

**DETERMINANTS OF CREDIT FACILITY DEMAND BY THE HORTICULTURAL  
PRODUCTS' EXPORTING COMPANIES IN KENYA**

**BY**

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## DECLARATION

This project is my own original work and has not been presented for a degree in any other university

Signed.....

Date.....12<sup>th</sup> NOV. 2006

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

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## *DEDICATION*

*To the Almighty God under whose grace and mercy I have come this far and  
to my wife Margaret Naini and children Risie, Sintei, Soittanae and Leshan*

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## List of Acronyms and Abbreviations

<b>ACP</b>	Africa, Caribbean and Pacific
<b>AFC</b>	Agricultural Finance Corporation
<b>CBK</b>	Cooperative Bank of Kenya
<b>CEO</b>	Chief Executive Officer
<b>C&amp;F</b>	Cost and Freight
<b>COMESA</b>	Common Market for Eastern and Southern Africa
<b>DBK</b>	Development Bank of Kenya
<b>EAC</b>	East African Community
<b>ERS</b>	Economic Recovering Strategy
<b>EU</b>	European Union
<b>FAO</b>	Food and Agriculture Organization
<b>FPEAK</b>	Fresh Produce Exporters Association of Kenya
<b>GAPS</b>	Good Agricultural Practices
<b>GDP</b>	Gross Domestic Product
<b>GoK</b>	Government of Kenya
<b>HACCP</b>	Hazard Analysis Critical Control Points
<b>HCDA</b>	Horticultural Crops Development Authority
<b>ICDC</b>	Industrial and Commercial Development Corporation
<b>IDB</b>	Industrial Development Bank
<b>ITC</b>	International Trade Centre
<b>JITAP</b>	Joint Integrated Technical Assistance Programme
<b>JKIA</b>	Jomo Kenyatta International Airport
<b>KEPHIS</b>	Kenya Plant Health Inspectorate Services
<b>KFC</b>	Kenya Flower Council
<b>KIPPRA</b>	Kenya Institute of Public Policy Research and Analysis
<b>MFIs</b>	Micro-Finance Institutions
<b>MoA</b>	Ministry of Agriculture
<b>MoFP</b>	Ministry of Finance and Planning
<b>MRLs</b>	Maximum Residue Levels
<b>MSEs</b>	Micro and Small Enterprises
<b>NBFIs</b>	Non-Bank Financial Institutions
<b>NGOs</b>	Non-Governmental Organizations
<b>PRSP</b>	Poverty Reduction Strategy Paper
<b>ROSCAs</b>	Rotating Savings and Credit Associations
<b>SACCOs</b>	Savings and Credit Cooperative Societies
<b>SME</b>	Small and Medium Enterprises
<b>SPS</b>	Sanitary and Phytosanitary Standards
<b>SPSS</b>	Statistical Package for Social Science
<b>UK</b>	United Kingdom
<b>UNCTD</b>	United Nations Centre for Trade and Development
<b>WTO</b>	World Trade Organization

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## ABSTRACT

Over the last decade or so, the agricultural sector, with the exception of horticulture, experienced low and declining productivity in terms of export earnings, employment creation, food security, household farm income and provision of raw materials for the agro-processing industries. Despite the positive growth in the horticulture sub-sector, the horticulture export business's future does not appear bright due to increased competition from other upcoming countries in the East, Central and West Africa; introduction of stringent new quality standards and legal requirements in addition to the existing financial and technical barriers in the industry's small and medium enterprises (SMEs) to upgrading their product lines and management systems. A difficult challenge under the EUREPGAP quality standards is ensuring the application of good agricultural practices (GAPs) particularly among the small holder farmers. The need to address these challenges places heavy demand on the institutional resources.

This study was conducted with the objective of assessing the important factors that influence the decision to source for credit facility, the level of credit facility demanded and the influence demographic factors have on demand for credit within the horticultural products' exporting companies in Kenya. According to the Horticultural Crops Development Authority (HCDA) (2004), there are 205 active exporters of horticultural products from which a sample of fifty firms were randomly selected.

Data was collected through questionnaire method. The questionnaires were administered through the "drop and pick up later" method while courier services were used for delivering the questionnaires in case of firms outside Nairobi. The response rate was 60% which was considered adequate for the study. The assessment on the relative importance of factors influencing demand for credit in the horticultural products exporting firms was done on a scale ranging from a score 1= not important to a score 5= very important.

The research study revealed a high demand (72.4%) for credit finance in the horticultural products exporting businesses. However, out of the total short and long term loans applied for, 49% were successful while 51% were not. About 56% of the companies

which had never applied for credit facility financed their businesses through partnership arrangements, 33% through self finance and 11% through financial support.

The study results showed that the factors that the sample firms considered very important in influencing their decisions to source for credit finance were business expansion, airfreight charges for C&F orders, compliance with the new market standards and regulations, investing in IT for market information, investing in value addition to address customer needs, venturing into new markets, ensuring HACCP standard compliance, investment in market intelligence services and produce handling facilities. Other factors rated as important in influencing credit facility demand were installation of cold storage facilities, financing produce purchase, installation of irrigation system, and prompt payment of taxes. From the analysis of factors in the value chain it was evident that most of the ratings throughout the value chain were perceived to be either “very important” or “important” This is a further indication of high credit facility demand by export businesses in the horticulture sub-sector.

The only demographic factors that had a significant relationship on demand for credit were the age of the business and the period the firm had been exporting horticultural products. The two factors are time based and thereby suggesting that, most of these firms have been dealing with horticultural trade as their core business right from the time they were established. The positive correlation between credit demand and the age of business can be attributed to the expansion needs of these firms to achieve economies of scale and the investment demands placed on these firms in order to meet the quality standard requirements in the international market.

The challenges considered very important were high freight rates and inadequate cargo space. Those regarded as important were compliance with new market standards, poor road infrastructure, lack of credit facility to finance business, high interest rates on loans, means of establishing personal relationship with the customers, and lack of continuous supply of quality produce to meet market demand. Among the challenges the exporters could address on their own, finances were a major constraint. Additionally, almost two-

thirds of the respondents indicated having encountered business opportunities which they were not able to exploit due to finance-related constraints.

On basis of the research findings, it can be concluded that demand for affordable credit facility exists in the horticultural export businesses to finance investment in the value chain processes and to enable them venture into new markets. To achieve competitiveness of Kenya's horticultural commodities in the international markets and steady growth in the horticulture sub-sector, facilitative policies that address access to affordable credit particularly to small and medium scale farmers and marketing agents is important. This is because the global business environment the exporters are operating in is increasingly becoming very competitive. Additionally, the role played by the horticulture industry in stimulating economic growth, job creation, increased rural farm income, supply of raw materials to the industrial sector and in earning the country the much needed foreign exchange cannot be underscored.

This research only focused on the export horticultural business. Further research can be done to determine the level of credit facility demanded by horticultural products' processing industries capturing the many cottage industries which are a predominant feature in this sub-sector. Research can also be done to determine credit demanded by producers particularly the small and medium scale horticultural farmers. Other areas of research include *undertaking an assessment of levels of borrowers' satisfaction with horticultural credit service providers* and an investigation of the extent to which trade finance is used in the horticulture export business.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background

Over the last decade the agricultural sector, with the exception of horticulture, experienced low and declining productivity in terms of export earnings, employment creation, food security and household farm incomes (Government of Kenya, 2003). According to the Ministry of Agriculture (2004), agriculture is the backbone of the national economy, contributing directly 26% of gross domestic product (GDP) and 60% of the export earnings. The Ministry further states that agriculture contributes an additional 27% of the country's GDP through links with manufacturing, distribution and service-related sectors.

To support the performing sub-sectors and reverse the declining productivity requires the adoption of new and improved technologies. This in turn requires use of extra resources especially credit. Nickel et al (2005) defines credit as borrowed capital that is repaid over a specific period usually longer than one year for long term credit and less than one year for short term credit respectively. Credit has been recognized as an important tool for development. Chijoriga and Cassimon (1999), proponents of credit approach to development, argued that people who live in developing countries might improve their living standards by becoming micro entrepreneurs and that financial institutions should support their initiative with small loans. Credit enables an individual member or enterprise to enjoy the benefits of economies of scale and new technologies (Grande, 1984). According to Wangia (2001), credit is a prerequisite for the adoption of improved agricultural technologies by resource poor farmers.

Supporting production alone may, however, not reverse the declining trends in agricultural productivity. Assistance to small and medium scale marketing agents is required to enable them to expand their businesses at local, regional and international

levels. Financial support to small and medium scale marketing agents is required to enable them gain a competitive position and also expand their businesses (Jaffee, 2003).

The Poverty Reduction Strategy Paper (PRSP) (2001) further points out that a need exists to focus on the competitiveness of agricultural commodities in response to the effects of globalization and the signing of the East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA), and the World Trade Organization (WTO) treaties. For the small and medium-scale marketing agents, the overriding interventions identified relate to credit and finance, infrastructure provision and marketing of products.

The Economic Recovering Strategy for Wealth and Employment Creation (GoK, 2003) recognizes the role of the financial sector in the development process as one of mobilizing resources and allocating those resources in the economy. According to the Strategy Paper, the ability of Kenya's financial sector to contribute to development process has been undermined by non-performing loans portfolio which stood at nearly 30% of the total loans and advances from commercial banks by the end of 2002. Other factors that have contributed to the poor performance of the financial system, according to the literature include absence of effective competition which has led to persistence of wide interest rate spreads; absence of strong and vibrant institutions for long-term capital and legal system characterized by long delays in the determination of commercial disputes and enforcement of contracts.

Small scale enterprises sector development in Kenya is faced with a number of problems including, according to Kibera et al. (1996), an inhibiting environment, lack of finance, and poor non-financial promotional programmes. Although the financial sector in Kenya is fairly diversified in terms of financial institutions, removal of those factors that have constrained effectiveness of the financial sector's intermediation role is necessary (GoK, 2003).

Perhaps one critical area where marketers of financial services in Kenya have failed is the management of interest rates as evidenced by the introduction of the Central Bank

Amendment Act often referred to as the “Donde Bill” which was passed into law, an outcome that was vigorously contested by the banking industry. The issue remains contentious and is far from resolved. The “Donde Act” popularity is a clear manifestation of the public disaffection with banking services especially the “pricing” of loan products. Although the banks would like to attribute this to ignorance and inability of the customers to manage credit responsibly and a legal system that is slow on resolution and tilted in favour of the borrower, customers still believe that they are getting a raw deal from the banks (Market Intelligence, 2002). One of the intervention measures that the Government wants to introduce is a Micro-finance Institutions Act. The bill once enacted is expected to enhance competition in the financial sector.

The financial market in developing countries typically includes a mix of components (Germidis, Kessler and Meghir, 1991). The formal financial sector covers a wide range of institutions such as banks and cooperative societies (Robinson, 2001). These are mostly urban and peri-urban based and supply financial needs of the more modern sector. The semi-formal financial organizations are usually unlicensed and generally unsupervised, but at times operate under specific laws and regulations.

Unlike the formal financial institutions, the semi-formal ones usually provide limited services, as the law in many countries may not allow them to provide a wide range of financial services. Some institutions such as the Non-Governmental Organizations (NGOs) provide micro-credit but are usually not permitted to take savings from the public. The informal sector, on the other hand, is uncontrolled and unregulated. It includes such providers as loan sharks, wholesalers, shopkeepers, employers, rotating credit and savings associations (ROSCAS) and landlords (Lengewa, 2003).

On the demand side, several studies have been conducted which indicate that demand for financial services in Kenya far outweighs the supply. Demand for savings, micro-insurance, and money transfer services is evident. It only calls for understanding the nature of demand and developing innovative products/service design and delivery mechanism (Rutherford, 1999; Wright, 2000; Kimuyu and Omit, 2000).

In Kenya, financial assistance to small scale producers and marketing agents in the horticultural sub-sector may require the adoption of the Grameen Bank group lending model which has been used successfully in Bangladesh. According to Charitonenko and Rahman (2002) Bangladesh is well recognized as one of the very few countries in the world where microfinance is extensively developed, covering 70% of the poor household. The Grameen Bank group lending model should however, be adopted with modification to suit the Kenyan cultural, economic, and political situation to achieve mobilization and commitment of the target groups (Fowler and Kinyanjui, 2004). Availability of credit to small businesses and low income households such as the small scale horticultural producers could greatly enhance their economic strength and eventually break the vicious circle of low income – low savings –low investment – low income (Yunus, 1984)

Like other sectors of the economy, the agricultural sector needs a lot of financial support aimed at reversing the declining performance in order to achieve the envisaged 7% growth in Gross Domestic Product by the year 2006 (GoK, 2003). The next section gives an overview of the horticulture sub-sector in Kenya.

