by innovation, with marketing having a negative overall effect. Customer demand play’s the largest role in the implementation of innovation activities, followed by technological advancement. The fact that customer demand has the strongest relationship on innovation activities is supported by the regression analysis, where we found that product innovation had the strongest role in building competitive advantage.
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<thead>
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<th>Description</th>
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<tr>
<td>HCDA</td>
<td>Horticultural Crop Development Authority</td>
</tr>
<tr>
<td>KNBS</td>
<td>Kenya National Bureau of Statistic</td>
</tr>
<tr>
<td>KRA</td>
<td>Kenya Revenue Authority</td>
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<tr>
<td>HDP</td>
<td>Horticultural Development Programme</td>
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<tr>
<td>UBA</td>
<td>United Bank of Africa Ltd</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and</td>
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<td></td>
<td>Development</td>
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CHAPTER ONE: INTRODUCTION

1.1 Background

In today’s fast paced economy there is an increasing focus on competition and innovation of products and services in many businesses. In an era of globalization, deregulation, increasing competition, new technologies and e-commerce, organizations are finding it harder to compete. In this dynamic and changing environment, one way to create growth and sustain performance is to innovate (Higgins, 1996; Kay, 1993; Patel, 1999). Firms must innovate in order to keep a head of their competitors and this can be in the form of new products or services, cost reducing process improvements or innovative business methods or models.

Innovation has a variety of roles such as the renewal and enlargement of the range of products and services and the associated markets, the establishment of new methods of production, supply and distribution, the introduction of changes in management, work organization and the working conditions and skills of the workforce (European Commission, 1995). In response to massive increase demand, the requirement of products or services and most of organization seek to use innovation methods to get strategic advantages. Innovation helps organizations to better identify market opportunities and exploit them effectively and build a sustainable competitive advantage Trott, (2005). Innovation is essential in order to generate long-term stability, growth, shareholder returns, and sustainable performance and remain at the leading edge of the organizations industry. One way to achieve growth and sustain performance is to foster and encourage creativity and innovative practices internally within the organization (Band et al., 2001).

Competitive advantage can only be generated by strategies that cannot be easily copied by competitors. Between cost, differentiation and focus different firms have adopted varying strategies and this ensures that they all gain advantage in different ways that are not easy to
duplicate creating a dynamic and vibrant industry (Mulwa 2010). These strategies have focus on organizational innovation, production innovation and product innovation. Production innovations initially focused on efficiency and effectiveness in order to increase yields and lower costs. Today, production innovations focus on developing sustainable production techniques and its primary objective is to introduce new products and improve the existing product range in terms of quality, yield and taste. On the other hand product innovations focus on adding value in terms of packaging and ready-to-prepare/eat products (Jones et al 2012).

1.1.1 Concept of Innovation

Innovation is pivotal to survival and success in dynamic and complex organizational environments (Rowley, 2011). According to Robert and Tucker (2008) innovation is coming up with ideas and bringing them to life. The purpose of innovation is to create new customer value. Robinson and Pearce (2005) argue firms find it profitable to make innovation their grand strategy. They seek to reap the initially high profits associated with customer acceptance of a new or greatly improved product. The rationale of the grand strategy of innovation is to create a new product life cycle and making similar existing products obsolete. Changes that create competitive advantage can be internal or external. Internal change is generated by innovation. Innovation not only creates competitive advantage, it provides a basis for overturning the competitive advantage of other firms (Grant, 2005). Innovation strategy helps a company in three ways, exciting its customers, outperforming competitors, and building a new product portfolio (Kiplimo, 2011).

Innovation is seen as the ability to ‘change the rule of the game’ (Johnson et al., 1998). Robert and Tucker (2008) stated there are three types of innovation, product, process and strategy or
business model innovation. In business innovation includes new approaches to doing business that is strategic innovations which is the development of new business concepts. Gary Hamel argues that strategic innovation is not some one-time-only event. If companies are to develop true resilience in turbulent markets they must engage in the continual reinvention of the company’s business model (Grant, 2005).

1.1.2 Competitive Advantage

Gaining Competitive advantage depends on a firm discovering its own unique resources and capabilities and how they can be used in choosing and implementing strategies (Barney, 2007). A firm has a competitive advantage when it’s able to create more economic value. Firms need to develop how to exploit their own unique resources and capabilities than to be excellent in how it imitates the resources and capabilities of other firms. Businesses become more successful when they possess some advantage relative to their competitors. The two most prominent sources of competitive advantage can be found in the business cost structure and its ability to differentiate the business from competitors. Business that create competitive advantage from one or both of these sources usually experience above average profitability within their industry (Robinson and Pearce, 2005).

Porter proposed three different generic strategies by which an organization can achieve competitive advantage. These are overall cost leadership, differentiation and focus. Organizations achieve competitive advantage by providing their customers with what they want, or need, better or more effectively than competitors (Johnson et al., 1998). Grant (2005), views the two sources of competitive advantage as differentiation and cost which define two fundamentally different approaches to business strategy’s firm that is competing on low cost
distinguishable from a firm that competes through differentiation in terms of market positioning, resource and capabilities and or organizational characteristics.

1.1.3 Horticultural Processing and Export Industry in Kenya

The horticultural industry has been ranked Kenya’s fastest growing sub sector and continues to contribute to the Kenyan economy through generation of income, creation of employment opportunities for rural people and foreign exchange earnings, in addition to providing raw materials to the agro processing industry, the sub sector employs approximately 2.5 million people countrywide directly in production, processing, marketing and other activities. Kenya’s horticultural export commodities have historically been focused on the European Union market.

The European Union accounts for 65% of Kenya’s exports (HCDA, 2010). The horticultural products produced in Kenya are either exported or sold locally as fresh or processed products. Fruits account for approximately 0.6% share of the exported products, while vegetables accounts for 1.4% this is according to data from Kenya National Bureau of Statistic KNBS (2010) and the Kenya Revenue Authority (KRA, 2010). More than 50% of the consumers purchase horticultural products from convenient stores whereas, 27% and 15% percent purchase from supermarkets and fast food restaurants respectively. This is largely due to the fact that the urban consumer market is accustomed to purchasing horticultural products in the convenient stores which also make up a larger proportion of the horticultural points of sale. Supermarkets are also set up as chains but they are not as many as the convenient stores. The fast food market generally serves the consumers purchasing semi-processed and processed foods such as fruits salad, juices and meals. Majority of the processed horticultural products traded are fruits mainly; the Mangoes, Passions, Oranges followed by Pineapples and Irish Potatoes. This is because these are the most consumed
horticultural produce in Kenyan market and the least traded processed commodities are the dried vegetables, baby corn and peas (HDP 2010).

Over 80% of vegetables processed products are mainly for export markets. Processing of horticultural commodities in Kenya is characterized by large scale and small scale processing for export market and domestic market respectively. The processed commodities are mainly fruits and vegetables however, processing takes a small percentage of total produce as the fresh market still consumes most of horticultural commodities produced locally. Processing for export is mainly done on; fruits (concentrates of pineapples, mangoes and passion fruits), beans (canned and frozen), and nuts (macadamia nuts, cashew nuts). The local market for processed products is dominated by tomato products (ketchup), fruit jam, and marmalade, corn and Irish potatoes crisps (HDP 2010). There exists a huge potential for horticultural processing industry due to existing gap in processing, especially in fruit industry where supply of some raw materials is low. Though the sub sector is the fastest growing within the agricultural sector lack of efficient value addition strategies deprives the sub sector major socio-economic benefits. Fresh juices also face competition from artificial soft drinks in domestic market (HDP, 2010).

1.2 Research Problem

Innovation and competitive advantage are connected by complex and multidimensional relationships. According to Lengnick-Hall (1992), the link between innovation activities and competitive advantage rests primarily on four factors. One, innovations that are hard to imitate are more likely to lead to sustainable competitive advantage (Clark 1987; Porter, 1985). Two, innovations that accurately reflect market realities are more likely to lead to sustainable competitive advantage (Deming, 1983; Porter, 1985). Three, innovations that enable a firm to
exploit the timing characteristics of the relevant industry are more likely to lead to sustainable competitive advantage (Betz, 1987; Kanter, 1983).

Fourth, innovations that rely on capabilities and technologies that are readily accessible to the firm are more likely to lead to sustainable competitive advantage (Ansoff, 1988; Miller, 1990). Porter (1990), states that organizations acquire competitive advantage by developing new ways to carry out activities of the value chain for delivering superior customer value and this is ideally an act of innovation. Innovations can occur in any value creating activity of the organization, and all types of innovations, both technological and non-technological, can lead to sustainable competitive advantage (Weerawardena, 1999).

The horticultural industry contributes immensely to the economy of the country through job and wealth creation. The horticultural products are processed in small and large scale and consumed locally or exported to other countries and hence key in revenue generation. Despite the growth of the horticultural subsector, there is lack of efficient sustainable value addition strategies to enhance major socio-economic benefits for the country. These strategies should be applied to cushion against the seasonality of the horticultural products, high storage, processing costs and exploitation of domestic and international markets. Products are sold in convenient stores, supermarkets and food restaurants (HDP 2010). Previous research has been done on innovations. Karanja (2011) conducted a study on competitive advantage through innovation strategies in United Bank Of Africa Ltd and concluded that innovation strategies adopted by UBA, contributed to the bank’s survival and success in the uncertain and competitive financial environment consequently achieving competitive advantage.
Wafula (2011) carried out a study on organizational innovation and competitive advantage among Health Focused Non-Governmental Organizations in Nairobi Kenya and concluded that there exist challenges of undertaking consistent and systemic innovation activities. However those organizations that possess higher ratings in extent of innovation activities also subsequently tended to possess a greater competitive advantage than their counterparts. Mulwa (2010) studied the competitive strategies adopted by small and medium sized horticultural exporting companies in Nairobi Kenya concluding that competitive strategies form a key basis of the horticultural export industry performance hence cannot be underrated or ignored. To the best of the researcher’s knowledge there is no study that has focused on the role of innovation in building competitive advantage in selected horticultural processing and export firms in Nairobi. This study therefore seeks to answer the following question, what is the role of innovation in building competitive advantage in horticultural processing and export firms in Kenya.

1.3 Objective of the study

i. To determine the innovation activities adopted by horticultural export and processing companies in Kenya.

ii. To determine the role of innovation in building competitive advantage in horticultural processing and export companies in Kenya.

iii. To determine factors that influence the horticultural processing and export firms in the implementation of innovation activities.

1.4 Value of the study

The research is aimed at determining how innovation contributes to competitive advantage of selected horticultural processing and export firms in Nairobi. The study will be important to the
various stakeholders in the horticulture industry as they will be able to identify areas in need of change and will propose specific actionable activities that could improve competitiveness of their firms. For scholars the study will provide information and knowledge on innovations adopted among horticultural processing and export firms in Nairobi and as well as identify areas of further study. Policy makers will obtain knowledge of the innovations that are suitable and design appropriate policies that will regulate the sector. The horticultural processing and export firms will determine factors that influence the implementation of innovation activities that affect their operations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter looks at the various innovations literature that constitutes and informs the study. The main areas under this include literature review on product innovation, organizational innovation, process innovation, market innovation and its role in building competitive advantage among the horticultural processing and export companies in Nairobi, Kenya.

2.2 Innovation

Innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations (OECD Oslo Manual, 2005). Innovation is the process of taking new ideas effectively and profitably through to satisfied customers. It is a process of continuous renewal involving the whole company and is an essential part of business strategy and everyday practice (Armstrong, Kelly &McAdam, 1998). Innovation is one of the
fundamental instruments of growth strategies to enter new markets, to increase the existing market share and to provide the company with a competitive edge.

Due to the increasing competition in global markets, companies have started to grasp the importance of innovation, since swiftly changing technologies and severe global competition rapidly erode the value added of existing products and services. Thus, innovations constitute an indispensable component of the corporate strategies for several reasons such as to apply more productive manufacturing processes, to perform better in the market, to seek positive reputation in customers’ perception and as a result to gain sustainable competitive advantage (Alpkan 2009). Wafula, (2011) states that the focus of innovation literature varies. Some scholars have analyzed the stages of innovation process; these allowing distinguishing if an organization is a generator or a adopter of innovation (Damanpour, 1992). Other scholars have identified the types of innovation that is technical versus administrative innovation (Damanpour, 1992); product versus process innovation (Daft, 1992) and radical versus incremental innovation (Damanpour, 1996). This literature covers the innovation types.

In the OECD Oslo Manual (2005), four different innovation types are introduced. These are product innovation, process innovation, marketing innovation and organizational innovation. A product innovation is the introduction of a good or service that is new or significantly improved regarding its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics. Product innovations can utilize new knowledge or technologies, or can
be based on new uses or combinations of existing knowledge or technologies. The term product covers both goods and services (OECD Oslo Manual, 2005).

Product innovation is a difficult process driven by advancing technologies, changing customer needs, shortening product life cycles, and increasing global competition (Alpkan, 2009). Innovation in products and services is related with R&D and meeting consumer’s needs (Dale et al, 1999). Andy and Jasper (1998) states the production of new products or processes strengthens a firm’s competitive position in relation to its rivals but the profits and growth will be transitory and only last as long as the innovating firm can defend its position against rivals and therefore increase the firm’s power (Damanpour, 1994; Daft, 1992).

Organizational innovation is the implementation of a new organizational method in the firm’s business practices, workplace organization or external relations. Organizational innovations can be intended to increase a firm’s performance by reducing administrative costs, improving workplace satisfaction, gaining access to non-tradable assets and reducing cost of supplies (OECD Oslo Manual, 2005). Administrative innovation is the main component of organizational innovation and it refers to a new management system, administrative process, and staff development program occurring in an administrative component and affects a social system of an organization via organizational members and their relationships, including roles, procedures and structures related to the communication and exchange among organizational members (Subramanian and Nilakanta, 1996).

Administrative innovation potentially promotes work redesign and work systems, and changes in incentives (Yamin et al., 1997). It explicitly helps firms deal with the turbulence of external
environments and is a significant driver of long-term business success in dynamic markets. Essentially it becomes a key determinant of competitive advantage, corporate performance, firm success, and organizational sustainability in a changing environment (Liao et al., 2008). Further administrative innovation involves organization structure and administrative processes related to work activities of the organization and its management (Damanpour, 1991). It provides the development of business and builds its competitive advantage. Thus, it is a valuable tool which firms have implemented so as to survive in the competitive markets. Firms have attempted to create value through administrative innovation in order to gain competitive advantage and achieve their profitability and survival. Then, firms with greater administrative innovation tend to enhance superior competitive advantage, gain better business excellence and promote higher firm performance (Phapruke, 2012).

Technical innovation is another component of organizational innovation and it is defined as an adoption of new ideas pertaining to new products or services, and an introduction of new elements in an organization’s production process or service operations occurring in the operating component and affects the technical system of an organization through the equipment and methods of operations used to transform raw materials or information into products or services (Subramanian and Nilakanta, 1996). Technical innovation is an important driver of explaining competitive advantage, business efficiency and corporate success. It appears to have a great impact on work productivity, competitive advantage and overall performance of an organization (Phapruke, 2012).

Moreover, technical innovations affects the routines, processes and operations of an organization (Armbruster et al., 2008). It changes and applies new procedures and processes that initiate new products or services within the organization in the volatile markets and environments that
influence the speed and flexibility of production and the quality of production (Phapruke 2012). Technical innovation is the innovation with respect to products, manufacturing and facilities (Liao et al., 2008).

It pertains to products, services and production process technology (Damanpour, 1991). It is a significant tool in helping firms achieve competitive advantage, profitability and encourage business performance (Phapruke 2012).

In addition standards are an enabler of innovation and a facilitator of technological process. Standards make sound business sense and should be used as a strategy to open new markets and promote technological advances. Industry leaders should know that each product is generated in compliance with relevant standard so as to enable them to gain access to the global marketplace. They connect our products to global markets. We use standards to analyze the value of each element in the supply chain. Conforming to standards makes it possible for a small and medium-sized enterprise to get the opportunity to connect to the global market as exporters need to fulfill global requirements to succeed (Samillani, 2012). Standards play an important role in the economy of any country especially for those industries which actively participate in the export related activities. Industry should implement standards to focus on continual improvement giving them the competitive advantage including their certification where applicable.

A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (OECD Oslo Manual, 2005). Marketing innovations target at addressing customer needs better, opening up new markets, or newly positioning a firm’s product on the market with the intention of increasing firm’s sales. John (1999) states market innovation is concerned with improving the
mix of the target markets and how chosen markets are best served. Its purpose is to identify better (new) potential markets and better (new) ways to serve target markets. Marketing innovations are strongly related to pricing strategies, product package design properties, product placement and promotion activities along the lines of four P’s of marketing (Kotler, 1991). This activity relies on accurately interpreting buying preferences but in greater detail. A process innovation on the other hand is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software. Process innovations can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products (OECD Oslo Manual, 2005). Improved and radically changed products are regarded as particularly important for long term business growth (Hart, 1996).

2.3 Competitive Advantage

Competitive advantage is defined as the outcome of firms ‘successful strategy implementation. It can be obtained by offering superior value to the customer through either unique benefit that offset a higher or lower price than competitors for equivalent benefits (Wagner, 2006). When a firm sustains profits that exceed the average for its industry, the firm is said to possess a competitive advantage over its rivals. The goal of much of business strategy is to achieve a sustainable competitive advantage (Porter 1998). Competitive advantage grows out of value a firm is able to create for its buyers that exceeds the firm’s cost of creating it. Value is what buyers are willing to pay and superior value stems from offering lower prices than competitors for equivalent benefits or providing unique benefits that more than offset a higher price. It is an advantage over competitors gained by offering consumers greater value, either by means of
lower prices or by providing greater benefits and services that justifies a higher price (Porter, 1985).