## **1.2 The Horticulture Industry**

Horticultural exports from Kenya began in the 1930s, when passion fruit juice was exported to Europe. The first air-freighted exports of fresh horticultural produce occurred in the 1950s when high value fresh produce was exported to the United Kingdom (Nyoro, 1993). At Independence (1963) the horticulture sub-sector was a very insignificant activity in the economy. Much of the activity was by European settlers while the indigenous small-scale farmers involvement in horticultural production was merely subsistence. Since then, exports of fresh produce have expanded to other countries in Europe, Middle East and South Africa. Since 1966 horticulture's share of agricultural export earnings and total domestic export earnings has increased steadily. This tremendous growth has provided the impetus for growth of Kenya's agricultural sector at a time when traditional exports of coffee and tea declined due to unfavorable world demand and prices (MoA, 2003). From early 1980s to the present the sub-sector has

witnessed expansion in the exports of all the major product categories namely flowers, fruits, vegetables, nuts, herbs and spices

Over the years, horticulture has emerged as the fastest growing industry in the agricultural sector. It employs directly and indirectly about 2.5 million people. The small-holder farmers grow about 60% of the produce. In addition to employment creation the horticulture sub-sector is important in its contribution to the Kenyan economy as it provides income, food security, improved nutrition and provides raw materials for the agro-processing industry and foreign exchange earnings (GoK, 2003).

The horticulture exports have been developed on the basis of a government policy that promotes private investment with minimum government control. As a result, the private sector has played an important role in production and marketing of horticultural produce. This policy was adopted in the early 1980s and has over time been reviewed in favour of the private sector through the exemptions of duty on imported horticultural inputs (Muema, 2001). The policy has continued to guide the sector for the last twenty years and has led to a situation where the private investor was free to operate without government bureaucracy, thereby encouraging many to invest in the sub sector.

The future of the sub-sector is still bright provided improvements are achieved in yields, quality, packaging, air freight costs, promptness in meeting commitments, observance of the European Union requirements on maximum residue levels (MRLs) and traceability, selling through the internet and implementation of the EUREPGAP standards requirements (Muema, 2001)

From the total horticultural exports, 90% is bought by the European Union with the rest being exported to Middle East and South Africa. However, the market is still extensive in these traditional markets not to mention the fact that the Eastern European markets are yet to be explored. The quantities exported by Kenya's competitors clearly show that Kenya only supplies a small percentage of the various products while the competitors supply the bulk. The major suppliers are South Africa, Costa Rica, Canada, Morocco,



Turkey and Colombia which supply about 40% to this market. Fruits are the main exports to the European Union with vegetables being the second largest, both accounting for 10 million tons valued at 8 billion Euros in 1999 (Muema, 2001).

The export horticulture business is faced with a number of constraints key of which include the EUREPGAP Standards requirements, the WTO Sanitary and Phytosanitary (SPS) regulations, high competition in the market place, low value for raw exports, lack of branding for Kenyan produce, high freight charges for the raw products to these distance markets, and lack of a revolving fund to support the sub-sector from the government among others.

### **1.3 Statement of the Problem**

Commercial horticultural production and marketing require high capital investment which many farmers and marketing agents do not have (ITC,WTO and UNCTD, 2002). Production entails intensive use of farm inputs such as fertilizers, high quality planting materials, agrochemicals and other inputs. Most marketing agents in the horticultural export business depend on out-growers for produce supply. However, the rising cost of production has been adversely affecting these farmers whose purchasing power has gradually been eroded (ITC,WTO and UNCTD, 2002)<sup>1</sup>. The small and medium scale producers are very significant participants in the production of avocado, mango, passion fruit, french beans, snow peas, and Asian vegetables for export market. However, most of these farmers are resource poor and lack the required collateral security to make them credit worthy. According to HCDA (December, 2004)'s list of flowers, fruits and vegetable exporters, out of 671 licensed exporters, only 205 (30.5%) were actively exporting. This is a clear indication of existence of serious challenges which result in many firms dropping out of the export business.

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<sup>1</sup> In this strategy document, lack of credit facilities has been cited as the major cause of failure by the farmers to adopt modern technologies and hence low yields and poor quality produce. The most affected are small-scale farmers who have no access to commercial banks which charge high interest rates and require collaterals.

Press reports in the recent years have continued to highlight the potential negative impact the EUREPGAP standards and the new European Union (EU) legal requirements have on the Kenyan Horticultural Industry (Songa et al, 2004). These reports suggest that the changing conditions may push out business enterprises particularly the small and medium scale exporting companies and the many out growers that they deal with.

Despite the positive growth that the Kenyan Horticultural Industry has shown in the last two decades, the introduction of strict food safety standards like the EUREPGAP (Food plus), which is supported by major European retailers and produce marketing organizations; the Codex Alimentarius of Food and Agriculture Organization; and the World Trade Organization Sanitary and Phytosanitary Standards (Songa et al, 2004; and MoA, 2004) suggest a need for exporters of horticultural products to invest additional resources to ensure compliance at all stages in the value chain. The problem is compounded by the fact that markets and the regulatory context for trade is changing in ways that appear to be hindering new entries while posing new challenges in the path of existing developing countries suppliers (Jaffee, 2003). Consumers in industrialized countries are becoming increasingly concerned about food safety, environmental and social dimensions of their food supply chain.

For many years the horticultural industry functioned using very simple supply chains with relatively little investment in infrastructure, product development and management systems including those for food safety. The changing regulatory environment within Europe, Kenya's major market for fresh horticultural produce, has raised concerns that developing countries will be unable to maintain, let alone, continue to expand their trade in high-value horticultural products. The cost of compliance to the increasingly stringent food safety, phytosanitary, and other regulations in Europe and in new markets with high potentials like Japan and the United States are a threat to the small and medium scale enterprises in the horticultural export business (Jaffee, 2003).

Kenyan horticultural products exporting firms require capital to fund various activities in the value chain to enable them meet these ever increasing consumer demands and in

addition expand their businesses to enable them venture into the new markets. These activities include procurement of high quality produce either through own production or supplies from farmers; undertaking operations that add value to the products as in processing, packaging, marketing and sales, organization based support activities and customer service. The formation of regional trading blocks offers additional business opportunities for the small and medium scale enterprises that may invest in value addition processes. Jaffee (2003) points out the important challenges as:

- ensuring the application of good agricultural practices and being able to more fully demonstrate and document the safety of fresh produce sourced from smallholder farmers who are a major supplier of horticultural produce to the small and medium scale exporters;
- enabling the industry's small and medium enterprises (SMEs) to overcome the financial and technical barriers to upgrading their product lines and management systems; and
- further strengthening the capacity of the Kenya Plant Health Inspectorate Service (KEPHIS) and have the European Union recognize it as a competent authority for phytosanitary and quality inspection services.

It is estimated that about 40% of total horticultural production go to waste. This can be attributed to poor management of the value chain occasioned by poor marketing infrastructure and lack of capital. The bigger picture, however, is one of an industry repositioning itself successfully to profit and compete in precisely those segments of the European and other markets that are the most demanding in terms of food safety and quality management (Jaffee, 2003). Despite the repeated call for exporters of agricultural products to invest in value addition processes, most horticultural exports are characterized by raw exports. This can be attributed to lack of capital to finance value addition processes.

The current need for Kenyan horticultural firms to reposition themselves is an effective management strategy for addressing changing business environment. According to Kotler (2003), a company will occasionally discover that it may have to reposition its products because of changing customer preferences or new competitors. Repositioning

may put heavy demands on an organization's resources and where such demand is not met internally, external funding will be sought. The overall demand for credit facilities is, however, determined by many factors in the value chain which is what this study attempts to establish in terms of identification of the relevant factors and assessment of their relative importance.

#### **1.4 Objectives of the Study**

The objectives of the study are:

- to assess level of credit facility demanded by horticultural products' exporting companies in Kenya
- to determine the relative importance of various factors that influence level of credit facility demanded.
- to determine the influence of business demographics on demand for credit

#### **1.5 Importance of the Study**

This study is expected to be of use to development financial and micro-finance institutions as it sheds light on the level of credit facility demanded in this sub-sector upon which investment decisions can be made. Such financial institutions include the Cooperative Bank of Kenya (CBK), Agricultural Finance Corporation (AFC), Industrial Development Bank (IDB), K-Rep Bank and other micro-finance institutions.

The study is also expected to extend the frontiers of knowledge by assessing the relative importance of various factors that contribute to demand for credit. This is of academic value to scholars and researchers as they research further this economically important sub-sector

The Government and institutions involved in formulation of credit policy in trade and agriculture will also find the study results useful in guiding determination of budgetary allocations to development for this sub-sector.

The study will in addition assist new investors in the sub-sector who may want to use credit finance more succinctly understand the areas they need to give priority.

## CHAPTER TWO

### LITERATURE REVIEW

The previous chapter considered the background of the study, the research problem, objectives and the importance of the proposed study. This chapter reviews the literature relevant to this study. This embraces an understanding of the term credit; the basic types of credit; an overview of the major sources of credit finance in Kenya; the value chain activities and credit demand; and management analysis of market opportunities that justify the long-term profitability of credit finance.

#### 2.1 Credit

The word “credit” has been used for different purposes. The best way to think of credit is to think of it as meaning “trust”. The word ‘Credit’ comes from the latin word *Credere* meaning ‘trust’. When a seller transfers his/her wealth to a buyer who has agreed to pay later, there is a clear implication of trust that the payment will be made at the agreed date. The credit period and the amount of credit depend upon the degree of trust (Edward, 1997). According to Edward (1997), ways have always been and will always be found to satisfy the demand from ‘needers’ without the means to pay right now, but good business management, whether of governments, banks, companies or households requires decisions about time scales and amounts that can be afforded from future earnings.

Time scales and amounts that can be afforded from future earnings decisions have always required information on the customer or borrower to be able to judge how much trust and for how long. In the olden days, information was largely by word of mouth. However, the modern demand for credit requires the seller to organize a credit process to cope with continuing volumes; capital resources to fund the waiting time with a worthwhile return on the investment; and regulation, informally or by law, of credit agreements and their enforcement. To cater for the increasing demand for reliable and trusted structures, credit to borrowers must be well-organized and the repayment of principal, interest and

administration expenses is charged to the borrower via carefully worded agreements (Edward, 1997).

Despite the wide recognition of the dynamic role of credit, few small business owners in developing countries have benefited from the available formal financial services. Ziorklui and Senbet (1997), as in Chijoriga and Cassimon (1999) have identified the lack of long-term capital for investment in the private sector as a major constraint to growth and development in Sub-Saharan Africa.

Access to financial services has been identified as a major problem experienced by many people who attempt to do business in Kenya. In particular, access to credit by micro and small enterprises (MSEs) from the formal banking sector has been cited as a major constraint to their development and growth (KIPPRA, 2001). Commercial banks, which were traditionally looked upon as powerful catalysts of economic development through resource mobilization and the provision of credit to profitable venture, did not offer credit to the rural poor or small businesses (Kuzilwa and Mushi, 1997). Their Stringent lending policies and Collateral requirements, Cumbersome procedure and their own perception of small business and the rural poor as risky business often led to their exclusions. According to KIPPRA (2001), various studies have concluded that, while credit in formal banking institutions has grown steadily over the years, little of this credit has reached the MSE sector.

The Ministry of Finance (2001) recognizes the challenges existing in crops produced for export namely tea, coffee and horticulture. These export products will have to comply with importing country standards and requirements with regard to chemical use, worker welfare and good agricultural practices(GAP) as defined in the EUREPGAP Protocol (Food plus, 2004). This will require extra capital investment by exporting firms in these sub-sectors. According to KIPPRA (2001) micro and small enterprises sector provides over 15% of employment countrywide and therefore should be assisted in their endeavors to operate, and where possible to grow. Although micro-finance institutions (MFIs) have endeavored to close the credit gap, their outreach efforts have been limited. Inadequate

project finance has also been a major source of concern because of lack of sufficient long-term capital (KIPPRA, 2001). For the last three decades, rural credit has been left to the private sector in a system where, with liberalization and the bringing of more and more of the financial sector under the Banking Act, farmers and the rural sector are now starved of both credit and financial services (MOFP, 2001)

For a marketing enterprise to buy produce, transport, add value through processing and resell, it must have sufficient funds to cover all the payments involved including overhead costs of facilities, equipment and staff until the proceeds of sales come in. This can be a matter of weeks or much longer if produce purchased at the harvest season is held for resale to consumers later in the year (Abbott, 1987).

To open its doors, a new business requires capital, and additional capital is needed for expansion. The required funds can come from many different sources, and they can take many different forms, but all capital can be classified into two basic types – debt and equity (Brigham and Gapenski, 1998). According to Abbott (1987) most private marketing enterprises begin with some own capital (equity), however small, add to this by borrowing from relatives, and then go to a bank or other credit source for a short-term loan to make up what is needed to begin operations. If the enterprise is successful and can provide adequate collateral such as a house, land, or business property, it can expect further bank finance in subsequent years, possibly on easier terms. Raising capital as debt has both advantages and disadvantages. The main advantages are that interest is tax deductible which lowers the effective cost of debt; debt holders are limited to a fixed return, and that they do not have voting rights (Brigham and Gapenski, 1998). The principal disadvantage of raising capital through debt is that, the higher the debt ratio, the greater the risk and the higher the interest rate. At some point, rising interest rates overwhelm the advantages of debt. If a company encounters hard times and if its operating income is insufficient to cover interest charges, it may be forced into bankruptcy.



If a firm had inexhaustible sources of funds, it could get into any project which somehow contributes positively to its wealth. Unfortunately, money is a scarce commodity and also an expensive one. The firm therefore cannot afford to pursue all projects desirable as they might be. Rules have to be devised for determining which projects to undertake. This is capital sharing or rationing (Kibera et al, 1996).