Porter (1985) approach to competitive strategy and competitive advantage proposed the development of three generic strategies that could be used either individually or in combination to outperform competitors. These strategies are overall cost leadership, differentiation and focus on a particular market niche. Cost leadership entails being the lowest cost manufacturers or provider of services for a given quality level. Such a strategy is characterized by tight control of costs and overheads, minimization of operational costs, reduced labour and input costs. Differentiation entails offering a product or service that is perceived as unique throughout the industry and as such offers unique attributes that are valued by customers. Focusing on a particular niche involves concentrating on a narrow customer or product segment. By concentrating on a particular segment an organization can achieve either a cost advantage within a limited market or differentiation based on meeting customer requirements.

In building competitive advantage, both low cost competition and product differentiation become valuable strategies for helping firm’s compete in the markets (Tien et al., 2005). They become valuable strategies that help firms succeed in business operations and achieve superior firm performance and growth (Weerawardena and O’Cass, 2004). Firms create competitive advantage by perceiving or discovering new and better ways to compete in an industry and bringing them to market. This is an act of innovation. Innovation have their concepts and development based in an understanding of the markets needs and it mirrors the modern marketing concept (Whalley 2010). The most typical causes of innovations that shift competitive advantage are new
technologies, new or shifting buyer needs, the emergence of a new industry segment, shifting input costs or availability and changes in government regulations (Whalley, 2010).

2.4 The Role of Innovation in building Competitive advantage

Innovation helps an organization develop competitive advantage either through relative differentiation, relative low cost positioning or focus (Porter, 1985). According to Lengnick-Hall (1992), innovation, technology advances, and competitive advantage are connected by complex and multidimensional relationships. The link between innovation activities and competitive advantage rests primarily on four factors. One, innovations that are hard to imitate are more likely to lead to sustainable competitive advantage (Clark 1987; Porter, 1985). Two, innovations that accurately reflect market realities are more likely to lead to sustainable competitive advantage (Deming, 1983; Porter, 1985). Three, innovations that enable a firm to exploit the timing characteristics of the relevant industry are more likely to lead to sustainable competitive advantage (Betz, 1987; Kanter, 1983).

Fourth, innovations that rely on capabilities and technologies that are readily accessible to the firm are more likely to lead to sustainable competitive advantage (Ansoff, 1988; Miller, 1990). The less a strategy can be imitated, the more durable the source of competitive advantage (Porter, 1985). Given the array of capabilities needed to sustain effective corporate entrepreneurship, innovation provides an attractive source of competitive advantage if it creates positive synergy for the firm. Likewise, if the innovation process or the outcomes of innovation are difficult to copy, effective corporate entrepreneurship becomes an increasingly important ingredient in sustaining competitive advantage. Lawless & Fisher (1990) suggest that product
form, function, pricing, and distribution offer potential avenues for reducing imitability for innovative firms.

Others argue that managerial innovations, such as the strategic management of human resources (Lengnick-Hall, 1988; Schuler and Jackson, 1989), or information-based innovations, such as new market research techniques (Tornatzky & Solomon, 1985), provide more durable routes to competitive positioning than can be gained from product innovations. Still others like (Spencer & Triant, 1989) recommend that firms only specialize in developing technologies that have pivotal importance to their business in order to protect imitability of key competitive elements. The common thread is identifying outcomes that are difficult for other firms to replicate.

The second factor that links innovation and competitive advantage is the importance of acting upon market realities. Market issues and opportunities are largely driven by customer value chains (Porter, 1985). This value chain can be obvious or it can be obscure. The customer's expectations can be observable, unmet needs. Innovations of this type often rely on applying modifications of existing technologies in new ways for new markets. Market realities introduce two related, but distinct requirements for successful corporate entrepreneurship. First, creativity should embrace important and attractive elements in the potential buyer's value chain. Innovations must have an application that is desired, reasonably pervasive, and of some threshold utility to generate a competitive advantage.

Second, innovations should omit trivial or undesirable features. Simply because a product has distinctive and innovative features does not guarantee that a sufficient number of customers will be willing to purchase those features. As with managing the configuration, responding to these
two factors requires perspective and balance. To ensure that important and desirable features are included in the product and/or service, the innovator must focus on the customer.

Customer-driven innovation is a common thread among quality gurus like Deming (1986), Crosby (1979), and Feigenbaum (1991). Quality function deployment and total quality control eloquently speaks to the need for recognizing and responding to specific customer preferences for performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality (Garvin, 1983). Innovative responses can enable a firm to either position itself within an attractive niche or to meet a larger proportion of customer preferences than its competitors. Both the niche approach and a broad differentiation approach are attractive and sustainable competitive options (Porter, 1985).

The link between innovation and market-based competitive advantage is based on four factors. First, management must facilitate and maintain sufficient innovative activity to create a firm that is prepared, but nimble and ready to act (Waterman, 1987). Second, the firm must not feel so compelled to act from pent-up ideas that irrelevant or trivial product features are introduced to the market (Miller, 1990). Third, decision-makers must thoroughly understand the customer so as to be able to make appropriate decisions on which features to include and which to exclude (Deming, 1986).

Fourth, decision-makers must have sufficient expertise as to potential applications of their innovation activity that latent customer needs can be identified (Feigenbaum, 1991). The third factor linking innovation and competitive advantage is timing. Innovations that enable a firm to exploit the timing characteristics of the relevant industry are more likely to lead to sustainable competitive advantage (Betz, 1987; Kanter, 1983). The definition and implementation of a firm's
product/market strategy often reflects timing considerations (Hambrick, 1982). Technology
timing depends on development speed and direction and a firm's ability to capitalize on these
progressions (Clark, 1987). Timing can have a substantial influence on the cost of a venture
(Porter, 1985).

Markets driven by brand identification may offer important first-mover cost advantages. In these
industries, being first enables a firm to gain committed customers before competitors are actively
engaged. Timing may introduce a meaningful source of uniqueness or effective cost leadership
(Teece, 1987). Being first can enable a firm to gain valuable experience before their competitors.
Porter (1985) argues, competitive timing is closely linked with market conditions. Early follower
advantages often result from the high levels of uncertainty accompanying technological
substitution (Robert & Berry, 1985). Innovation activities effectively timed to suit industry
conditions can be a valuable tool in the competitive arsenal.

The fourth factor shaping the relationship between innovation and competitive advantage is
specific organizational capabilities needed to exploit and sustain innovation. Effective
exploitation reflects a wide range of competencies. Teece (1987), for example, argues for control
of assets that complement a new concept. Ansoff (1988) suggests that effective entrepreneurial
strategies are dependent deterring price sensitivity in the marketplace. (Burgelman & Maidique,
1988; Damanpour & Evan, 1984; Leonard-Burton, 1987) contend that cross-functional and
cross-product integration and continual organizational learning are mandatory competencies for
effective innovation exploitation. Effective management of resource allocations is an essential
competence (Kanter, 1983). Many of these abilities signal an interest in developing potential
synergies. Creating a new market requires intimate knowledge of the intended customer so the
product will be seen as useful and desirable (Miller, 1990). Innovations that create markets require extensive promotional talents, intraorganizational networks to build the needed infrastructure (Porter, 1985), and sufficient organizational and human commitment to overcome delays and resistance (Kanter, 1983).

2.5 Factors that influence firms in the Implementation of Innovation Activities

In this dynamic and changing environment, one way to create growth and sustain performance is to innovate (Band et al., 2001). Today’s companies are experiencing significant pressures from increased levels of competition, rapidly changing market requirements, higher rates of technical obsolescence, shorter product life cycle and the heightened importance of meeting the needs of increasingly sophisticated customers (McGrath et al., 1992). Added to this are visibly increasing product development lead times, more frequent development of new technologies and increasing product development costs and complexity. The ways in which companies meet these challenges depends largely on the nature of the business they are in, the dynamic forces of the market in which they operate, and the resources and skills that can be applied to ensure their business objectives are met (Ahmed& Shepherd, 2000). Enterprises engage in innovation for a number of reasons. Their objectives may involve products, markets, efficiency, quality or the ability to learn and to implement changes. Identifying enterprises motives for innovating and their importance is of help in examining the forces that drive innovation activities, such as competition and opportunities for entering new markets (OECD Oslo Manual, 2005).

Sheth and Ram (1987) states four main factors drive market change and in combination, create the need for innovation. These are technological advances, changing customers’ needs, intensified competition and the changing business environment. The rate at which knowledge is
being created has accelerated and there are numerous new technologies that have a major influence on markets. Companies need to constantly monitor new technology, as it may influence or potentially transform their markets. Organizations need to become good at tracking the progress of a wide range of technologies. This includes monitoring both the performance of the technologies they currently use and those which may replace existing technologies. Business environments are changing. Worldwide, markets are becoming more open as the market economy is embraced by most governments and through the efforts of reduced tariffs by trade groupings such European Union.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

This chapter highlights the research design that was adopted, population of the study, data collection methods, and data analysis technique that was employed to analyze the data. The study was a survey research design. A survey method was used to collect data from a cross-section of horticultural processing and export firms that operate in Nairobi in order to determine the role of innovation in building competitive advantage.

3.2 Target Population
The population comprised of all registered horticultural processing and export firms in Nairobi. According to the government regulator of the industry, HCDA (2013) statistics for active members indicate there are 49 horticultural processing and export firms operating in Nairobi and these formed the population of the study.

3.3 Data collection

Primary data was used for this study because of the nature of responses required by the topic under study. Data was collected using a structured questionnaire drafted in line with the research objectives and was divided into three parts. The first section comprised the basic organizational background information; the second part consisted of questions assessing innovation activities taken and competitive advantage while the third part adopted questions determining the factors that influence firms in the implementation of innovations. The questionnaires consisted of closed-ended and check questions and questions in which the respondents gave their ratings. The questionnaires were self administered to either the chief executive officers or senior managers of respective companies who were considered key in innovation development. This was because of their level of involvement in the innovation and the business development process and therefore they were adequately informed on the topic under study.

3.4 Data Analysis

The data collected was edited for completeness, uniformity, accuracy and consistency. It was further be coded to classify responses into meaningful categories of emerging patterns to enable data to be analyzed. The coded data was analyzed using Statistical Package for Social Sciences (SPSS). Descriptive statistics such as frequency distribution was used in order to examine the pattern of responses to each of the variables under description. Percentages, frequencies and
arithmetic mean were used in order to facilitate comparisons. Tables were used in presentation of data findings.

A data reduction technique (factor analysis) was used to reduce the various dominant factors influencing innovation in the horticultural processing and export firms for easier and faster interpretation. To address the role of innovation on building the competitive advantage, a multiple regression model was used to estimate the independent variables of organizational, marketing, product and process innovation on how they affect the dependent variable of building competitive advantage on the horticultural processing and export firms in Kenya. The regression model was represented by $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$, where $Y$ represented the dependent variables, $X_1, X_2, X_3$ and $X_4$ represented the independent variables and $\beta$ for the parameter or coefficients of estimation while $\beta_0$ for the constant term.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the results of the analysis of the data collected during the study survey. A total of 49 completed and usable questionnaires were obtained from the firms for survey. This represent 69% response rate while 15 firms turned down to participated in the survey citing security reasons and confidentiality of the information. This represents 31% refusal. This section of the study provides analysis of data where descriptive statistics was conducted and the results of the study were presented in terms of figures.

4.2 Profile of Respondent Firm
Part one of the questionnaire sought information on basic organization information such as name of the firm, organization area of specialization and company ownership. The consideration on this analysis was whether companies were locally or foreign owned as shown in Table 4.2.1.

**Table 4.2.1 Company Ownership**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>33</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Internaional</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The analysis however showed that all 100% of the respondents in the survey manage businesses that are locally-owned. This could be the industry is regulated by Horticultural Crop Development Authority. The HCDA role is to regulate, promote, coordinate, develop and facilitate operations of the horticultural sub-sector to ensure smooth production and marketing environment and to advocate for policies that favour investments and enhanced performance of the subsector.

**4.2.2 Number of Years the Firm has been in Operation**

The competitiveness and innovation potential of a firm is partially a function of how long the firm has been in operation. In this study the respondents were required to indicate the category the firm belonged as shown in Table 4.2.2.

**Table 4.2.2 Years in operation**
As can be observed in Table 4.2.1, the majority (55%) of firms surveyed have been in business for less than 10 years, 21% of firms have operated for 10 to 20 years, and 24% have operated for more than 20 years. The fact that there is less business in operation over a long period of time implies that there is business growth in the industry and interest among the small and large scale entrepreneurs.

### 4.2.3 Respondent Position in the Firm

Innovation activities employed by a firm may not be understood as a whole by all the employees. Heads of department may understand the strategies for their departments without a clear knowledge of the overall strategy of the company. The respondents were required to indicate their position in the firm as shown below in Table 4.2.3.

### Table 4.2.3 Respondent position in the firm

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>9</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>Technical Manager</td>
<td>8</td>
<td>24%</td>
<td>52%</td>
</tr>
<tr>
<td>Human Resources Manager</td>
<td>4</td>
<td>12%</td>
<td>64%</td>
</tr>
</tbody>
</table>
As can be observed from the above Table, 27% of the respondents were Company Directors, 24% of respondents were Technical Managers, and 12% were Human Resource Managers. This means that the bulk of survey respondents (63%) served in high-level management positions, and thus the information given can be relied upon for inferential analysis. Very few survey respondents (only Quality Assurance Supervisors and Agronomists) do not have direct management experience, meaning that our data quality should be quite exceptional. Given that the majority of the firms in this survey were small-scale firms in existence for fewer than 10 years, it is expected that even low-level managers will have reliable information about the competitive activities of the firm.

### 4.2.4 Those Involved in Innovation Activities

Due to the nature of output of the organizations operations the respondents were asked to indicate their involvement with the organization innovation activities. The results as indicated in Table 4.2.4
Table 4.2.4 Those Involved in Innovation Activities

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Managers</td>
<td>27</td>
<td>82%</td>
<td>82%</td>
</tr>
<tr>
<td>CEO</td>
<td>4</td>
<td>12%</td>
<td>94%</td>
</tr>
<tr>
<td>All Employers</td>
<td>2</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

The Table 4.2.4 indicates that, for the vast majority of companies surveyed (82%) all top managers are involved in making innovation activities. In very few companies does the CEO exclusively (12%) or every employee (6%) make decisions related to innovation activities? This fact lends credence to the validity of our survey data, given that the majority of survey respondents were managers.

4.2.5 Range of products exported by firms

Regarding the nature of output of the organization’s operations, the range of processed products in the industry may be as a result of some organizations innovation activities. The results presented in Table 4.2.5 shows that 79% of vegetables and 18% of fruits are exported by firms.

Table 4.2.5 Range of products exported by firms

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>26</td>
<td>79%</td>
<td>79%</td>
</tr>
<tr>
<td>Fruits</td>
<td>6</td>
<td>18%</td>
<td>97%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>3%</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
As can be observed from the Table 4.2.5, the majority of horticultural firms interviewed export vegetables as the primary export good. Fruit exports occupied the second most popular category of export goods.

### 4.2.6 Target Market

With regards to the output of the organization’s operations the respondents were also required to indicate their outlet for their products. As can be seen in table 4.2.6, 34% of the firms sale their products through supermarket outlets only. 31% both retail and supermarkets and the remaining 6% sale through retail only.

#### Table 4.2.6 Target Market

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supermarkets</td>
<td>12</td>
<td>34%</td>
<td>34%</td>
</tr>
<tr>
<td>Retail</td>
<td>2</td>
<td>6%</td>
<td>40%</td>
</tr>
<tr>
<td>Both Supermarket and Retail</td>
<td>11</td>
<td>31%</td>
<td>71%</td>
</tr>
<tr>
<td>Distributors</td>
<td>2</td>
<td>6%</td>
<td>77%</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>23%</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

The plurality of respondents sells their products directly to supermarkets, although a similar proportion pursues both supermarkets and retailers. A minority of respondents exclusively use...
retailers or third-party distributors. The information is important in the context of innovation analysis because it means that whatever innovation strategies a horticultural firm decides to adopt, it must somehow apply to supermarket sales. Whether it is improved advertising or product differentiation, supermarkets should be the focus of interest for these firms.

4.3 Innovation Activities among the Horticultural Processing and Export Firms in Kenya.

Innovation is a process that transforms ideas into outputs which increase customer value and it is aimed at developing competitive advantage of a firm. Firms are engaging themselves in various innovative activities ranging from organizational, process, marketing and product. This leads to product improvement, new methods of production and changes in work management systems. This section covers findings from the specific questions posed to the respondents to determine the innovation activities among the horticultural processing and export firms in Kenya.

4.3.1 Organization Innovations

An organization performance is the outcome of business operations, practices and activities. This section covers findings from the specific questions posed to the respondents to determine the organization innovation activities and the extent to which they are more likely to cope with competition as shown in Table 4.3.1.

Table 4.3.1 Organizational Innovations

<table>
<thead>
<tr>
<th>Organizational Innovations</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewing the organization structure to facilitate teamwork</td>
<td>3.970588</td>
<td>.7971652</td>
</tr>
<tr>
<td>Renewing the production and quality management systems.</td>
<td>4.147059</td>
<td>.7439596</td>
</tr>
</tbody>
</table>
Renewing the organization structure to facilitate coordination between different functions such as marketing and manufacturing

Renewing the routines, procedures and processes employed to execute firm activities in innovative manner

Renewing the human resources management system.

Renewing the supply chain management system.

Renewing the organizational structure to facilitate strategic partnerships and long-term business collaborations

<table>
<thead>
<tr>
<th>Marketing Innovations</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewing the organization structure to facilitate coordination between different functions such as marketing and manufacturing</td>
<td>3.794118</td>
<td>.9464259</td>
</tr>
<tr>
<td>Renewing the routines, procedures and processes employed to execute firm activities in innovative manner</td>
<td>4.117647</td>
<td>.8077168</td>
</tr>
<tr>
<td>Renewing the human resources management system.</td>
<td>3.705882</td>
<td>1.142284</td>
</tr>
<tr>
<td>Renewing the supply chain management system.</td>
<td>3.970588</td>
<td>.8698761</td>
</tr>
<tr>
<td>Renewing the organizational structure to facilitate strategic partnerships and long-term business collaborations</td>
<td>3.852941</td>
<td>.821394</td>
</tr>
</tbody>
</table>

Responses for organizational innovation questions ranged from ‘to no extent (1)’ to ‘a very large extent (5)’. Two components of organizational innovation has particularly high averages: “Renewing the production and quality management systems” and “Renewing the routines, procedures and processes employed to execute firm activities in innovative manner.” Both of these relate to the technological processes that underpin production, rather than the human processes, meaning the firms focus more on improving production systems rather than human systems.