## **2.2 Types of Credit**

There are two major types of credits based on the repayment period, namely short-term and long-term credit or debt. Short term credit is repayable within a period of one year whereas long term credit repayment period exceeds one year. The ratio of long-term to short-term financing at any point in time will be greatly influenced by the term structure of interest rates, often referred to as yield curve (Block and Hirt, 1992).

### **2.2.1 Long-Term Credit**

Long-term credit is the basis for capital structure decisions. Gearing or (leverage) is an indication of the relationship between the long-term credit and the equity. A low geared company has a low proportion of the long term debt (Hannagan, 2002). On any given day, corporations go to market for vast amounts of debt capital. The use of debt is generally required to maximize the value of a firm. There are many types of long term debt: amortized and non-amortized, publicly issued and privately placed, secured and unsecured, marketable and non marketable, callable and non callable, convertible and non-convertible among others. A firm's long-term financing decisions are influenced by its target capital structure, the maturity of its assets, its current and forecasted financial conditions, the suitability of its assets for use as collateral and current and forecasted interest rate levels (Brigham and Gapenski, 1998). Developmental Financial Institutions have been the country's principal sources of long-term finance for industrial and other business development activities. These institutions are funded primarily through loans and grants received from bilateral and multilateral development institutions and donors, as well as GoK. The government, once a major source of funds, has eliminated its budgetary allocations (KIPPRA2001)

Keeping a balance between borrowed capital (credit) and equity is good management practice and organizations have always strived to maintain debt at a level that does not result in cash outflows equal or exceeding cash inflows. However capital has different meaning to different people, to some capital refers to funds available for investment; to others it refers to equipment and machinery used by entrepreneurs and managers to produce goods and services; and still to others it refers to postponed consumption. The term capital refers to all these (Kibera et al, 1996). Many people seem to think that the only way they can get capital is by borrowing. They forget that they could save the necessary money or even make capital themselves. It should be remembered that capital which is borrowed must have been saved by someone else. Savings means going without some of the pleasures of life today (Upton and Athonio, 1979).

One of the most perplexing issues facing financial managers is the relationship between capital structure, which is the mix of debt and equity financing and stock prices. Although the optimal capital structure decision is generally not crystal clear, an understanding of the capital structure theory and practice would help a great deal. Too much debt can keep a company away from accessing otherwise good times and instead wipe out the business altogether (Brigham and Gapenski, 1998). Small scale producers and the marketing agents in export horticultural businesses require technical advice to enable them develop strategic plans in addition to making the necessary capital structure decision for improved profitability.

### **2.2.2 Short -Term Credit**

Most firms use several types of short-term funds to finance their working capital requirements. These include bank loans, trade credit (accounts payable), commercial papers and accruals (Brigham and Gapenski, 1998). Companies structure their current liabilities differently depending on the nature of their business. Short-term credit is generally cheaper than long-term capital, and it is easier to obtain. However, it is a riskier, less dependable source of financing. Interest rates can increase dramatically and changes in a company's financial position can affect both the cost and availability of

short-term credit (Brigham and Gapenski, 1998). Where a company uses trade credit and accruals, such credit is essentially free and virtually no short-term bank debt.

## **2.3 Sources of Credit**

The major formal sources of credit finance for MSEs in Kenya include commercial banks, non-bank financial institutions; micro finance institutions; savings and credit cooperative societies; and development finance Institutions (KIPPRA, 2001). However, in a few instances, MSE firms have been reported to source finance from traders, merchants and informal institutionalized organizations such as rotating savings and credit associations (ROSCAS) (Kinunda-Rutashobya, 1999).

### **2.3.1 Commercial Banks**

Commercial Banks are regulated under the Banks and Companies Acts. There are fifty five commercial banks currently operating in Kenya, nine of which dominate the banking system and account for approximately 69% of commercial banking deposits. Commercial bank lending primarily consist of short term loans and overdrafts (KIPPRA, 2001). The cooperative Bank of Kenya, one of the five largest, has traditionally served a different clientele from other banks. It provides banking facilities to its member cooperatives and finances the cooperative movement through the provision of overdraft facilities and short and medium-term loans. The bank takes deposits from the public and also obtains loan funds from donors. It has recently expanded its operations to provide credit to the private sector. The banking sector is characterized by high interest rates which have caused an increase in non – performing loans (KIPPRA, 2001).

### **2.3.2 Non-Bank Financial Institutions (NBFIs)**

The non-bank financial institutions (NBFIs) are companies other than banks, which carries on financial business, that is, acceptance from members of the public of money deposits repayable on demand, and investment of money held on deposit at the risk of the

depositor. The NBFIs sector grew rapidly between the mid 1970s and the early 1980s due to the favourable two-tier legal and regulatory frame work in the Banking Act. Commercial banks which at the time were required to observe credit ceilings, opted to establish NBFIs to serve as additional market for their credit (KIPPRA, 2001). Unfortunately, several NBFIs collapsed and this led the Central Bank of Kenya to adopt a universal banking policy. This is causing according to KIPPRA (2001), this segment of the financial services sector to disappear.

### **2.3.3 Micro-Finance Institutions**

Micro finance refers to small scale financial services, primarily credit savings provided to people who run small businesses. Ledgerwood (1998) defines the term microfinance as the provision of financial services to low income clients, including the self-employed. She further explains that micro-finance institutions generally provide services that include credit, savings, insurance and money transfer services.

Development of micro-finance institutions in Kenya can be traced back to the late 1970s and early 1980s as a response to results of research findings about the state delivery of subsidized credit to poor farmers. According to KIPPRA (2001), it was determined that inaccessibility to credit from the formal banking sector was strangling the large, informal micro and small enterprises (MSEs) sector. In the same period, subsidized targeted credit model supported by donors was an object of steady criticism because most programs set up to provide these services were inefficient and thus returned huge losses (Ledgerwood, 1998). By 1998, there were over 86 NGOs and other organizations involved in providing micro-finance.

The services that were provided then were basically small loans at subsidized rates. The efforts were not seen from the point of sustaining the service provider or the beneficiaries of these loans. In an effort to develop this type of credit further many credit programmes experimented on product design, delivery methods and institutional structures. The results of these experiments lead to the emergence of micro credit delivery mechanism.

It became evident with time that market based solutions were critically important for the development of microfinance. This led to an approach that considered micro-finance as an integral part of the overall financial system. Emphasis gradually shifted from rapid disbursement of subsidized credit by short-lived projects or programmes towards the building of sustainable institutions to serve the poor (Ledgerwood, 1998). These institutions have proved, through a relatively low default rate that the economically active MSEs are credit worthy. However many MFIs are still in developmental stage and are currently facing pressure from donors to become self-sustaining (KIPPRA, 2001).

#### **2.3.4 Savings and Credit Cooperative Societies (SACCOs)**

Saving and Credit Cooperative Societies (SACCOs) are regulated under the Co-operative Societies Act and have played a vital role in providing financial services to Kenyans. The growth of saccos over the last twenty years has been spectacular. The number rose from 630 in 1978, to 3169 by the end of 1997, an indication that SACCOs are meeting a demand that is not being met by other financial Institutions (KIPPRA, 2001). Today, some savings and credit societies are larger than some small commercial banks.

#### **2.3.5 Development Financial Institutions (DFIs)**

Kenya has several government owned enterprises set up primarily to assist with financing of development projects and, in some cases to facilitate government acquisition of equity in business enterprises (Kibera et al, 1996). The main development financial Institutions through which the government channels funds for development are the Industrial and Commercial Development Corporation (ICDC), the Industrial Development Bank (IDB), Agricultural Finance Corporation (AFC) and the Development Bank of Kenya (DBK). Apart from DBK which in addition is offering commercial banking services, participation of the other three institutions is limited to projects:

- that are profitable but needing encouragement, which serves as a straight forward way of showing the governments approval and encouragement.

- that are profitable but risky, in which governmental participation is required to reduce the risk
- that are marginally profitable by themselves but involving external economies, making them highly desirable for the economy as a whole.
- that are too big for individual private domestic investors and entrepreneurs
- in which a strong public interest exists and in which financial participation is desirable in order to establish public control, promote Kenyanisation, prevent abuse of monopoly powers or generally ensure that the enterprise operates in the public interest (Kibera et al, 1996).

Some of the DFIs listed above exist on paper only, incurring huge losses and paying their operating costs through proceeds from the sale of assets while others are virtually dormant (KIPPRA, 2001). According to KIPPRA(2001), Kenya needs to retain some of its DFIs, as institutions involved in mobilizing foreign and local currency resources for financing long-term projects to improve economic development and support the policy to transform the country into a newly industrialized nation by the year 2020. Export-led industrial growth, to which Kenya is strongly committed, requires a high level of long-term industrial financing. Purchasing fixed assets, which yield returns over long periods, do as well.

There is an argument that long-term industrial financing can best be provided by DFIs, which can be used as intermediaries for donor and other development agencies to mobilize funds. DFIs have assisted in developing most sectors including manufacturing, tourism, agriculture and housing. Their exit would certainly open a gap in the provision of long-term funds. Even within the current liberalization regime, some measures should be taken to repackage these institutions so that they continue to play their strategic role in the new environment. It is clear that poor management has been largely responsible for destroying the credibility of DFIs. It is unfortunate that poor management has discredited the role these institutions have played and can continue to play (KIPPRA, 2001).

The Government of Kenya (2002) in the Kenya rural Development Strategy recognizes credit as being necessary for agricultural production, marketing, processing, storage and

long-term agri-business investment. Rural finance has been made available through various financial intermediaries including commercial banks, co-operative sector, non-governmental organizations; agricultural boards; and development financial institutions among others (GoK, 2002).

Agriculture gets 10 – 12% of total credit disbursed. The stipulated target for agricultural advances as a percent of deposit is 17%. Over the period 1983-1993 agricultural advance, as a percentage of total deposits of commercial Banks fell from 20% in 1983 to 8% in 1993. In the case of non bank financial institutions, this fell from 12% to 4% (GoK, 2002).

According to Central Bank of Kenya statistical bulletin of June 1998, out of total advances of Ksh.208 billion, only Ksh.20 billion or 9.6% was advanced to the agricultural sector. This is despite the sectors importance as the employer of approximately 70% of the country's total labour force, being a major contributor to the gross domestic product (26%) and a major foreign exchange earner, accounting for 50% of export receipts (KIPPRA 2001).

Low income groups, and micro and small enterprises (MSEs) find it difficult to get savings and credit from commercial banks. This situation, however, is not unique to Kenya but exists worldwide. Despite the immense demand for micro-credit, the commercial banking sector does not find this market segment attractive (KIPPRA, 2001). The reasons cited are the perception of MSEs by bankers as bad credit risk; a belief by banks that small loans are costly; and that MSE operators lack the education or cannot afford to employ qualified staff to prepare business plans. This, in turn, makes most banks favour their large, well-established clients. Accessibility to credit in commercial banks is constrained by legal and regulatory factors as well as stringent bank policies developed to counter risks associated with culture, attitude and cumbersome loan recovery procedures. Low income households and MSEs are regarded by formal banking institutions as too poor to save and are not personally known to them, do not keep written accounts or business plans, and usually borrow small uneconomic sums (Ndanshau,

1996). Lending to them is therefore perceived as exposing these financial institutions to high risks.

Some new approaches on how to lend to the poor were proposed in late 1980s. The most common approach according to literature was the participatory approach, based on traditional system. The second approach was the modeled approach, that utilizes standard predetermined packages and includes step-by-step guidelines to micro business feasibility studies, loan administration etc. Examples of these two approaches include the various schemes and model currently operational in developing countries like the Grameen Bank in Bangladesh (Chijoriga and Cassimon, 1999). Most people believe that these schemes or models will: reduce poverty through increased income and standards of living; empower women; develop the business sector through potentials; and develop a parallel financial sector.

Conflicting ideas exist as to why microfinance exists. Some argue that due to limited access to formal bank credit, development financial institutions (DFIs) fill the gap for financing the poor. However, empirical evidence and surveys give mixed results of success and failure (Chijoriga and Cassimon, 1999).

### **2.3.6 Suppliers**

Suppliers are possible source of financing to business entities through a variety of credit supplies options. The supplier finances the purchase by delaying the date at which payment is due, or allowing installment payments. This source of working capital financing is very common for both starting and growing businesses and is referred to as trade credit. The supplier keeps a tight reign on credit terms and receivables. Many new businesses rely heavily upon a single supplier with whom they reach a long-term understanding regarding credit purchases.

In managing the amount of trade credit and other debts a business assumes, the critical feature is not the total amount of debt, but rather the ability of the business to make



payments from its cash flow. Realistic cash flow projections and a strong cash flow history form the primary interest of trade creditors.

The major advantages of trade credit from suppliers are that it is often readily available, it allows you to spread your payments over several months or years; and minimal or no down payment or interest charges assessed. Trade credit may be in form of a simple delay in payment for purchases, sales on consignment, equipment loans, or a variety of different options to assist dealers in financing stock purchases.

### **2.3.7 Rotating Savings and Credit Associations**

Rotating savings and credit associations (rosocas) are among the oldest savings institutions and play an important role in savings mobilization in many developing economies. One of the most surprising features of rosocas is their prevalence. Rosocas are found worldwide and in countries with vastly different levels of economic development. Ardener (1964) and Ardener and Burman (1995) document the prevalence of rosocas in Asia, Latin America, the Caribbean, and Africa. Rosca participation is particularly high in Africa.