4.3.2 Marketing Innovations

A firm needs to clearly identify its target market as this is a determinant of the strategies an organization will adopt and also affect the firm performance. Marketing innovation enables the firms to create new markets hence increasing the competitive advantage.

Table 4.3.2 Marketing Innovations

<table>
<thead>
<tr>
<th>Marketing Innovations</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Renewing the product promotion techniques employed for the promotion of the current and/or new products.

Renewing the distribution channels without changing the logistics processes related to the delivery of the product.

Renewing the product pricing techniques employed for the pricing of the current and/or new products.

Renewing general marketing management activities.

<table>
<thead>
<tr>
<th>Process Innovations</th>
<th>Mean</th>
<th>Std.Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining and eliminating non value adding activities in delivery related processes</td>
<td>4.058824</td>
<td>.9515912</td>
</tr>
<tr>
<td>Decreasing variable cost and/or increasing delivery speed in delivery related logistics processes</td>
<td>4.117647</td>
<td>.8444007</td>
</tr>
<tr>
<td>Determining and eliminating non value adding activities in production processes</td>
<td>4.242424</td>
<td>.9364262</td>
</tr>
</tbody>
</table>

Every response to the survey questions related to marketing innovations ranged from 2 to 5, with 1 never being selected. This shows that every firm believes marketing plays a large role in its competitive success. Respondents appear to gravitate towards selecting 4, or “a large extent”, as their response to marketing innovations questions.

**4.3.3 Process Innovations**

Firms’ process innovation requires developing new competences and routines. An organization has to clearly identify a process innovation that will lead to efficiency and effectiveness as shown in Table 4.3.3.

**Table 4.3.3 Process Innovations**

<table>
<thead>
<tr>
<th>Process Innovations</th>
<th>Mean</th>
<th>Std.Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining and eliminating non value adding activities in delivery related processes</td>
<td>4.058824</td>
<td>.9515912</td>
</tr>
<tr>
<td>Decreasing variable cost and/or increasing delivery speed in delivery related logistics processes</td>
<td>4.117647</td>
<td>.8444007</td>
</tr>
<tr>
<td>Determining and eliminating non value adding activities in production processes</td>
<td>4.242424</td>
<td>.9364262</td>
</tr>
</tbody>
</table>
Responses to process innovation questions again ranged from 2 to 5, with the average answer being a 4. There was no significant difference between any of the responses to process innovation questions. That being said, the response “Determining and eliminating non-value adding activities in production processes” had a higher average than the rest of the responses, which demonstrates the importance of streamlining production for horticultural processing industries. That is, there appears to be a greater opportunity to eliminate waste than augmenting production activities.

4.3.4 Product Innovation

Product innovation in a firm plays an important role in the strengthening a firm’s competitive position in an industry in relation to its rivals through profits, growth and maintaining market share of the firm. The competitive advantage of a firm depends on its possibility to benefit from innovational activities

Table 4.3.4 Product Innovations

<table>
<thead>
<tr>
<th>Product Innovations</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing newness for current products leading to improved ease of use for customers and to improved customer satisfaction.</td>
<td>4</td>
<td>.9211324</td>
</tr>
<tr>
<td>Decreasing manufacturing cost in components and materials of current products</td>
<td>4.176471</td>
<td>.6728766</td>
</tr>
<tr>
<td>Increasing manufacturing quality in components and materials of current products</td>
<td>4.264706</td>
<td>.9632276</td>
</tr>
<tr>
<td>Overall cost leadership (offering low prices for your products than competitors)</td>
<td>4.030303</td>
<td>1.045372</td>
</tr>
<tr>
<td>Focus (focusing on a particular buyer group, product line or geographic line or geographic market)</td>
<td>4.176471</td>
<td>.8693637</td>
</tr>
</tbody>
</table>
Is your company’s mission statement specifically mention creativity and/or innovation | 4.029412 | .9369614
---|---|---
Does your organization’s actual performance contribute in making innovation happen? | 3.848485 | .8703883
Do you have formal programmes for innovation in your organization | 3.818182 | 1.044466
To what extent do you have quantified goals for innovation and its impact on future performance | 4.029412 | .9995543

Source: (Author 2014)

The responses in this section ranged from 1 to 5, with 4 being selected the most regularly. Of particular interest in the response “increasing manufacturing quality in components and materials of current products” which had the highest average out of any response in this category. This means that horticultural firms believe that quality is one of the most important considerations in terms of boosting competitiveness vis-à-vis other firms in the market. This response scored higher than any other response in the other innovation categories, which leads me to believe that quality control is the most important component for product differentiation and competitiveness for horticultural firms.

4.4 The Relationship of Innovation and Competitive Advantage

Innovation is aimed at developing competitive advantage, profitability and organizational performance of a firm. Firms which engage in innovation activities are likely to enhance superior competitive advantage and gain greater organizational sustainability in dynamic environments. Prior to regression analysis, survey questions were broken down into four categories: questions related to organizational innovation; questions related to marketing innovations; question related
to process innovations; and questions related to product innovations. In order to perform multiple linear regressions, an index was created for each of the above categories representing the average across each category. The descriptive statistics for each of these new indices can be seen in Table 4.4.1.

**Table 4.4.1 Descriptive Statistics for Innovation Mean**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std.Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Organizational</td>
<td>34</td>
<td>2</td>
<td>4</td>
<td>3.9370</td>
<td>.54619</td>
</tr>
<tr>
<td>Mean Marketing</td>
<td>34</td>
<td>2</td>
<td>5</td>
<td>4.0147</td>
<td>.72807</td>
</tr>
<tr>
<td>Mean Process</td>
<td>34</td>
<td>2</td>
<td>5</td>
<td>4.1225</td>
<td>.75356</td>
</tr>
<tr>
<td>Mean Product</td>
<td>34</td>
<td>2</td>
<td>4</td>
<td>4.0445</td>
<td>.44043</td>
</tr>
<tr>
<td>Valid N (list wise)</td>
<td>34</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** (Author 2014)

The mean index for mean organizational was 3.9370 with standard deviation of 0.54619. This implies that the lowest possible mean index for mean organizational is 3.39081 (3.9370-0.54619) whereas, the highest possible mean index for mean organizational is 4.48319 (3.9370+0.54619).

Secondly, the mean index for mean marketing was recorded as 4.017. Given that the corresponding standard deviation was 0.72807, implies that the lowest possible mean index for mean marketing was 3.28663 while the highest possible value was 4.74277 (4.0147 ± 0.72807).

Also, mean index of the mean process was 4.1225 with standard deviation of 0.75356 leading to the lowest and highest possible values being 3.36894 and 4.87606 (4.1225 ± 0.75356) respectively. Finally, the mean index for the mean product was recorded as 4.0445 with standard
deviation of 0.44043. Consequently, this leads to lowest and highest possible values being 3.60407 and 4.48493 respectively.

A multiple regression model with response variable percent_turnover with covariates (mean_organizational, mean_marketing, mean_process, mean_product) was developed as shown below:

\[ \text{percent\_turnover} = \alpha + \beta \text{(mean\_organizational)} + \beta \text{(mean\_marketing)} + \beta \text{(mean\_process)} + \beta \text{(mean\_product)} + \text{error} \]

Where percent_turnover is the response variable usually referred to as total variability, (mean_organizational, mean_marketing, mean_process, and mean_product are model independent/explanatory variables usually associated with explained/known variability, and the error/noise term usually referred to as unexplained/unknown variability.

The response variable is assumed to be normally distributed so as to meet one of the key requirements for ordinary least squares regression analysis. Also, the normal error term is assumed to be independent and identically distributed random variable with mean zero and a constant variance. The hypothesis in the study is that all the regression parameters denoted by $\beta$ are equal to zero. From the multiple regression summary result, the following information can be extracted as shown in Table 4.4.2

<table>
<thead>
<tr>
<th>Mode</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std.Error Of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.536 ²</td>
<td>.287</td>
<td>.189</td>
<td>15.86306</td>
</tr>
</tbody>
</table>
a. Predictors (Constant), mean product, mean process, mean marketing, mean organizational

The R-square value can be interpreted to mean that 29% of the variability in overall innovation and competitiveness can be explained by the relationship between percentage turnover and mean product, mean process, mean marketing and mean organizational.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-.928</td>
<td>27.659</td>
<td>-.034</td>
<td>.973</td>
</tr>
<tr>
<td>Mean_organizational</td>
<td>1.477</td>
<td>6.825</td>
<td>.046</td>
<td>.216</td>
</tr>
<tr>
<td>Mean_marketing</td>
<td>-14.539</td>
<td>4.788</td>
<td>-.601</td>
<td>-3.036</td>
</tr>
<tr>
<td>Mean_process</td>
<td>3.218</td>
<td>4.327</td>
<td>.138</td>
<td>.744</td>
</tr>
<tr>
<td>Mean_product</td>
<td>15.762</td>
<td>7.432</td>
<td>.394</td>
<td>2.121</td>
</tr>
</tbody>
</table>

The regression equation can be modeled by the following:

\[
\text{percent\_turnover} = (-.928\pm27.659) + (1.477\pm6.825 (\text{mean\_organizational}) - ...
\]
Which denote estimates for the regression coefficients plus their corresponding standard deviations. From this the following information can be further deduced. The percent turnover when there is no effect attributable to mean organization, mean marketing, mean process and mean product on average was (-0.928) at 95% confidence level.

For every unit increase in mean organizational, the percent turnover on average increases by 1.477 with other factors held constant at 95% confidence level. Also, for every additional unit increase in mean marketing, the percent turnover reduces on average by 14.539 at 95% confidence level. This can deviate by ±4.788. The percent turnover increases by 3.218 for every additional unit increase in the mean process with standard deviation of 4.327 at 95% confidence level. Finally, the percent turnover increases substantially on average by 15.762 for every additional unit increase in mean product at 95% confidence level. This can vary by ±7.432.

However, of the four independent variables that is (mean organization, mean marketing, mean process and mean process), only two factors that is mean marketing and mean product were significant at 95% confidence level (alpha = 0.05 level of the test) with probability values usually denoted by (p values) being 0.005 and 0.043 respectively. It is clear that the hypothetical metric value 0 is properly contained in the intervals except for mean marketing and mean product.

Statistically, a significant variable in multiple linear regression implies that zero (0) exist within the confidence interval. This leads to a rejection of the null hypothesis in favor of the alternative hypothesis hence significance.
Also, proportion of variation explained/accounted for in the response variable was insignificant (about 29%) as shown with R squared of statistics. This signifies a poor fit. It’s also possible that a very important independent variable which ought to explain most of the variability was omitted during data collection. This in most cases lead to under fitting which is usually associated with false positive associations in classical regression analysis. Alternatively, it is possible that the independent variables considered has sufficient interaction effects among them thereby resulting in biased estimates hence unrealistic/quake relationships that are not generalizable in real life.

4.5 Factors That Influence the Horticultural Processing and Export Firms in the Implementation of Innovation Activities

Various factors encourage an organization to implement innovation activities. These factors demand continuous innovation and they help to create a sense of urgency around the need to create new organizational goals and generate new ideas for meeting these goals. The next set of survey questions inquired into the factors that firms believed affected their innovation activities. The questions were broken up into the following categories: customer demands, technological advancement, globalization, government legislation, and environment. Like the earlier series of questions, the possible responses ranged from 1 to 5, with 1 representing “No Extent” and 5 representing “Very Great Extent.”

Table 4.5.1 Factors that influence the horticultural processing and export firms in the implementation of innovation activities
<table>
<thead>
<tr>
<th>Factors</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer demands</td>
<td>4.352941</td>
<td>.773906</td>
</tr>
<tr>
<td>Technology advancement</td>
<td>4.264706</td>
<td>.7511133</td>
</tr>
<tr>
<td>Globalization/increased competition</td>
<td>4.117647</td>
<td>.6859943</td>
</tr>
<tr>
<td>Legislation</td>
<td>4</td>
<td>.8164966</td>
</tr>
<tr>
<td>Environmental issues</td>
<td>4.058824</td>
<td>.8507101</td>
</tr>
</tbody>
</table>

Looking at the means for each one of the categories suggests that managers at horticultural processing firms believe each factor influenced innovation activities.

Customer demand appears to play the largest role in the implementation of innovation activities, followed by technological advancement. The fact that customer demand has the strongest relationship on innovation activities is supported by the regression analysis, where we found that product innovation had the strongest role in building competitive success. We can therefore make the assumption that product innovation is stimulated by customer demand, both of which have a powerful influence on overall innovation and competitiveness.

4.6 Discussion of Findings

Surface-level analysis of data quality confirms that the survey is a fair representation of innovation activities performed in the horticultural processing industry. The vast majority of respondents had a management position; all were locally owned; and all sold to similar target markets. This means that the respondents had similar levels of market access and competition, thereby allowing for direct comparisons between horticultural processing industries in so far as it relates to innovation activities. Descriptive statistics relating to survey question finds that most

38
firms believe investing in all aspects of innovation organization, marketing, process, and product are important.

It was found out from organization innovation that renewing the production and quality management systems and renewing the routines, procedures and processes employed to execute firm activities in innovative manner were important. These innovation activities relate more to technical innovation which is an important driver of explaining competitive advantage and business efficiency. Organizations that posses higher ratings in extent of innovation activities subsequently tend to possess a greater competitive advantage than their counter parts (Wafula 2011). This has a great impact on work productivity and overall performance of an organization (Phapruke 2012). The horticultural processing industry is highly competitive not just from other players within but also from exporters in other countries. The distance of Kenya from the market is also not favorable with countries closer to Europe, e.g. Egypt paying cheaper rates to transport their goods to the market. This is coupled with strict quality demands by the consumers and especially with regard to food safety and phytosanitary requirements (Mulwa 2010).

The study found out that the majority of the respondents believed marketing played a role in building competitive advantage in the firm there by selecting 4 to a large extent as their response. The study established 34% of their target markets as supermarkets while 79% vegetables and 18% fruits as range of products exported by the firms. It was evident that majority of business appreciate and practice innovative marketing techniques to increase sales and enhance loyalty (Kotler 1991). Marketing factors determine the commercial success of specific technologies or products and affect the path of technological change. They may also determine whether or not firms innovate. If firms do not believe that there is sufficient demand for new products in their
market, they may decide either not to innovate or to delay innovation activities (OECD Oslo Manual, 2005).

The marketing techniques that were mostly used were product promotion, distribution channels and product pricing. Majority of local processors, both large scale and small scale targets local markets for their processed products. The local market for processed products is dominated by tomato products ketchup, fruit jam, and marmalade, corn and Irish potatoes crisps which support the findings of (HDP 2010). Product differentiation was noted in the research by renewing the product promotion and pricing techniques employed for the promotion and pricing respectively of the current and new products (mean of 4 and 4.029412) respectively offering low prices for their products than competitors. Due to increased competition the companies are coming up with ways to retain and attract new customers such as using different flavors e.g. masala, cheese & onion, barbecue.

Process innovation activity was undertaken by the response “Determining and eliminating non-value adding activities in production processes” it had a higher average of 4.242424 than the rest of the responses, which demonstrates the importance of streamlining production for horticultural processing industries. This is intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products (OECD Oslo Manual, 2005). This response scored higher than any other response in the other innovation categories making it the most important innovation activity in the horticultural processing industry.
It was established that majority of respondents in product innovation selected 4 as the large extent. Of particular interest in the response “increasing manufacturing quality in components and materials of current products” which had the highest average out of any response in this category. This means that horticultural processing firms believe that quality is one of the most important considerations in terms of boosting competitiveness of the firms in the market. The research revealed product innovations as to be highly beneficial in the horticultural processing industry being their products are fairly homogenous, packaging and value addition is one area where the firms made concerted efforts at differentiation. The results from past studies disclosed that different firms adopt varying strategies between cost, differentiation and focus and this ensures that they all gain advantage in different ways that are not easy to duplicate creating a dynamic and vibrant industry (Mulwa 2010). Majority of horticultural processed products traded are fruits and vegetables. Processed products for local markets are dominated by tomato ketchup, fruit jam, salads, marmalade, corn and Irish potato crisps. Processing for export is mainly done on fruits concentrates of pineapples, mangoes and passion fruits, beans canned and frozen, and macadamia and cashew nuts (HDP 2010).

The study used the regression analysis to address the role of innovation in building competitive advantage in horticultural processing and export firms in Nairobi Kenya. According to the regression analysis which analyzed the linear relationship between the percentage turnovers accounted for by innovation for each horticultural processing industry and four indices measuring organizational innovation, marketing innovation, process innovation, and product innovation respectively. This regression analysis found that both marketing and product
innovation had a statistically significant relationship on the percentage turnover accounted for by
innovation.

However, the marketing index had a negative relationship (B = -14.539; p<.005), which suggests that horticultural processing industries, on average, are hurt by over investing in marketing. It is perhaps the case that customers don't respond well to advertisements on horticultural processed products because they care more about product quality. Indeed, regression analysis found a statistically significant relationship between product innovations and percent turnover (B= 15.762; p<.043), confirming the hypothesis that making products cheaper and higher quality is highly important for competition. Some innovations, however, appeared to be higher priority for firms than others. For example, questions in the "product innovation" category had the highest averages, which is suggestive of the fact that product innovations are the most important in building competitive edge in the horticultural processing industry.