Rosocas are locally organized groups that meet at regular intervals; at each meeting members contribute funds that are given in turn to one or more of the members. Once every participant has received funds, the rosca can disband or begin another round. In joining a rosca, an individual agrees to a schedule of periodic payments in return for which one receives a lump-sum payment at a future date (Gugerty, 2003). Rosocas often pay no interest and participants often have little or no control over when they receive the funds. Participants also bear the risk that other participants may not fulfill their obligations.

## **2.4 Business Demographics**

Business demand for extra resources can be influenced by demographic factors such as the location; age of business; number of employees; type of products dealt with among others. For a business to obtain the best results in form of profit, social benefits or both, it must utilize its resources to best advantage (Dale, 1965). Borrowers with longer banking relationships pay lower interest rates and are less likely to pledge collateral. The credit worthiness of a given business may at times be based on its legal status, risk assessment of product dealt with and the numbers of employees. The location of a business may place certain demands on the business resources in form of rent and transport expenses for the firm's products and supplies.

## **2.5 The Value Chain and Demand for Credit**

Operationally a business performs a conversion or transformation process through which it adds value to a commodity or service, in the sense that the value of the output of the organization is greater than the cost of the inputs and the process involved (Hannagan,2002). Hannagan points out that, all businesses start with raw materials, whether these are in form of goods or services, and that at all stages in the production process, value is added. Drury (2000) defines the value chain as the linked set of value creating activities all the way from basic raw material sources for components suppliers through to the ultimate end-use product or service delivered to the customer.

Michael Porter (1985) proposed the value chain as a tool for identifying ways to create more customer value. Every firm is a synthesis of activities that are performed to design, produce, market, deliver, and support its product. The value chain identifies nine strategically relevant activities that create value and cost in a specific business. These nine value-creating activities consist of five primary activities and four support activities.

The primary activities represent the sequence of bringing materials into the business (inbound logistics), converting them into final products (operations), shipping out final

products (outbound logistics), marketing them (marketing and sales), and servicing them (service). The support activities (procurement, technology development, human resource management, and firm infrastructure) are handled in certain specialized departments, though not exclusively. For example, several departments may do some procurement and hiring of people. The firm's infrastructure covers the costs of general management, planning, finance, accounting, legal, and government affairs that are borne by all the primary and support activities (Kotler, 2003). Kotler (2003) argues that a firm's task is to examine its costs and performance in each value-creating activity and to look for ways to improve it. The firm should estimate its competitors' costs and performances as benchmarks against which to compare its own costs and performances. It should go further and study the best of class practices of the world's best companies.

Horticultural marketing begins with the production or acquisition of products for sale. In planning production or purchasing, a firm will consider product characteristic; ability to finance production or purchase through own capital or credit; sale price and prospective profit (Abbott, 1987). This according to Porter's value chain model is the inbound logistic.

Horticultural marketing can be defined as the series of services involved in moving a product (commodity) from the point of production to the point of consumption (FAO, 1989). This definition emphasizes that, horticultural marketing is achieved by a series of processes which include produce harvesting techniques, grading and sorting; packing, transporting, storage, processing, distribution, and selling of products. The process of marketing horticultural products fits the Porter's value chain model activities and represents a series of cost drivers before the produce can reach the customer. Coordinating the individual parts of the value chain together to work as a team creates the condition to improve customer satisfaction, particularly in terms of cost efficiency, quality and delivery (Drury, 2000). All these activities require funding which may not be readily available to a firm.

## 2.6 New Marketing Opportunities and Demand for Credit

Companies compete successfully in today's market place by having a commitment to creating and delivering superior value to target customers in addition to knowing how to adapt to a continuously changing market place. They practice the art of market oriented strategic planning, the managerial process of developing and maintaining a viable fit between the organization's objectives, skills, and resources and its changing market opportunities (Kotler, 2003). The aim of strategic planning is to shape the company's business, products, services, and messages so that they achieve targeted profits and growth.

For a strategic plan to succeed, an organization needs to invest in information gathering and measuring market demand. This can only be achieved by investing in an internal record system; marketing intelligence, research and decision support systems. No company can win if its product offering resembles every other product offering (Kotler, 2003). Kotler (2003) points out that, today, most companies are guilty of strategy convergence, namely, undifferentiated strategies. He recommends that companies should pursue meaningful and relevant positioning and differentiation. Each company and offering must represent a distinctive big idea in the mind of the target market, and each company must dream up new features, services and guarantees, special rewards for loyal users, and new conveniences and enjoyments.

Kenyan horticulture export business has traditionally developed due to a number of preferential advantages. It was one of the world's pioneers in the development of the off-season and tropical fruits and vegetables export trade with Western Europe (Hirst, 1995). Some of these advantages according to Hirst (1995) include a unique geographical location, topography and range of climate which allow production under irrigation, a wide range of fruits, flowers, and vegetables throughout the year, readily trainable and abundant labour force; Africa Caribbean and Pacific (ACP) group of countries membership which conferred the benefit of tariff-free entry into the European Union for most fresh produce and hence a price advantage over competitors who are non ACP-EU

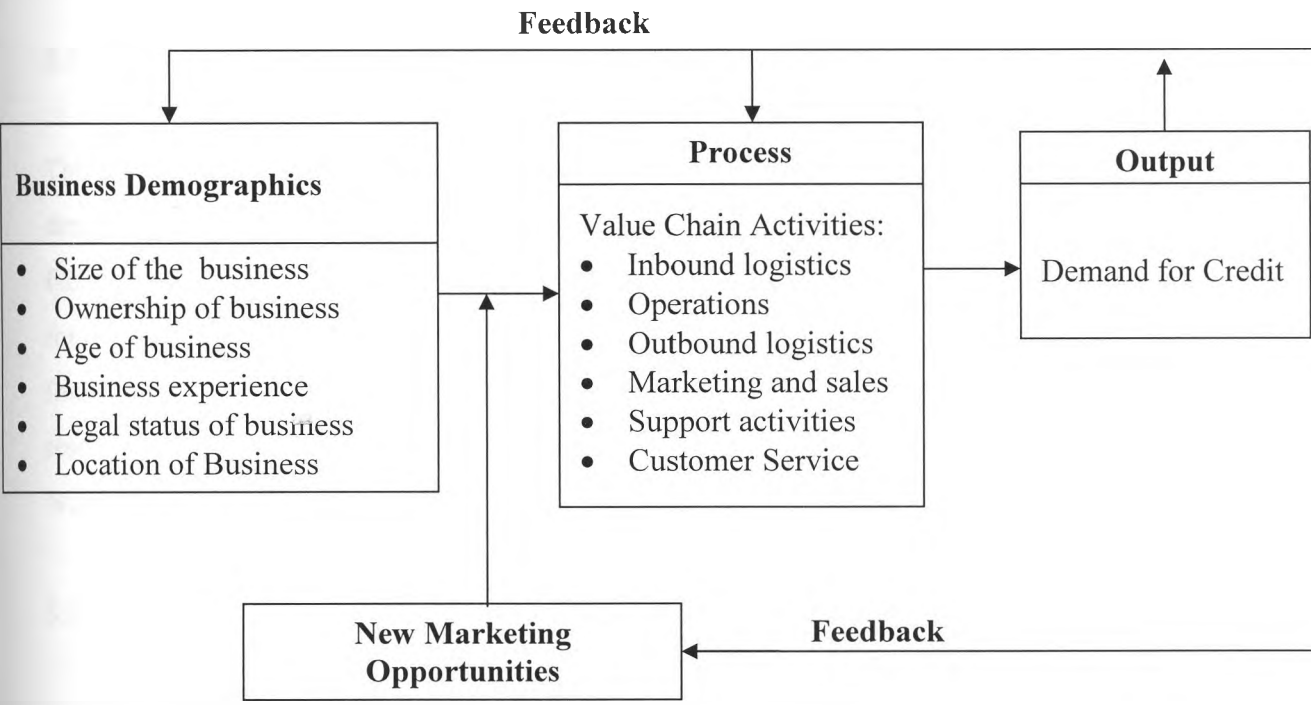
members; and good air freight links with most major cities in Europe. These factors enabled exporters to reach the rapidly growing and increasingly sophisticated consumer markets and made the business of marketing a relatively simple and profitable one at all levels of the trade-chain. Quality was unfortunately not always a very high priority in the sub-sector (Hirst, 1995).

The market place has changed quite dramatically and is continuing to change at an increasing pace. These changes are occasioned by the concentration of retail outlets through the phenomenal growth of the supermarkets across Europe, completely changing the shopping habits of most of the population; emergence of tremendous competition from other developing countries with suitable climate; and revolution in transportation to include air freight, sea-freight and use of already paid for freight-space (Hirst, 1995).

Consumers in industrialized countries are becoming increasingly concerned about food safety and about the environmental and social dimensions of their food supply chain. In a number of countries, these concerns have deepened over the past decade in the wake of a series of food safety crisis, scandals, mass product recalls, and other adverse events and communications (Jaffee, 2003). The response to these consumer concerns and the real prevailing weakness in systems to manage food safety has been a wave of legislative and regulatory activity and the emergence of numerous private sector code of practice or other technical protocols such as the EUREPGAP protocol. These measures raise the technical, financial and administrative requirements for Kenyan horticultural product exporters if they have to beat these challenges and gain market entry. Firms in the horticultural export business require sources of finance to enable them respond to the changing marketing environment as and when they occur to ensure they remain in business in addition to taking advantage of emerging business opportunities.

The key factors discussed above can be depicted diagrammatically as shown in Figure 1.

**Figure 1: Conceptual Framework**



The conceptual framework (Figure 1) shows that demand for credit is primarily influenced by business demographics via the intervening variables of value chain activities. The impact of the business demographics is also moderated by the availability and nature of new marketing opportunities. The conceptual framework guided the remaining phases of the study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

This was a descriptive research aimed at determining factors that influence level of credit demanded by companies exporting horticultural products, assessing the level of credit facility demanded, and determining the influence of business demographics on demand for credit. According to Cooper and Schindler (2003), such a study is concerned with finding out who, what, when, where, and how of the relevant phenomenon. Similar research design has in the past been used by Rukwaro (2001); Otieno (1998); and Wanjiro (2000), among others.

#### **3.2 Population**

The target population in this study comprised all active horticultural products exporting companies in Kenya operating under a license issued by the Horticultural Crops Development Authority. According to HCDA (2004) there are a total of 205 flowers, fruits and vegetables exporters. The list of the active exporters is presented in appendix 3.

#### **3.3 Sampling Plan**

A sample of 50 firms was selected for the study. This was about 24% of the target population. A widely quoted rule of thumb states that, “the sample size should be around one tenth of the population size”. For the purpose of this study, 24% was considered appropriate to improve on the degree of confidence in the estimates. The question of sample size according to Churchill and Iacobacci (2002) is complex because it depends on the type of sample, the statistic in question, the homogeneity of the population, and the time, money, and personnel available for the study among other factors.

Systematic random sampling method was used to select the sample members. This method, according to Luck et al (1978), is desirable for selecting a random sample if a list of the target population exists. This method involved selecting every  $k^{th}$  unit from the target population list after the beginning unit was chosen at random using random number tables, in the range of 1 to  $k$ . The sampling interval,  $i$ , is the inverse of the sampling fraction ( $n/N$ ), where  $n$ =sample size and  $N$ =target population. Thus for this study the interval ( $k$ ) was 4.

### **3.4 Data Collection**

Data for this study was collected using a self-administered questionnaire (Appendix 2). The semi-structured questionnaire was divided into three parts. Part one questions related to the business demographic information. Part two elicited data on the level of credit demanded and Part three, the relative importance of factors influencing credit facility demanded in this sub-sector. The questionnaire was pre-tested to determine clarity of the questions and their appropriateness before using it in the sampled firms. Courier services were used for delivering the questionnaire in case of those firms which were outside Nairobi. A drop-and-pick up later method was used to collect the data from firms within Nairobi.

The questionnaire respondents were the chief executive officers (CEOs) in each of the sampled firms. The target respondents in this study made use of a self-administered questionnaire ideal as a method of primary data collection. Face to face interview would have been the best method of data collection for this type of study because the interviewer is able to collect verbal and non-verbal information, in addition to clarifying responses. However, the number of CEOs involved and the fact that they are busy personalities did not make this approach feasible. Secondary data was obtained from available records to supplement primary data.



### 3.5 Data Analysis techniques

The data collected from this study was mainly analyzed using descriptive statistics. These included measures of central tendency and measures of dispersion. Content analysis was also used to analyze the data obtained from open-ended questions. Cross-tabulations was used to compare relationships between various factors.

Since demand for credit is a function of the various activities in the value chain, the Porter's value chain model was adopted in grouping the activities into six independent variables. The dependent variable in the study was credit demand, index Y, and the independent variables were the various factors assessed under Porter's value chain stages which included inbound logistics (X<sub>1</sub>), Operations (X<sub>2</sub>) outbound logistics (X<sub>3</sub>), marketing and sales (X<sub>4</sub>), customer service (X<sub>5</sub>), and support activities (X<sub>6</sub>). In equation form, this is represented by

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + \dots + b_6 X_6$$

Regression analysis was used to assess the relationships between credit demand and the six independent factors both individually and collectively. That is, the relationship between credit demand and these factors was investigated using simple and multiple regression analysis. The data was analyzed using the Statistical Package for Social Sciences (SPSS).

## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION

#### 4.1 Introduction

To address the objectives of this study, this section presents an analysis of the primary data gathered from the respondents who comprised 57% chief executive officers and 43% senior managers in administrative and technical departments. The data was analyzed to determine the level of credit facility demanded; assess the factors that companies exporting horticultural products consider important in terms of influencing their decision to source for credit facility; and evaluate the influence of business demographics on demand for credit.

#### 4.2 Sample Demographics and Behavioral Patterns

A sample of 50 firms was targeted for the study but only 30 (60%) responded. The demographic characteristics of the firms are discussed in terms of business location, legal status, nature of ownership, duration the company has been in export business, products exported, source of produce, standards certification status, stability of the business environment, number of permanent employees, challenges and existing business opportunities.

##### 4.2.1 Business location

The locations of the sample businesses are presented in Table 1.

**Table 1: Business location**

Location	Frequency	Percent
Nairobi	26	86.7
Athi River	1	3.3
Mount Elgon	1	3.3
Naivasha	1	3.3
Nanyuki	1	3.3
<b>TOTAL</b>	<b>30</b>	<b>100</b>

As shown in Table 1, majority (87%) of the firms that responded were based in Nairobi. That is most horticultural products exporting firms have pack houses and cold storage facilities in Nairobi around the Jomo Kenyatta International Airport. However, some have these facilities located at the farm level and only transport the packed products to the airport for shipment.

#### 4.2.2 Nature of Business Ownership

The data on nature of ownership of horticultural business are depicted in Table 2.

**Table 2: Nature of ownership of the businesses**

Type of ownership	Frequency	Percent
Local	24	80.0
Local and Foreign	4	13.3
Foreign	2	6.7
<b>Total</b>	<b>30</b>	<b>100</b>

All the firms exporting horticultural products are registered companies with the Registrar of Companies as a requirement for issuance of the HCDA) export license. Table 2 shows that most of the businesses were locally owned (80%). Some 13.3% of the firms were jointly owned. Only a small proportion (6.7%) of the firms that responded were owned by foreigners and were The firms with foreign ownership were mainly in the flower business.

#### 4.2.3 Number of years the Sample companies have been in business

The length of period in years during which the sample companies have been in business is indicated in Table 3.

**Table 3: Period the company has been in horticultural export business**

Period (years)	Frequency	Percent
1 – 5	17	56.7
6 – 10	8	26.7
11 – 15	1	3.3
> 15	4	13.3
<b>Total</b>	<b>30</b>	<b>100%</b>

As shown in Table 3, a majority of sample firms 83.4% indicated they had been in operation for a period of up to ten years. This implies high rate of investment in this sub-sector over the last ten years.

#### 4.2.4 Products Exported by Sample Firms

The data on the products exported by the sample firms are summarized in Table 4.

**Table 4: Products Exported by the sample firms**

Product Combination	Frequency	Percent
Vegetables and Fruits combined	21	70.0
Flowers only	6	20.0
Vegetables, Fruits and flowers	2	6.7
Vegetables and Flowers combined	1	3.3
<b>Total</b>	<b>30</b>	<b>100%</b>

Table 4 indicates that 70% of the studied firms exported a combination of vegetables and fruits, 20% exported flowers only, 6.67% exported all the three product categories while only 3.3% said they exported Vegetables and flowers. Further details regarding the exported products are as follows:

##### a. Vegetables

According to the results of the study, the vegetables exported by the studied firms were French beans, sugar snaps, mangetout (snow peas), runner beans, sweet corn, garden peas, baby corn, broccoli, leeks, and Asian vegetables. Further analysis of the exported

vegetables showed that 67% of the firms exported a combination of French beans, snow peas, and sugar snaps. The main forms of value addition were the cutting of top and tail, packing in pre-pack, and bar coding. The value addition processes are labour intensive necessitating these companies to hire many casual workers. The main markets for these products were United Kingdom (UK), France, Netherlands, Greece, Norway, Denmark, Belgium, Sweden, Australia, and Spain.

Another important vegetable exported mainly to UK by 17% of the studied firms was baby corn. Further, 6.7% firms dealt exclusively with the exports of Asian vegetables combined with passion fruit, raw mangoes, bananas and pawpaws to the United Kingdom. No much value addition was done since these vegetables were packed in loose cartons with a net weight of between two and three kilograms.

**b. Fruits:**

Passion fruits were a major product exported by 73.3% of the studied firms. The main markets for this product were France, Sweden, Canada, Belgium, UK, Norway, Greece, Dubai and Switzerland. Other fruits were bananas, raw mangoes and pawpaws which were marketed in UK by 6.7% of the studied firms. Mangoes, Avocado, and Pineapples were major products exported by 30% of the sampled firms to the Middle East mainly Dubai, U.A.E and Jeddah with no much value addition.

**c. Flowers**

Only six flower firms (20%) completed the questionnaire. The main flowers exported by these companies are assorted varieties of roses, Zantedechia and summer flowers. The main markets were UK, Holland and Japan. Not much value addition was done other than packing the flowers in sleeves.

#### **4.2.5 Sources of the exported products**

As shown in Table five, 40% of the firms that participated in the study sourced their products from out-growers.

**Table 5: Source (Supplier) of the exported products**

Source	Frequency	Percent
Out growers	12	40.0
Own production and Out-growers	11	36.7
Own production	7	23.3
<b>Total</b>	<b>30</b>	<b>100</b>

A further 36.7 % sourced products from out-growers besides growing their own products while 23.7% relied on their own production. Self supply was most predominant in flower exporting firms while most vegetable exporters sourced produce from out-growers who were predominantly small scale farmers.

#### 4.2.6 Status of Business Environment

The sample responses on the status of business environment are summarized in Table 6.

**Table 6: Description of the Exporters' Business Environment**

Description	Frequency	Percent
Very Stable	1	3.3
Fairly Stable	24	80.0
Fairly turbulent	4	13.3
Very turbulent	1	3.3
Total	30	<b>100</b>

The results of the study in Table 6 show that 80% of the respondents saw themselves operating in a fairly stable business environment while 13.3% considered the environment to be fairly turbulent.

#### 4.2.7 Number of Permanent Employees.

The data on the number of employees in the studied firms are presented in Table 7.

**Table 7: Number of Permanent Employees**

<b>No. of Employees</b>	<b>Frequency</b>	<b>Percent</b>
Less than 5	4	13.3
6-10	13	43.3
11-15	2	6.7
More than 15	11	36.7
Total	30	<b>100</b>

The results in Table 7 show that 56.6% of the sample respondents had ten or less permanent employees while 43.4% had more than ten permanent employees. Given the labour intensive nature of business, the small numbers of permanent employees suggest that the firms engage a very high level of casual labour particularly during grading and other value addition processes in pack-houses.

The EUREPGAP standards certification status of the studied firms revealed that, 70% of the sample firms were compliant while 30% were not.

### **4.3 Challenges in the Horticulture Export Business**

The challenges facing the horticulture export business, as revealed by the study, are as indicated in table 8

**Table 8: Analysis of Challenges in the Horticulture Export Business**

<b>Challenge</b>	<b>n<sub>i</sub></b>	<b>Mean</b>	<b>Std Deviation</b>
High freight rates	30	4.93	0.254
Inadequate cargo space	28	4.50	1.036
Compliance with the new market standards such as the EUREPGAP	29	4.34	1.173
Poor road infrastructure	29	4.31	1.168
Lack of credit facility to finance the business	30	4.17	0.874
High interest rates on loans	30	4.07	1.112
Means of establishing a personal relationship with the customers	30	3.97	1.245
Lack of continuous supply of quality produce to meet market demand	30	3.57	1.406
Lack of proper mode of produce transportation from the farms	28	2.93	1.331
Land lease period	30	2.73	1.552

The results in Table 8 show that, the challenges considered **very important** were high freight rates (mean score of 4.93) and inadequate cargo space (mean score of 4.5). Those that were considered **important** were compliance with new market standards (mean score of 4.34), poor road infrastructure (mean score of 4.31), lack of credit facility to finance the business (mean score of 4.17), high interest rates on loans (mean score of 4.07), means of establishing a personal relationship with the customers (mean score of 3.97) and lack of proper mode of produce transportation from the farms (mean score of 3.57). Land lease period (mean score of 2.73) and lack of proper mode of produce transportation from the farms (mean score of 2.93) were regarded as challenges but not important ones. Sixty five per cent of the sample respondents agreed that important challenges exist which had not been addressed by stakeholders.



Additional information on very important challenges and the reasons why they were not addressed is presented on Table 9.

**Table 9: Challenges considered very important and reasons why they were not addressed.**

Challenge	Freq.	%	Reason Why Not Addressed	Status of challenge address
1. High freight rates	12	26.1	- Not within the companies' means, require government intervention. - Airlines do not give space for vegetables priority	No intention to address
2. Inadequate cargo space	8	17.4		
3. High interest rates on loans	6	13.0		
4. Poor roads infrastructure	5	10.9		
5. High production and marketing costs	5	10.9	-high cost of power and petrol require Government intervention - Too many Government taxes - High cost of staff development and training	No intention to address
			-High price fluctuation at the farm and poor condition roads	Intend to address
6. Regulation/ Controls	4	8.7	Compliance cost is very high	Intend to address
7. Market/ Customer	3	6.5	-Air ticket is expensive and hence difficult to pay visits to customers -Some markets have no cheap direct flights	Intend to address
8. Lack of finance	3	6.5	Banks' high interest rates	Intend to address
<b>Total</b>	<b>46</b>	<b>100</b>	-	-

The respondents had also been asked to indicate whether there were unexploited business opportunities. The responses suggested the existence of business opportunities

encountered but were not exploited (63%). Additional information on the business opportunities and the reasons why they were not exploited is presented in Table 10.

**Table 10: Unexploited business opportunities and the reasons why not exploited**

<b>Business Opportunity</b>	<b>Freq.</b>	<b>%</b>	<b>Reasons why not exploited</b>
1. Increased market demand (New orders, new clients, more orders)	13	50	<ul style="list-style-type: none"> <li>-Lack of management capacity and resources,</li> <li>-Ensuring compliance with standards e.g. EUREPGAP is expensive</li> <li>-lack of airspace and occasionally low price offers.</li> <li>- Lack of finances to support freight charges</li> <li>-The cost of completing the cycle before getting paid was very high</li> <li>- Some importer require C&amp;F shipment which the exporters could not meet</li> </ul>
2. Importers in the following new markets USA, New Zealand, Nordic Countries, Scandinavia, Italy and Switzerland.	5	19.2	<ul style="list-style-type: none"> <li>-No direct flights and high freight charges. Unlike the E.U. which had mutually accepted standards, no specific standards existed for third world countries exporting for the U.S. market.</li> <li>-The Ministry of Agriculture (KEPHIS) failed to communicate with the Ministry of Agriculture and Fisheries in New Zealand</li> <li>-Very high freight charges for direct flights</li> <li>- importer required C&amp;F shipment which the exporter could not meet</li> <li>- Limited flight destinations and high freight rates</li> </ul>
3. Expansion on market destinations and product lines	5	19.2	-Lack of capital and very high food safety standards requirements
4. Others: Canning, Freezing and starting high care products	3	11.6	Capital investment too high
<b>Total</b>	<b>26</b>	<b>100</b>	-

#### 4.4 Level of Credit Facility Demanded

One of the principle objectives of the current study was to assess level of credit demanded by horticultural products exporting companies in Kenya. This objective was satisfied by asking the sample respondents to indicate whether or not they had previously applied for credit finance; past loan application details; activities targeted for finance upon getting the credit; and sources of business finance. The responses to the issue of whether credit had been applied for are given in Table 11.

**Table 11: Indication of whether or not the studied firms had previously applied for credit finance**

<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Yes	21	72.4
No	8	27.6
<b>Total</b>	<b>29</b>	<b>100</b>

The results of Table 11 revealed that 72.4 % of the firms had previously applied for credit finance. However, out of the total short and long term loans applied for, 49% were successful while 51% were not. This is also reflected in the fact that 53% of the businesses are financed through equity (Table 14).

##### 4.4.1 Previous Loan Application Details

Details for the sample firms' previous loan applications are given in Table 12

**Table 12: Previous Loan application details**

<b>Financial Institution Credit Applied</b>	<b>Short term Credit</b>		<b>Long term Credit</b>		<b>Combined</b>	
	<i>S</i>	<i>NS</i>	<i>S</i>	<i>NS</i>	<i>S</i>	<i>NS</i>
Bank Names Withheld	2	4	6	4	8	8
NIC	3		1		4	0
Bank of India	3	2			3	2
Bank of Africa	3	1			3	1
CFC Bank		3			0	3
Barclays Bank	1			2	1	2
Kenya Commercial Bank				2	0	2
Citi Bank	1		1		2	0
Equity Bank	2				2	0
CDE		1			0	1
HDC		1			0	1
Development Bank of Kenya				1	0	1
Standard Bank				1	0	1
Faulu Kenya			1		1	0
PIP(Holland)				1	0	1
Cooperative Bank of Kenya		1			0	1
IFC				1	0	1
<b>Total</b>	<b>15</b>	<b>13</b>	<b>9</b>	<b>12</b>	<b>24</b>	<b>25</b>
<b>Percent (%)</b>	<b>53.6</b>	<b>46.4</b>	<b>42.9</b>	<b>57.1</b>	<b>49</b>	<b>51</b>

*S= Successful; NS = Not Successful*

Table 12 provides information on the financial institution where the respondents applied for credit, the type of credit, and whether or not the applications were successful. The results reveal that, short term loans applications (30%) were more successful than long term credit applications.

#### 4.4.2 Activities Targeted for Finance

Details on activities targeted for finance upon getting the credit facility are summarized in Table 13. In total, 40 responses were received. The frequency figure given indicates the number of times that response was recorded out of the total.

**Table 13: Activities targeted for finance upon getting the credit**

Targeted Activities	Frequency	Percent
Finance own supply of produce including:- Hiring farms, buying farms, installing irrigation systems on farms, improve the farming system and expand production.	7	17.5
Improve pack house facilities including: Building a pack-house, packaging materials, expanding or installing cold storage facilities.	6	15.0
Finance purchase of produce from farmers including:- Financing contract farmers and assisting/training out-growers	5	12.5
Purchase of a new canter	4	10.0
Meet freight charges	4	10.0
Finance BRC and EUREPGAP standards demands	4	10.0
Finance business support activities including: Staff training, paying suppliers, and improving office IT services	4	10.0
Capital investment	3	7.5
Others: Start high care products and explore new markets opportunities	3	7.5
<b>Total</b>	<b>40</b>	<b>100</b>

From Table 13, it can be seen that the activities targeted for financing cut across the various value chain stages. The increased need to invest in own supply of produce and improvement of pack house facilities could be associated with these firms desire to meet the stringent quality standards set by the consumers such as the EUREPGAP standards in the importing countries.

#### 4.4.3 Sources of Business Finance

The three sources of business finance are long-term credit, short-term credit, and equity. Equity can come from partnership, own capital or financial support. Details of how the sample firms financed their businesses are given in Table 14 and 15

**Table 14: Sources of business finance**

Source	Frequency	Percent
Equity	16	53.3
Short term Credit	3	10.0
Short Credit/Equity	3	10.0
Long/Short Credit/Equity	3	10.0
Long term Credit/ Equity	3	10.0
Short/Long Credit	1	3.3
Long term Credit	1	3.3
<b>Total</b>	<b>30</b>	<b>100</b>

According to Table 14, slightly over half (53.3%) of the sample firms were financed through equity. Others were financed by short term credit, long term credit or a combination of different sources of finance.

**Table 15: Sources of business finance for companies that have never applied for credit finance.**

Source	Frequency	Percent
Partnership	5	55.6
Self	3	33.3
Other: Financial support	1	11.1
<b>Total</b>	<b>9</b>	<b>100</b>

As shown in Table 15, about 55.6% of the firms which had never applied for credit facility financed their businesses through partnership arrangements while 33% did so through self financing and 11% through financial support.

The study showed a high level of credit facility demand in the export horticulture business. Out of the total firms that responded, 72.4% had applied for credit finance before while 27.6% had not. An analysis of the total loan applications revealed that, only 49% were successful with 51% being unsuccessful. Further analysis of the source of business finance showed that, 53% were financed through equity.

#### **4.5 Relative Importance of Factors Influencing Credit Facility Demand**

Assessment of the relative importance of factors that influence demand for credit was at the heart of the current study. The assessment was done on a scale ranging from a score of 1= not important to a score of 5 = very important. The relevant results are presented here below for the inbound logistics, operations, outbound logistics, marketing and sales, customer service and support activities.

##### **4.5.1 Produce Procurement (Inbound Logistics)**

The descriptive statistics for the Inbound Logistics are summarized, Table 16.

**Table 16: Statistics for Inbound Logistics**

<b>Credit Purpose</b>	<b>N</b>	<b>Mean</b>	<b>Std Deviation</b>
Expand the business(increase profitability by economies of scale)	29	4.66	0.721
Compliance with the new market standards and regulations	29	4.41	1.240
Invest in produce handling facilities.	30	4.03	1.129
Install cold store facilities	30	4.00	1.287
Finance purchase of produce	30	4.00	1.259
Installation of irrigation system	30	4.00	1.339
Installation of farm infrastructure (e.g.Electricity, Grading Sheds, Charcoal coolers, Sanitary facilities	30	3.90	1.322
Purchase own refrigerated vehicles	30	3.87	1.306
Procurement of farm inputs	30	3.87	1.332
Diversify the product range	30	3.80	1.186
Purchase land	30	3.50	1.480
Finance small scale out grower farmers requirements	30	3.50	1.503
Installation of green houses	30	2.60	1.694
<b>Overall</b>	<b>30</b>	<b>3.857</b>	<b>1.292</b>

From Table 16 above, it is clear that most of the factors considered under inbound logistics were regarded by the respondents as being either “very important” or “important” in influencing their decision to source for credit facility with a mean score range of 3.5 to 4.66. The low influence for the respondent’s decision to source for credit facility (mean score 2.6) for installation of green houses can be attributed to the low response rate (20%) from the flowers exporting firms who mostly grow their flowers in protected environments.



## 4.5.2 Operations

The relevant results for the operations are summarized in Table 17

**Table 17: Statistics for Operations**

<b>Credit Purpose</b>	<b>N</b>	<b>Mean</b>	<b>Std Deviation</b>
Invest in value addition processes to address customers' needs.	30	4.33	0.959
Ensure HACCP* standard compliant	30	4.13	1.042
Invest in packaging material attractive to the customers.	30	3.97	1.326
Invest in post harvest produce handling facilities	30	3.90	1.213
Process to enable utilization of sea shipment to distant markets	30	2.93	1.388
<b>Overall</b>	<b>30</b>	<b>3.85</b>	<b>1.186</b>

\* *Hazard Analysis Critical Control Points*

Most of the factors considered at the operations stage of the value chain were rated as important (Mean score 3.90 – 4.33) in influencing the respondents decision to source for credit finance. This can be attributed to the fact that the operations stage requires capital investment in form of equipment for the "pack house and the related value addition processes.

## 4.5.3 Shipping out Final Products (Out bound Logistics)

The statistics for the outbound logistics are presented in Table 18.

**Table 18: Statistics for Outbound Logistics**

<b>Credit Purpose</b>	<b>N</b>	<b>Mean</b>	<b>Std Deviation</b>
Pay airfreight charges for C & F orders	30	4.50	0.974
Charter own freight services	30	2.80	1.424
Purchase/invest in own containers for sea shipment	30	2.00	1.259
<b>Overall</b>		<b>3.10</b>	<b>1.219</b>

Paying the airfreight charges for C&F orders emerged as the single most important factor that influenced the sample respondents to source for credit facility. High freight rates (Table 8) were also rated as a very important challenge (Mean score of 4.93). The issue of high freight charges has for a long time been a major constraint in the performance of the export horticultural businesses. This may have been contributed by inadequate cargo space rated by the sample respondents as a very important challenge (mean score of 4.5) in addition to the high cost of jet fuel at the Jomo Kenyatta International Airport (JKIA). Fish and flowers were given first and second priority respectively in cargo space allocation with fruits and vegetables coming third. As a result, cargo off-loads were a common practice.

#### 4.5.4 Marketing and Sales

The relevant statistics for marketing and sales are summarized in Table 19.

**Table 19: Statistic for Marketing and Sales**

<b>Credit Purpose</b>	<b>N</b>	<b>Mean</b>	<b>Std Deviation</b>
Invest in information technology for market information services	30	4.40	0.770
Venture into new markets	30	4.33	0.844
Invest in market intelligence services	30	4.03	1.033
Support sales promotions.	30	3.83	1.177
Develop new market offering	30	3.80	1.297
Integrate (Backward/forward)	30	3.40	1.276
<b>Overall</b>	<b>30</b>	<b>3.97</b>	<b>1.066</b>

The results in Table 19 show that most of the sample respondents considered investing in information technology for market information services, venturing into new markets, investing in market intelligence services, supporting sales promotions and developing new market offering as important in influencing decision to source for credit facility. The attribute of backward and forward integration was rated lowest (mean score of 3.40).

#### 4.5.5 Customer Service

The results pertaining to customer service are summarized in Table 20

**Table 20: Statistics for Customer Service**

<b>Credit Purpose</b>	<b>N</b>	<b>Mean</b>	<b>Std Deviation</b>
Make occasional visits to the customers	30	3.83	1.341
Finance promotional shipment	30	3.13	1.502
<b>Overall</b>	<b>30</b>	<b>3.48</b>	<b>1.422</b>

The sampled respondents considered making occasional visits to their customers an important reason (mean score of 3.83) for sourcing credit finance. The air ticket and the related expenses for such visits were high despite the positive impact such visits would have on their businesses profitability.

#### 4.5.6 Support activities

The relevant data for support activities are contained in Table 21

**Table 21: Support activities Parameters Analysis**

<b>Credit Purpose</b>	<b>N</b>	<b>Mean</b>	<b>Std Deviation</b>
Prompt payment of taxes	27	4.00	1.271
Finance new technological advances in business.	30	3.93	1.015
Enable procurement of goods and services.	30	3.83	1.147
Invest in modern accounting systems	30	3.77	1.073
Invest in modern human resource management systems	30	3.70	1.088
Prompt payment of employees' dues	30	3.63	1.474
<b>Overall</b>	<b>30</b>	<b>3.81</b>	<b>1.178</b>

All the aspects considered under support activities were rated by the respondents as important (mean scores of 3.63 - 4.0) in influencing their decision to source for credit facility.

Looking at the whole value chain analysis, the factors rated as neutral and least important can also be used as an indicator to show the serious nature of lack of financial support in this sub-sector. These factors which include processing to enable utilization of sea shipment to distant markets (mean score of 2.93), charter own freight services (mean score of 2.80), backward and forward integration (mean score of 3.40) and financing promotional shipments can only be undertaken by businesses which are well established or through external funding in form of affordable products from financial services providers.

In the open ended general question, respondents pointed out that, the horticulture industry is not well regulated and that the Government line ministries are not fully supportive. In addition to making policies that make credit affordable and readily available the Government should regulate taxes and more importantly provide an enabling environment for trade. The credit acquisition process was cited as being too slow and the interest rates too high. Specific areas for finance were quoted as freight charges, purchase of packaging materials and meeting production cost by small holder out-growers. Credit for out-growers should be channeled through institutions close to them. In the past affordable financial services to this industry ended up benefiting the big undeserving cases. It was suggested that a mode of advancing credit to small and upcoming marketing enterprises that support 75% of small scale farmers should be put in place as this is bound to have an impact in poverty reduction.

#### **4.5.7 Regression Analysis**

Regression analysis was employed to establish relationships between the variables. The SPSS computer software was used to compute the model and the regression coefficients in a stepwise selection method. The standard elements of the stepwise output for simple and multiple regressions are given in Tables 22a, 22b, 23a and 23b.

(a) Simple regression

The simple regression models summary for the six variables are given in Table 22a

**Table 22a: Model Summary**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std Error of Estimate	Change Statistics				
					R <sup>2</sup> change	F change	df1	df2	Sig. F Change
Inbound Logistics	0.118a	0.014	-0.035	0.26275	0.014	0.283	1	20	0.601
Operations	0.185a	0.034	-0.012	0.25554	0.034	0.748	1	21	0.397
Outbound Logistics	0.329a	0.108	0.066	0.24557	0.108	2.551	1	21	0.125
Marketing and Sales	0.381	0.145	0.105	24042	0.145	3.570	1	21	0.073
Customer service	0.147a	0.022	-0.025	0.25724	0.022	0.461	1	21	0.504
Support Activities	172a	0.030	-0.024	0.27021	0.030	0.549	1	18	0.468

a. Predictors: (Constant) *Inbound logistics, Operations, Outbound Logistics, Marketing and sales, Customer service, Support Activities*

**Table 22b: Simple regression coefficients for the six variables**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std Error	Beta		
(Constant)	1.855	0.056		33.100	0.000
In bound logistics	0.031	0.058	0.118	0.532	0.601
(Constant)	1.867	0.054		34.832	0.000
Operations	0.046	0.053	0.185	0.865	0.397
(Constant)	1.870	0.051		36.340	0.000
Out bound logistics	-0.085	0.053	-0.329	-1.597	0.125
(Constant)	1.861	0.050		37.129	0.000
Marketing and sales	0.106	0.056	0.381	1.889	0.073
(Constant)	1.858	0.054		34.439	0.000
Customer service	-0.037	0.055	-0.147	-0.679	0.504
(Constant)	1.835	0.061		30.090	0.000
Support Activities	-0.046	0.062	-0.172	0.741	0.468

From the models summary in Table 22b, the contribution of the individual variable to demand for credit are marketing and sales 38.1%, outbound logistics -32.9%, operations 18.5%, support activities -17.2%, customer service -14.7%, and inbound logistics 11.8%. The derived linear regression equations for the dependent variable (Y=Demand for Credit) and each of the independent variables ( $X_1$  = inbound logistics,  $X_2$  = operations,

$X_3$  = outbound logistics,  $X_4$  = Marketing and sales,  $X_5$  = Customer service and  $X_6$  = Support Activities) are as follows:

- a.  $Y = 1.855 + 0.031X_1$                       b.  $Y = 1.867 + 0.046X_2$   
c.  $Y = 1.870 - 0.085X_3$                       d.  $Y = 1.861 + 0.106X_4$   
e.  $Y = 1.858 - 0.037X_5$                       f.  $Y = 1.835 - 0.046X_6$

**(b) Multiple Regressions**

The multiple regression model summary and coefficients are given in Table 23a and 23b respectively.