Customer demands were found to influence the horticultural processing and export firms in the implementation of innovation activities. The study establishes those customers demands are of critical importance to innovation. They are the most important driver of innovation. Firms oriented to customers are responsive to final customer needs, measure their satisfaction level and improve the processes in order to satisfy customers. Customer demand enhances product innovations which establish brand loyalty and credibility, accelerate the feedback from customer use to product improvement, generate learning curve costs advantages and therefore increase the costs of entry for imitators (Tidd 2006).

Demand factors shape innovation activity in a number of ways. Demand affects the development of new products, as firms modify and differentiate products to increase sales and market share.
Demand factors can force firms to improve their production and supply processes in order to reduce costs and lower prices. In many cases, they are also the main driver of innovation. Firms often spend substantial resources on researching demand and can adopt marketing measures to influence or create demand for their products (OECD Oslo Manual, 2005).

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter highlights the summaries of findings, conclusion, recommendation and limitations of the study.

5.2 Summary

The objectives of this study were to determine the innovation activities adopted by the horticultural processing and export firms in Nairobi Kenya, the role of innovation in building competitive advantage and the factors that influence these horticultural processing and export firms in the implementation of innovation activities.

All the firms that responded were locally owned meaning that the horticultural processing industry in Kenya are all regulated by the horticultural crops development authority(HCDA) which is a parastatal body in Kenya. The HCDA role is to regulate, promote, coordinate, develop and facilitate operations of the horticultural sub-sector to ensure smooth production and marketing environment and to advocate for policies that favour investments and enhanced performance of the subsector. Most of the firm’s business operation ranged from between 10 to 20 years indicating there is business growth in the industry and interest among the small and large scale entrepreneurs. From the study majority of top managers are involved in making
decisions related to innovation activities. Vegetables processed products and fruits are the primary export goods while their target markets were supermarkets and retailers.

Innovation activities mainly adopted by horticultural processing and export firms were marketing and product innovation. Other innovation activities that were applied as well were organization innovation and process innovation. Organization innovation was focusing on renewing the production and quality management systems and renewing the routines, procedures and processes employed to execute firm activities in innovative manner. Process innovation was applied through determining and eliminating non-value adding activities in production processes. Regression analysis found that marketing and product innovation these were two categories of innovation that were most related to overall innovation and competitiveness as operationalized by the percentage of turnover accounted for by innovation.

Marketing, however, had a negative coefficient, which means that the more a horticultural processing company invests in marketing campaigns, the worse their return on investment is in terms of innovation turnover. This is a surprising conclusion because we would expect an investment in marketing innovations to improve overall corporate competitiveness, but this appears not to be the case. This could be explained by the fact that, for the horticultural processing industry, marketing may have little effect given that neither exports nor a small-scale local sale requires significant marketing.

Product innovation had a large, statistically significant effect on overall innovation and competitiveness, suggesting that the most important category of innovation that the horticultural
processing industry can focus involves products. This could include diversifying food offerings, concentrates, improving quality, yield, and taste of each individual product, and adding value in terms of packaging and consumption efficiency. Horticultural processing companies should focus less on marketing and more on product innovations in order to improve turnover. Customer demands was found to be the main factor that influence the horticultural processing and export firms in the implementation of innovation activities followed by technology advancement which makes a value proposition to the consumers.

5.3 Conclusion

Innovation is very critical and is aimed at developing competitive advantage, profitability and organization performance of a firm. Innovation provides an attractive source of competitive advantage if it creates a positive synergy for the firm (Porter, 1985). Innovation is relevant only if it represents additional value in the eyes of the customer or other stake holders in the business ecosystem. The horticultural processing and export firms can become and remain competitive in the global market by practicing all types of innovation as analyzed. Different firms have varying innovation activities and challenges faced by these firms seemed to be similar. In overall, innovation forms a key basis for horticultural processing and export industry by protecting imitability of key competitive elements through identifying outcomes that are difficult for other firms to replicate.

The study revealed in the regression analysis only product and marketing innovations have a statistically significant effect on the percentage turnover accounted for by innovation, with marketing having a negative overall effect. This could be explained by the fact that, for the horticultural processing industry, marketing may have little effect. As stated in the earlier discussion, 50% of horticultural sales occur in supermarkets, which mean that there is less of a
reliance on marketing, and more of a reliance on securing contracts with supermarkets. Customer demand plays the largest role in the implementation of innovation activities, followed by technological advancement.

5.4 Recommendations

Based on the findings of the surveys, the R-square value was low in each of these models, there would be need to do a research that will better quantify other variables that might be related to innovation. For example, the size of each company and the average levels of employee education both might have an effect on innovation. In the future, both of these variables should be tracked and analyzed under linear regression in order to increase the size of our R-square values.

In addition, future research should seek a better method to operationalize competitive advantage and innovation. In this paper, the percentage of turnover accounted for by innovation was used as a proxy for competitive advantage however there are likely better ways to approximate this. There are many aspects to the relationship between innovation and competitive advantage. For example, perhaps there would be need to do a study on the number of patents obtained by a company as a measure of innovation, or the amount of money spent on creative enterprises.

5.5 Limitations of the study

Out of the population of 49 horticultural processing and export firms in Nairobi only 34 filled and returned the questionnaires. The response rate was therefore 69% with a none-response rate of 31%. Some respondents did not also fill in some of the key data that was essential in coming up with findings and conclusion due security reasons and confidentiality of the information.
REFERENCES


Feigenbaum, A.V. (1991), *Challenge to America's industrial leadership*.


APPENDICES
Appendix I: Letter of Introduction

Dear Sir/Madam

Re: Research on The Role of Innovation in Building Competitive Advantage in Horticultural Processing and Export Companies in Nairobi, Kenya.

I am a postgraduate student in the School of Business, University of Nairobi, currently undertaking a management research project on the above subject as part of the requirement. This is in partial fulfillment to the award of Master degree in Business Administration (Strategic Management).

You have been selected as one of the respondents in this study. I therefore request you to kindly facilitate the collection of the required data by answering the questions herein. This questionnaire is purely for academic purpose and the data collected will be treated with utmost confidentiality.

A copy of the completed project report shall be availed to you upon request.

Your assistance and cooperation will be highly appreciated. Thank you in advance.

Yours faithfully,

Lilian Auma Cell no 0703146408

Appendix II: Questionnaire

Tick Where Applicable

SECTION A: Demographic Details

1. Name of the firm

2. What is your organization’s area of specialization?

3. Company Ownership
   a) Local
   b) Foreign
   c) Other ( ) Please specify

4. Number of years the firm has been in operation…………………..

5. What position do you hold in the firm?

6. Who is mainly involved in the innovation activities in the organization
   a) CEO
   b) Top Managers
   c) All Employees
   d) Development partners
   e) Others (specify)
7. What range of products does your firm export?

a) Vegetables (  )

b) Fruits (  )

c) Flowers (  )

d) Other (  ) Please specify…………………………

7. What is your target market?

a) Retail

b) Supermarket

c) Other (  ) Please specify:

8. What percentage of your company’s budget is allocated to R&D or innovation?

a) 75-100%

b) 50-75%

c) 25-50%

d) Below 25%

e) None

9. What percentage of your company’s turnover is accounted for by innovations launched within the last three years?

a) 75-100%

b) 50-75%

c) 25-50%

d) Below 25%
SECTION B: INNOVATION ACTIVITIES AND COMPETITIVE ADVANTAGE

Please indicate to what extent you agree with the statements given by circling or striking through as per the following scale:

5=To a very large extent, 4=To a large extent, 3=To some extent, 2=To a small extent, 1=To no extent

Factor 1: Organizational Innovations

1. Renewing the organization structure to facilitate teamwork. 1 2 3 4 5
2. Renewing the production and quality management systems. 1 2 3 4 5
3. Renewing the organization structure to facilitate coordination between different functions such as marketing and manufacturing. 1 2 3 4 5
4. Renewing the routines, procedures and processes employed to execute firm activities in innovative manner. 1 2 3 4 5
5. Renewing the human resources management system. 1 2 3 4 5
6. Renewing the supply chain management system. 1 2 3 4 5

Factor 2: Marketing Innovations

7. Renewing the product promotion techniques employed for the promotion of the current and/or new products. 1 2 3 4 5
8. Renewing the distribution channels without changing the logistics processes related to the delivery of the product. 1 2 3 4 5
9. Renewing the product pricing techniques employed for the pricing of the current and/or new products. 1 2 3 4 5
10. Renewing general marketing management activities.

Factor 3: Process Innovations

11. Determining and eliminating non value adding activities in delivery related processes

12. Decreasing variable cost and/or increasing delivery speed in delivery related logistics processes.

13. Determining and eliminating non value adding activities in production processes

Factor 4: Product Innovations

14. Developing new products with technical specifications and functionalities totally differing from the current ones.

15. Developing newness for current products leading to improved ease of use for customers and to improved customer satisfaction.