**Table 23a: Model Summary**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std Error of Estimate	Change Statistics				
					R <sup>2</sup> change	F change	df1	df2	Sig. F Change
1	0.808a	0.652	0.492	0.19027	0.652	4.068	6	13	0.016

a. Predictors: (Constant) Inbound Logistics, Operations, Outbound Logistics, Marketing and Sales, Customer Service, and Support Activities

**Table 23b: Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std Error	Beta		
(Constant)	1.844	0.044		41.836	0.000
In bound logistics	-0.024	0.058	-0.092	-0.411	0.688
Operations	0.133	0.069	0.542	1.922	0.077
Out bound logistics	-0.137	0.053	-0.539	-2.594	0.022
Marketing and sales	0.184	0.065	0.639	2.854	0.014
Customer service	-0.089	0.058	-0.354	-1.519	0.153
Support activities	-0.065	0.063	-0.243	-1.032	0.321

The model above indicate that, 65.2% of credit demand can be explained by the six factors, namely, inbound logistics, operations, outbound logistics, marketing and sales, customer service and support activities . From Table 22b, the major contributors to this demand are marketing and sales (63.9%), outbound logistics (-53.9%) and operations (54.2). This is in line with the qualitative information collected in the questionnaire where the cost of air freight was considered to be too high in addition to lack of relevant market information.

The umbrella body for exporters, Fresh Produce Exporters Association of Kenya (FPEAK) and the Kenya Flower Council (KFC) were challenged to give relevant market information to exporters. The variable with least contribution to this demand is the outbound logistics followed by support activities. The constant term indicate that other unmeasured factors were also significant (Sig. 0.000) in influencing demand for credit facility accounting for the remaining 35% in the above model. From the coefficients, the model derived is as follows:

$$Y = 1.844 - 0.024X_1 + 0.133X_2 - 0.137X_3 + 0.184X_4 - 0.089X_5 - 0.065 X_6 + e$$

Since the value of the error term was determined ( $e = 0.19$ ), the specific demand function will be as follows:

$$Y = 2.034 - 0.024X_1 + 0.133X_2 - 0.137X_3 + 0.184X_4 - 0.089X_5 - 0.065 X_6$$

Separately, the six independent variables do not have as much influence to credit demand as when they are all put together as seen in the above analysis.

#### **4.6 Influence of Business Demographics on Credit Demand**

Some business demographic factors such as location, number of employees, type of product dealt with, and age of business among others were expected to influence the level of resource usage. The study sought to establish whether or not business demographics had any influence on demand for credit. The relevant results are summarized in Table 24.

**Table 24: Correlations between Business Demographics and Demand for Credit**

Demographic factor	Demand for Credit		
	Pearson Correlation	N	Level of Significance
Year business established	0.541**	22	0.009
Legal status of the business	-0.135	23	0.538
The nature of ownership of the business	0.071	23	0.748
Period the firm has been exporting horticultural products	-0.429*	23	0.041
Source of supplies (products) for export	-0.081	23	0.713
EUREPGAP standards Certification status	0.208	21	0.366
Description of the business environment	-0.159	23	0.469
Number of permanent employees	-0.284	23	0.189

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

Table 24, shows that the demographic factors that had a significant relationship with demand for credit are the year the business was established with a correlation coefficient of 0.541 ( $p=0.009$ ) and the period the firm has been exporting horticultural products with a simple correlation coefficient of -0.429 (0.041). The two factors are time based and therefore related suggesting that most of the export firms have been dealing with horticultural trade as their core business for a considerable time.

The study results suggest a high demand for credit finance in the horticultural products exporting businesses. Even with the high interest rates, exporters have been applying for credit facility from financial institutions but only less than half of the number end up being successful. Where the exporters fail to get credit from financial institutions, some made partnership arrangements to finance the business. From the analysis of factors in the value chain, it was evident that most of the mean score ratings throughout the value chain fell between 3.5 and 4.66 (important to very important). This is further indication of high credit facility demand in this sub-sector.



The only demographic factors that had a significant relationship on demand for credit were the age of the business and period the firm had been exporting horticultural products. The positive correlation between credit demand and the age of business can be attributed to the expansion needs of these firms to achieve economies of scale and the investment demands placed on these firms in order to meet the quality standard requirements in the international market.

Most of the challenges mentioned by the respondents were either “very important” or “important”. The major challenges were high freight charges, inadequate cargo space, compliance with new market standards, poor road network, lack of credit facility to finance business, high interest rates on loans, means of establishing personal relationship with the customers and lack of continuous supply of quality produce to meet market demands. Finally, the majority of sample respondents indicated having encountered business opportunities which they were not able to exploit due to finance-related constraints.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Summary

This study set out to assess level of credit facility demanded by the horticultural products exporters, determine the relative importance of the various factors that influence the level of credit facility demanded, and determine the influence of business demographics on demand for credit

To achieve these objectives a survey was carried out. Data was collected using a questionnaire which was distributed to the studied companies' chief executive officers. Out of fifty questionnaires sent out, some thirty (60%) were returned. The data obtained was analyzed using descriptive statistics. Regression analysis was also done to determine the relative importance of factors that influence demand for credit facility in the horticultural export businesses. The Pearson (Product Moment) Correlation Coefficient method of analysis was also used to assess the relationship between demographic variables and demand for credit.

#### 5.2 Conclusions

From the analysis of the findings and the discussions in the previous chapter, several conclusions can be made. First, the research study revealed a high demand (72.4%) for credit finance in the horticultural products exporting businesses. However, out of the total short and long term loans applied for, 49% applications were successful. Second, about 56% of the companies which had never applied for credit facility financed their businesses through partnership arrangements, 33% through self finance and 11% through financial support. Third, from the analysis of factors in the value chain, it was evident that most of the factors are either "very important" or "some what important".

Fourth the factors that the sample firms considered very important in influencing their decisions to source for credit finance were also empirically identified. Business expansion (mean score of 4.66), and paying airfreight charges for C&F orders (mean score of 4.5) were rated “very important”. On the other hand, compliance with the new market standards and regulations (mean score of 4.41), investing in IT for market information (mean score of 4.4), investing in value addition to address customer needs (mean score of 4.33), venturing into new markets (mean score of 4.33), ensuring HACCP standard compliance (mean score of 4.13), investment in market intelligence services and produce handling facilities (mean score of 4.03) were rated “important”. Other factors rated as important in influencing credit facility demand were installation of cold storage facilities, financing produce purchase, installation of irrigation system, and prompt payment of taxes.

The only demographic factors that had a significant relationship with demand for credit are the year the business was established and period the firm has been exporting horticultural products. The two factors are time based and therefore related, suggesting that most of these firms have been dealing with horticultural trade as their core business right from the time they were started.

Fifth, the challenges considered “very important” were high freight rates (mean score 4.93) and inadequate cargo space (mean score of 4.5). Compliance with new market standards (mean score of 4.34), poor road network (mean score of 4.31), lack of credit facility to finance the business (mean score of 4.17), and high interest rates on loans (mean score of 4.07) were considered “important”. While some of these challenges are beyond the control of the exporters, in the case of the challenges they could address on their own, finances were a major constraint. Additionally, 63.3% of the sample firms mentioned having encountered business opportunities but were not able to exploit them owing to lack of finance.

From the research findings, it can be concluded that demand for affordable credit facility exist to finance current value chain activities and new market opportunities in the export

horticulture business. Provision of financial services to the horticulture industry will therefore spur economic growth through increased farm incomes, job creation and enhanced foreign exchange earnings.

### **5.3 Managerial Implications of the Study**

It is imperative that the Government through the existing development financial institutions such as the Agricultural Finance Corporation, Industrial Development Bank and the Development Bank of Kenya support the small and micro-enterprises in the horticulture industry. This can be achieved by designing innovative and affordable products to cater for the financial needs of this fast growing sector.

The horticulture export businesses require affordable and easily accessible financial services to enable them address the many challenges in the value chain. This is important if these businesses have to survive the stiff competition in their current markets and to finance expansion into new markets. If this is done the firms will effectively address changing business and regulatory environments in Europe in addition to other emerging markets in the Far East, the United States and prospective markets in other parts of the world.

The study has extended the frontiers of knowledge by assessing the relative importance of various factors that contribute to demand for credit in Kenya. This is of academic value to scholars and researchers as they research further in the sector.

### **5.4 Limitations of the Study**

Every study has limitations. The current one was therefore no exception. First the busy nature of the targeted respondents, made it very difficult to get the questionnaires back even after sending many reminders by telephone and personal visits to the sampled firms. In some cases even being allowed access to the institutional premises was not easy and this made the follow-up exercise on the questionnaire a difficult task. The situation was

particularly bad in the case of flower firms where the response rate was rather low (20% of the studied firms). Another factor that led to the delay in filling the questionnaire was attributed to the fact that, provision of financial data required authority of the chief executive. In a number of cases, information on amounts of credit and the financial institutions involved in disbursing the credit was also not disclosed. However, in the final analysis the sample response rate was 60% and most of the required information was availed to the researcher. Therefore, the above limitations did not affect the overall quality of the study's results and conclusions.

## **5.5 Direction for further Research**

The current research only focused on the export horticultural businesses. Further research can therefore be done to determine the level of credit facility demanded by horticultural products processing industries especially the cottage industries which are a predominant feature in this sub-sector. The same variables can also be studied with small and medium scale horticultural farmers as the target population. Finally, studies can be conducted to assess levels of borrowers' satisfaction with horticultural credit service providers and the extent to which trade finance is used in the horticulture export businesses.

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## APPENDICES

### APPENDIX 1: INTRODUCTION LETTER

Christopher K. Nkukuu  
P.O. Box 55269 - 00200  
**NAIROBI.**

30<sup>th</sup> September, 2005

**TO WHOM IT MAY CONCERN:**

Dear Sir/Madam

#### **RE: REQUEST FOR RESEARCH DATA**

I am an MBA postgraduate student at the University of Nairobi conducting research on **Determinants of Credit Facility Demand by the Horticultural Products Exporting Companies in Kenya.**

Your business has been selected for the study because of the strategic role that it plays in the horticulture sub-sector. I would therefore highly appreciate your providing me with the information requested in the attached questionnaire.

I wish to assure you that the information you provide will be treated confidentially and used only for research purposes.

Thank you very much for your anticipated assistance.

Yours faithfully

**Christopher K. Nkukuu**  
**Post Graduate Student,**  
**University of Nairobi**

Counter Signed .....

**Professor Francis Kibera, PhD**  
**(University Supervisor)**

## APPENDIX 2: QUESTIONNAIRE

### Part 1: Background Information

1. Name of respondent (Optional) .....
2. Position of the respondent. ....
3. Name of Business. ....
4. Which year was the business established? .....
5. In which town is the business located? .....
6. Tick [] the legal status of your business.  
 (a) Sole proprietor []      (b) Partnership []      (c) Company []  
 (d) Other (Specify) .....
7. Please indicate the nature of ownership of the business by placing a tick []  
 (a) Local []      (b) Foreign []      (c) Both local and Foreign []
8. For how long have you been exporting horticultural products? Tick [] against  
 the appropriate period. (a) 1–5 years []      (b) 6– 10 years []  
 (c) 11 – 15 years []      (d) Above 15 years []
9. List down the products your business exports under the following  
 sub-headings as appropriate

Product	Any Value addition		Type of value addition* where applicable	Country where exported
	Yes	No		
<b>a) Vegetables</b>				
1.				
2.				
3.				
4.				
<b>b) Fruits</b>				
1.				
2.				
3.				
4.				

<b>c) Flowers</b>	Yes	No		
1.				
2.				
3.				
4.				
<b>d) Others (Specify)</b>	Yes	No		
1.				
2.				

\* Undertaking a certain activity on a product which customers perceive as adding a product's usefulness. Examples of value addition activities include: waxing, high care, Packing into punnets (150-500g), Packing into perforated bags (150-1000g), Bar Coding etc.

10. Who supplies your business with the produce you export?

- a) Self [ ]
- b) Out-growers [ ]
- c) Self and out-growers [ ]

11. Has your business been certified for EUREPGAP standards compliance?

- a) Yes [ ]      b) No [ ]

12. How would you describe your business environment? (Tick (✓) one only)

- i) Very stable [ ]
- ii) Fairly stable [ ]
- iii) Fairly turbulent [ ]
- iv) Very turbulent [ ]

13. Please indicate the category under which the number of your permanent employees fall by placing a tick (✓)

- (a) less than 5 employees [ ]      (b) 6 – 10 employees [ ]
- (c) 11 – 15 employees [ ]      (d) More than 15 employees [ ]

14. Please indicate by ticking (✓) the extent to which the various challenges listed in the table below are important to you on a scale of 1-5  
Where **5=Very important**, **4= Important**, **3= Neutral**, **2= Least important** and **1 = not important**

No.	Challenges	Not important	Least important	Neutral	Important	Very important
1	High freight rates					
2	Lack of credit facility to finance the business					
3	Lack of proper mode of produce transportation from the farms					
4	Compliance with the new market standards such as the EUREPGAP					
5	Means of establishing a personal relationship with the customers					
6	Inadequate cargo space					
7	Lack of continuous supply of quality produce to meet market demand					
8	High interest rates on loans					
9	Poor road infrastructure					
10	Land lease period					
11	Others (Please specify)					

15. Are there **very important** or **important** challenges you have not been able to address? Yes [ ] No [ ]
16. Please indicate the **very important** challenges that you have not been able to address and the reason(s) why:

Challenge	Reason why not addressed	Do you intend to address the challenge?
1		Yes [ ] No [ ]
2		Yes [ ] No [ ]
3		Yes [ ] No [ ]

17. Has there been business opportunities you have encountered since starting your business which you were not able to exploit?  
a) Yes [ ] b) No [ ]

18. If the answer in question (17) is 'Yes', specify these opportunities and give reasons why you were not able to exploit them in the space provided below.

Business Opportunity	Reasons why not exploited
1	
2	
3	
4	

**Part 2: Level of Credit Facility Demanded**

1. Have you ever applied for a credit facility to finance your operations?

Yes [ ] No [ ]

2. If yes, please provide the following information.

Name of financial institution from which you applied for a credit facility before, whether successfully or not.	Indicate whether short or long term credit	No. of times you applied for credit to this institution	No. of successful applications	Amount given
1	-			
2				
3				
4				

3. What activities did you target to finance upon getting the credit facility? Please list the activities in the space provided below:

i) ..... ii) .....  
 iii) ..... iv) .....  
 v) ) ..... vi) .....

4. What percent of your business is financed through;
- (a) Long term credit ..... % (b) Short term Credit ..... %
- (b) Equity ..... %
5. If the answer to question (1) above under this section is 'No', how did you finance your business? (a) Self [ ] (b) Partnership [ ]
- (c) Other (specify) .....

**Part 3: Relative Importance of Factors Influencing Credit Facility Demand**

Please indicate by ticking (√) the extent to which the various factors listed under each subtopic (3.1 to 3.6) are important on a scale of 1-5 in terms of influencing your decision to source for credit facility.

Where 5=Very important, 4= Important, 3= Neutral, 2= Least important and 1 = not important

**3.1 Produce Procurement (In Bound Logistics)**

No.	Credit Purpose	Not important	Least important	Neutral	Important	Very important
1	Finance own supply of produce					
	a) Purchase land					
	b) Installation of green houses					
	c) Installation of irrigation system					
	d) Procurement of farm inputs					
	e) Installation of farm infrastructure e.g.Electricity, grading Sheds, charcoal coolers, sanitary facilities					
	f) Finance purchase of produce					
	e) Others(Please specify)					
2	Finance small scale out grower farmers requirements					
3	Diversify the product range					
4	Compliance with the new market standards and regulations					
5	Invest in Produce handling facilities.					
6	Expand the business(increase profitability by economies of scale)					
7	Purchase own refrigerated vehicles					
8	Install cold store facilities					
9	Other (Specify)					



### 3.2 Operations

No.	Credit Purpose	Not important	Least important	Neutral	Important	Very important
1	Invest in post harvest produce handling facilities					
2	Invest in value addition processes to address customers' needs.					
3	Process to enable utilization of sea shipment to distant markets					
4.	Ensure HACCP** standard compliant					
5.	Invest in packaging material attractive to the customers.					
6.	Other (Specify)					

\*\* Hazard Analysis Critical Control Points

### 3.3 Shipping Out Final Products (Out Bound Logistics)

No.	Credit Purpose	Not important	Least important	Neutral	Important	Very important
1	Meet airfreight charges for C & F orders					
2	Charter own freight services					
3	Purchase/invest in own containers for sea shipment					
4.	Other (Specify).					

### 3.4 Marketing and Sales

No.	Credit Purpose	Not important	Least important	Neutral	Important	Very important
1	Invest in market intelligence services					
2	Invest in information technology for market information services					
3.	Venture into new markets					
4.	Support sales promotions.					
5.	Develop new market offering					
7.	Integrate (Backward/forward)					
8.	Other (Specify)					

### 3.5 Customer Service

No.	Credit Purpose	Not important	Least important	Neutral	Important	Very important
1	Make occasional visits to the customers					
2	Finance promotional shipment					
3	Other (Specify)					

### 3.6 Support Activities

These are the strategy and administrative activities in an organization. These support activities are handled by certain specialized departments which are procurement, technology development, human resource management, and firm infrastructure departments. Firm infrastructure includes cost of general management, planning, finance, accounting, legal and government affairs.

No.	Credit Purpose	Not important	Least important	Neutral	Important	Very important
1.	Enable procurement of goods and services.					
2.	Finance new technological advances in business.					
3.	Invest in modern human resource management systems					
4.	Prompt payment of employees' dues					
5.	Prompt payment taxes					
6.	Invest in modern accounting systems					
7.	Other (Specify)					

Do you have any other comments that you deem relevant to the whole business of providing credit to the horticultural sub-sector in Kenya

.....

.....

.....

.....

.....

**THANK YOU VERY MUCH FOR YOUR COOPERATION**

### Appendix 3: List of Active Exporters of Horticultural Products

	Name of Business		
1	14 FLOWERS	36	DONYAWA FLOWERS
2	AAA GROWERS LTD	37	EAST AFRICAN GROWERS
3	ABERMARK FLOWERS LTD	38	EAST WEST EPORTERS
4	AGRIFLORA (K) LTD	39	EFM FREZA KENYA
5	ALORA FLOWER LTD	40	ELDOFLORA NURSERIES
6	ANDERSON ORCHARDS LTD	41	ELIKA GROWERS
7	AQUILA DEVELOPMENT CO. LTD	42	EMBWEN LTD
8	ARTS FLOWERS (K) LTD.	43	EMPIRE VEG AND FRUIT EPORTERS
9	ATOLL FLOWERS	44	ENKASITI FLOWER GROWERS LTD
10	AUCTION FLOWERS (K) LTD	45	EQUITORIAL NUTS PROCESSORS LTD
11	AVENUE FRESH PRODUCE LTD	46	EQUATOR FLOWERS (K) LTD
12	BARIO EXIM SERVICES	47	EVEREST ENTERPRISES LTD
13	BATIAN FLOWERS LTD	48	EVERFLORA LTD
14	BAWAN ROSES	49	EVERLINK LTD
15	BEKYA FLORICULTURE	50	EXTROPICA (K) LTD
16	BELT CARGO SERVICES LTD	51	FINLAY FLOWERS LTD
17	BEVERLY FLOWERS LTD	52	FIAN GREEN (K) LTD
18	BEAUTY LINE LTD	53	FLORICULT
19	BILASHAKA FLOWERS	54	FLORALINE FRESH PRODUCTS
20	BOBS HARRIES LTD	55	FOUR-TEN INVESTMENTS
21	BROTHERHOOD AGENCIES	56	FRESHPAK HORTICULTURES
22	BUDS AND BLOOMS	57	FRESHFIELDS EXPORTERS
23	BUDS OF PARADISE	58	GATOKA LTD
24	CARZAN CULTURES & LAB	59	GARDEN FLORA LTD
25	CARNATIONS PLANTS LTD	60	GREEN VENTURES
26	CELINICO FLOWERS LTD	61	GREENLANDS AGROPRODUCERS
27	CHARM FLOWERS LTD	62	GREENGOLD ENTERPRISES
28	CHANJEMA FLOWERS	63	HARVEST LTD
29	CLEOS VEGFRUIT	64	HARMONY FOOD LTD
30	COLOUR CROPS LTD	65	HILLSIDE GREEN GROWERS & EPORTERS
31	COUNTRYWIDE CONNECTIONS LTD	66	HIGHLANDS PLANTS LTD
32	CULTURAL DE-AFRIQUE FLOWERS LTD	67	HOMEGROWN (K) LTD
33	DANKA INVESTMENTS	68	HORT. FARMERS & EXPORTERS
34	DAMICO INVESTMENTS	69	HORIZON KENYA LTD
35	DORALCO TRADING COMPANY	70	HORTEC PRODUCE LTD

71	INDU-FARM EPZ LTD	107	MAGANA FLOWERS
72	INTERGREEN LTD	108	MAKINDU GROWERS & PACKERS LTD
73	ISINYA FLOWERS LTD	109	MATSINBERG C/F
74	JAMBO HORTICULTURAL EXPORTERS	110	MAMY FLOWERS
75	JEAN IMPEX ENTERPRISES	111	MARIDADI FRUITS & VEG.
76	JIM FLOWERS	112	MAJI MAZURI FLOWERS
77	JILIALE TRADING COMPANY	113	MARIDADI FLOWERS LTD
78	JUSTEL FRUITS	114	MBOGA TUU LTD
79	K-NET FLOWERS LTD	115	MEADOW VEG & FRUIT (K)
80	K-PACK LTD	116	MIWAN FRESH PRODUCE CO. LTD
81	KAREN ROSES LTD	117	MIGOTIYO PLANTATION
82	KANDIA FPS LTD	118	MOSI LTD
83	KAURENGENI HORTICULTURAL FARM	119	MT. ELGON ORCHARDS/ANDERSON
84	KENNOR IMPORTS & EXPORTS	120	MWEIGA BLOOMS
85	KENYA FRESH PRODUCE	121	MYNER EXPORTS LTD
86	KENYA HIGHLANDS NURSERIES	122	NATURE GROWN LTD
87	KENYA HORTICULTURAL EXPORTERS	123	NEPTUNE FLOWERS AGENCIES
88	KEITT LTD	124	NGEWE BLOEM
89	KENYA CUTTINGS LTD	125	NIKITA FLOWERS LTD
90	KENYA PLANT PRODUCTION	126	NINI LTD
91	KENYA FRESH PRODUCE EXPORTERS	127	NJORO GARDENS
92	KIJABE LTD	128	NJAMBI FLORA
93	KYOME FRESH	129	OKA FRESH EXPORTERS
94	LA'MINA AGENCY	130	OL-NJOROWA LTD
95	LAKE FLOWERS LTD	131	OSERIAN DEVELOPMENT CO. LTD
96	LAPORTE HOLDINGS	132	P. J. DAVE
97	LAUREN INTERNATIONAL FLOWERS LTD	133	PANACOL INTERNATIONAL LTD
98	LAUREL INVESTMENTS LTD	134	PANDA FLOWERS LTD
99	LAKE FRESH VEG. LTD	135	PEMI CULTURAL AFRIQUE
100	LIKI RIVER FARM	136	PENTA FLOWERS
101	LIVE WIRE LTD	137	PHOENIX INVESTMENTS
102	LINSSEN ROSES	138	PLANET FLOWERS LTD
103	LOCLAND	139	PRIMAROSA FLOWERS LTD
104	LONGONOT HORTICULTURAL EXPORTERS	140	REAP HORTI
105	LOTEC EXPORTERS	141	REDHILL FLOWERS
106	LOBELLA FARMS LTD	142	REDLAND ROSES

143	REDHILL GARDENS LTD	175	TAMBUZI LTD
144	REGIE FLOWERS KENYA LTD	176	TANU ROSES (K) LTD
145	RIVER FARM BLOOMS	177	TERRASOL (K) LTD
146	ROSETY SERVICES LTD	178	TERRA FLEUR
147	ROZIKKA GARDEN CENTRE	179	THE FRESH APPROACH LTD
148	ROFFILL FRESH PRODUCE	180	THE PLANT FACTORY KENYA LTD
149	SACCO FRESH LTD	181	TROPIFLORA LTD
150	SANDE KENYA LTD	182	TRANSBEL LTD
151	SANSORA INVESTMENTS LTD	183	VALENTINE ROSES
152	SARKISH FLORA LTD	184	VERT FRESH LTD
153	SAFWAN CARGO CONVEYORS	185	VEGMON AGENCIES
154	SAMROCK	186	VEGPRO (K) LTD
155	SAWA HARVEST	187	VEPI FLOWERS
156	SELECTION FRUITS ENTERPRISES	188	VEG VILLE
157	SHALIMAR FLOWERS (K) LTD	189	VITACRESS (K) LTD
158	SHER AGENCIES	190	VIAFLOR KENYA LTD
159	SIMBI ROSES	191	WAMU INVESTMENTS
160	SIXTIES (K) LTD	192	WAQASH ENTERPRISES
161	SIRGOEK FLOWERS FARM	193	WARIDI LTD
162	SILKENLINES ENTERPRISES LTD	194	WARIDI ESPORT FRESH
163	SIAN EXPORTS (K) LTD	195	WET FARM LTD
164	SIGNET FORWARDERS (K) LTD	196	WILHAM (K) LTD
165	SMALL WESTLANDS LTD	197	WILMAR AGRO
166	SOPHIA ROSES	198	WIMA FLOWERS LTD
167	SOTE FLOWERS	199	WINTER FRESH LTD
168	STAR FLOWERS (K) LTD	200	WILDFIRE FLOWERS LTD
169	SUBATI LTD	201	WINCHESTER FARM LTD
170	SUERA LTD	202	WINDSOR FLOWERS
171	SUNRIPE (1976) LTD	203	WONI VEG-FRU EXPORTERS & IMPORTERS
172	SUPER VEG LTD	204	ZENA ROSES
173	SURVO FREIGHT FOREWARDERS	205	ZEDGEE LTD
174	SUMMER FOODS LTD		

Source: Horticultural Crops Development Authority (2004)