16. Developing new products with components and materials totally differing from the current ones.

17. Decreasing manufacturing cost in components and materials of current products

18. Increasing manufacturing quality in components and materials of current products

25. Overall cost leadership (offering low prices for your products than competitors)

26. Focus (focusing on a particular buyer group,
product line or geographic line or geographic market)

27. Is your company’s mission statement specifically mention 1 2 3 4 5 creativity and/or innovation

28. Does your organization’s actual performance contribute in 1 2 3 4 5 making innovation happen.

29. Do you have formal programmes for innovation in your 1 2 3 4 5 organization

30. To what extent do you have quantified goals for innovation 1 2 3 4 5 and its impact on future performance

Section 3. Factors that influence Firms in the implementation of Innovation Activities

To what extent has the following factors affected or continue to affect the implementation of innovation activities?

Tick where appropriate in the boxes below
## APPENDIX 3: HORTICULTURAL PROCESSING AND EXPORT FIRMS IN NAIROBI

<table>
<thead>
<tr>
<th>NO</th>
<th>NAME OF PROCESSORS</th>
<th>TYPE OF PRODUCE</th>
<th>PHYSICAL LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Associated Farm</td>
<td>Vegetables</td>
<td>Transami</td>
</tr>
<tr>
<td></td>
<td>Company Name</td>
<td>Products</td>
<td>Location</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------</td>
<td>---------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Lycan EPZ Enterprises Ltd</td>
<td>Fruits and vegetables</td>
<td>EPZ Athi River</td>
</tr>
<tr>
<td>3</td>
<td>Vegmon International Ltd</td>
<td>Avocados &amp; mangoes</td>
<td>Tasia</td>
</tr>
<tr>
<td>4</td>
<td>Myner Exporters</td>
<td>Vegetables &amp; fruits</td>
<td>Wall Street Business park</td>
</tr>
<tr>
<td>5</td>
<td>Signet Export Company Ltd</td>
<td>Fruits and Vegetables</td>
<td>Fedha estate</td>
</tr>
<tr>
<td>6</td>
<td>Redwood General Traders Ltd</td>
<td>Avocados &amp; Mangoes</td>
<td>Fedha estate</td>
</tr>
<tr>
<td>7</td>
<td>Sidefarm Produce</td>
<td>Avocados &amp; mangoes</td>
<td>Fedha estate</td>
</tr>
<tr>
<td>8</td>
<td>Value Park Fruit Limited</td>
<td>French beans</td>
<td>Transami</td>
</tr>
<tr>
<td>9</td>
<td>Athi Farm Exporters Limited</td>
<td>Vegetables &amp; fruits</td>
<td>Aviation</td>
</tr>
<tr>
<td>10</td>
<td>Kakuzi Ltd</td>
<td>Avocados</td>
<td>Thika Makuyu</td>
</tr>
<tr>
<td>11</td>
<td>Jungle Nuts EPZ</td>
<td>Cashewnuts</td>
<td>Thika Makongeni</td>
</tr>
<tr>
<td>12</td>
<td>Sonic Fresh</td>
<td>Mangoes &amp; avocados</td>
<td>MiragPlaza 1st floor Mombasa road</td>
</tr>
<tr>
<td>13</td>
<td>Avenue fresh (EPZ) Ltd</td>
<td>Fruits &amp; vegetables</td>
<td>EPZ</td>
</tr>
<tr>
<td>14</td>
<td>Scan African Exporters</td>
<td>Vegetables &amp; fruits</td>
<td>Aviation area</td>
</tr>
<tr>
<td>15</td>
<td>Kenya Horticultural Exporters(1977) Ltd</td>
<td>Fruits &amp; vegetables</td>
<td>Off Enterprise Rd Industrial Area</td>
</tr>
<tr>
<td>16</td>
<td>Eden Ltd</td>
<td>Vegetables</td>
<td>JKIA 1st Avenue</td>
</tr>
<tr>
<td>17</td>
<td>Jade Fresh Exporters</td>
<td>Fruits &amp; vegetables</td>
<td>Aviation area</td>
</tr>
<tr>
<td>18</td>
<td>E.A Growers Ltd</td>
<td>Vegetables &amp; fruits</td>
<td>JKIA Specialized Cargo Area</td>
</tr>
<tr>
<td>19</td>
<td>Saco Fresh Ltd</td>
<td>Vegetables</td>
<td>Embakasi plot 209</td>
</tr>
<tr>
<td>No.</td>
<td>Company Name</td>
<td>Products</td>
<td>Location</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------------------------</td>
<td>---------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>20</td>
<td>Makindu Growers &amp; Packers</td>
<td>Asian vegetables</td>
<td>JKIA Cargo Handling</td>
</tr>
<tr>
<td>21</td>
<td>Willham Kenya Ltd</td>
<td>Vegetables</td>
<td>JKIA</td>
</tr>
<tr>
<td>22</td>
<td>Greenlands Agro Producers Ltd</td>
<td>Vegetables &amp; Passion fruits</td>
<td>JKIA Cargo center</td>
</tr>
<tr>
<td>23</td>
<td>Home Fresh</td>
<td>Passion fruit &amp; vegetables</td>
<td>Aviation embakasi</td>
</tr>
<tr>
<td>24</td>
<td>Woni Veg-Fru Exporters &amp; Importers Ltd</td>
<td>Passion fruits &amp; vegetables</td>
<td>Embakasi</td>
</tr>
<tr>
<td>25</td>
<td>Fresh an Juici Ltd</td>
<td>Apples, pears, oranges, nectarines, plums, grapes, lemon &amp; vegetables</td>
<td>Embakasi Area</td>
</tr>
<tr>
<td>26</td>
<td>Premier Fresh Ltd</td>
<td>Passion fruits &amp; vegetables</td>
<td>Aviation</td>
</tr>
<tr>
<td>27</td>
<td>Masafi Fruits &amp; Vegetables Ltd</td>
<td>Avocados, mangoes, pineapples, bananas &amp; vegetables</td>
<td>Aviation</td>
</tr>
<tr>
<td>28</td>
<td>Mavuno Exports Ltd</td>
<td>Passion fruits &amp; vegetables</td>
<td>Aviation</td>
</tr>
<tr>
<td>29</td>
<td>Chriven Enterprises</td>
<td>Passion fruits &amp; vegetables</td>
<td>Airport Road</td>
</tr>
<tr>
<td>30</td>
<td>Interveg Exports Ltd</td>
<td>Vegetables</td>
<td>Transami</td>
</tr>
<tr>
<td>31</td>
<td>Kandia FPS Ltd</td>
<td>Passion fruit &amp; vegetables</td>
<td>Transami</td>
</tr>
<tr>
<td>32</td>
<td>Kenya Fresh Ltd</td>
<td>vegetables</td>
<td>JKIA</td>
</tr>
<tr>
<td>33</td>
<td>Mboga Tuu Ltd</td>
<td>Asian vegetables</td>
<td>North airport road</td>
</tr>
<tr>
<td>34</td>
<td>Emke Commodities (K) Ltd</td>
<td>Avocados, mangoes and vegetables</td>
<td>Embakasi</td>
</tr>
<tr>
<td>35</td>
<td>Athi Farm Ltd</td>
<td>Passion fruits and vegetables</td>
<td>Aviation area</td>
</tr>
<tr>
<td>36</td>
<td>The Fresh Approach Ltd</td>
<td>Vegetables</td>
<td>Aviation area</td>
</tr>
<tr>
<td>37</td>
<td>Fruity Fruits Ltd</td>
<td>Fruits and vegetables</td>
<td>Mpaka Road, Brick</td>
</tr>
<tr>
<td>No.</td>
<td>Company Name</td>
<td>Products</td>
<td>Location</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------</td>
<td>-------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>38</td>
<td>Sunripe (1976) (K) Ltd</td>
<td>Fruits and vegetables</td>
<td>JKIA, Cargo Village, NAIROBI</td>
</tr>
<tr>
<td>39</td>
<td>Vegpro</td>
<td>Fruits and vegetables</td>
<td>JKIA Cargo Village</td>
</tr>
<tr>
<td>40</td>
<td>AAA growers</td>
<td>Fruits and vegetables</td>
<td>JKIA Cargo Village</td>
</tr>
<tr>
<td>41</td>
<td>Kenya Nut Ltd</td>
<td>Nuts</td>
<td>Barclays plaza house of volvo</td>
</tr>
<tr>
<td>42</td>
<td>Premier Foods Industries ltd</td>
<td>Fruits and vegetables</td>
<td>Ruaraka, Nairobi</td>
</tr>
<tr>
<td>43</td>
<td>Kevian Kenya Ltd</td>
<td>Fruits and vegetables</td>
<td>Opp. War Memorial Cemetery, Ngong Road</td>
</tr>
<tr>
<td>44</td>
<td>Delmonte K Ltd</td>
<td>Fruits</td>
<td>Oloitiptip road, off Garissa road Thika</td>
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<tr>
<td>45</td>
<td>Mana Food Suppliers</td>
<td>Fruits and Vegetables</td>
<td>Thome</td>
</tr>
<tr>
<td>46</td>
<td>Summer Fruits</td>
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<td>Embakasi</td>
</tr>
<tr>
<td>47</td>
<td>Kenton Farm</td>
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<td>Kenya Bloom</td>
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<td>Utawala</td>
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<td>49</td>
<td>Green Point</td>
<td>Vegetables</td>
<td>JKIA Cargo Village</td>
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