2023

Factors affecting value addition in the floriculture industry in Kenya.

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Factors Affecting Value Addition in the Floriculture Industry in Kenya

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Submitted in partial fulfillment of the requirements for

the Degree of Master's Degree in Business Administration

at Strathmore University

Strathmore University
Business School
Nairobi, Kenya

December 2022

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Signed: ..... Date: 15TH December 2022

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This research paper has been Reviewed and submitted for examination with my approval as University supervisor.

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ACRONYMS AND ABBREVIATIONS

ACRONYM	MEANING
ASOCLFLO	Association of Flower Exporters
EHPEA	Ethiopian Horticulture Producer & Exporters Association
FPEAK	Fresh Produce Association of Kenya
GDP	Gross Domestic Product
HCD	Horticultural Directorate
ICT	Information and Communication Technology
KEPHIS	Kenya Plant Health Inspectorate Services
KFC	Kenya Flowers Council
WEF	World Economic Forum
WTO	World Trade Organization

ABSTRACT

This study focused on investigating the factors affecting Value Addition in the Floriculture Industry in Kenya. A conceptual framework that highlights on the factor conditions, Demand conditions, Related and supporting industries, firm Competitive strategy, Governance and natural endowments as the independent variables guided it. The study adopted a Descriptive research design. It obtained both primary and secondary data. Primary data collection was in form of questionnaires to a population of Eighty-Five (85) flower farms registered by the flower council of Kenya. The research employed the Census survey to collect data in form of questionnaires to the target population. Secondary data was generated in form of literature survey from leading floriculture publications on world trends in the floriculture industry. The quantitative data collected was analyzed using descriptive statistics to generate the required frequencies and percentages to interpret and test the research question. To achieve the Research objectives on the relationship between the various independent variables and the dependent variable, multiple Non-linear regression analysiswas conducted. The findings revealed that demand conditions, firm Competitive Strategy and governance and natural endowments significantly influences value addition of floriculture industry in Kenya. Based on the above findings, the study recommends concerted efforts by both the Government and the Private Sector to increase Value Addition to Kenyan Floriculture Products in order to increase their Competitive Advantage in the International Market.

Key Words:

Competitive Advantage, Floriculture, Product Differentiation, Value Addition

CHAPTER ONE

INTRODUCTION TO THE STUDY

This chapter focuses on the background information of the study, the statement of the problem, the research objective, significance and the scope of the study.

1.1 Background of the study

This study had the overall objective of determining the effect of the factors affecting value addition in the floriculture industry in Kenya. Floriculture is the segment of horticulture concerned with commercial production, marketing and sale of bedding plants, cut flowers, potted flowering plants, foliage plants, flower arrangements and home gardening (Getu, 2009).

Globally, the increased use of flowers makes marketing of the flowers a lucrative business (Belwal & Chala, 2008). According to Belwal andChala (2008) people all over the world realize that flowers enhance the quality of life and human feelings more than words or other gifts. Globalization, cultural exchanges, celebrations such as valentine's day, mother's day, father's day, Christmas day, weddings have induced people globally to use flowers as a means to share their feelings. Some countries are both producers as well as consumers. This is true of Asia due to the rapid growth of the economies and the resultant increase in disposable income of citizens of the countries, leading to changing consumers' perception towards flowers in their lifestyle (Gudeta, 2012).The floriculture industry in the present day is dynamic and international with diverse global actors (MilcoRikken, 2011). World floriculture trade totals more than Usd 90 billion and has increasedin the international market in recent years growing at an annual rate of 10-15 per cent with the revenues of cut flowers, cut foliage, living plants and flower bulbs reaching Usd 54.2 billion in 2022against Usd 21.15 billion in 2011.there are 120 countries actively involved in the floriculture industry as global manufacturers (Rabobank, 2021). Netherlands is the leading exporter,valued at Usd 3.6 billion and accounting to about 52% of exports. It is also the epicenter of flower trading by the major role that it plays in setting the global standards for daily prices through its computerized clock auction system and acts as the distribution Centre for Europe. The other top exporters are Columbia (16%), Ecuador (6%) and Kenya (6%).

The main import destinations for the floriculture exports are Netherlands (43.3%), United Kingdom (17.1%), Germany (5.8%) and Norway (5.6%) (ITC trade map, 2021). Kenya sells 70 percent of its flowers to European countries. The main export markets include the Netherlands, followed by the United Kingdom, Germany, and Norway, with an export share of 43.3, 17.1, 5.8, and 5.6, respectively. Moreover, approximately half of all exported flowers from Kenya are being sold in Dutch auctions. Low cost cut-flower producing countries close to the equator such as Kenya, Ethiopia, Ecuador, Columbia and Malaysia have increased their global market share in the cut flower trade, strengthening their position in global production and trade (ITC trade map, 2021).

Regionally, floriculture is one of the fastest growing economic sectors in Sub-Saharan Africa. The global demandfor flowers has grown in the past decades, leading to attracting increasing numbers of developing countries, mainly from Africa to cut flower trade. This contains a huge potential to earn foreign currency through export diversification (Belwal et al., 2008). The European cut flower producers especially the Netherlands have been looking for continuity for more affordable conditions as experienced in the east African countries. Determined flower producers have found investing in more than one African country helps to spread the risks. Existing farms are being expanded and newer ones being created in countries such as Tanzania, Ethiopia, Malawi, Zambia and Namibia. Kenya has been the leader in cut flower production and export in Africa, with 60% of African flowers originating from Kenya (world floriculture map, 2021).

Locally, Kenya's floriculture industry had its humble beginnings soonafter the end of the Second World War (Collinson, 2001). From the humble beginnings in the 1960s, the floriculture industry has grown to dominate Kenya's horticultural exports (Whitaker & Kovali, 2004). The floriculture industry is a significant contributor to Kenya's gross national income. Flowershave become a driving force in the growth of Kenyan agricultural exports (Hamrick, 2004). It is also one of the three most important contributors to the country's foreign exchange earnings alongside diaspora remittances and tea export earnings, generating Usd 300 million accounting to about 14% of Kenya's total exports earnings (Sipalla, 2012). It has recorded growth in both value and volumes. Average tonnage grew from 10,946

tons in 1988, 86,480 tons in 2006, 120,220 tons in 2010 to 122,800 tons in 2015.this further increased from 141,216 tons on 2020 to 176,372 tons in 2021 (HCD, 2022). In 2021, the floriculture sector contributed to more than 1% of the national GDP. It is estimated that in Kenya, 500,000 people including over 100,000 flower farm employees depend on the floriculture industry, impacting over 2 million livelihoods (Kenya flower council, 2022).

1.2 statement of the problem

The floriculture industry is one of the most crucial sectors in Kenya's economy as a leading foreign exchange earner. It contributes to a significant percentage of the gross national product (GNP) and employs thousands of workers (Sipalla, 2012). The increase in global competition is one of the largest challenges in the floriculture industry in the recent years (World floriculture map, 2015).

Despite its lucrative position in the Kenyan economy due to the overall growth over the years, the Kenyan floriculture industry has been unable to display consistency and stability in performance (World Bank, 2010). There was a seven percent (7%) decline in exports in the sector was realized over the period 2011-2013(Ndege, 2014). This alludes to the reality of emerging global, regional and local challenges that have a direct impact on the sustainability of export competitiveness of the Floriculture industry in Kenya.

Globally, there are heightened concerns for international compliance in quality standards, environmental conservation, product traceability and safety by the European Union, the largest market for the Kenyan floriculture products (HCD, 2022). The world floriculture map research indicates that the increase in global competition is one of the largest challenge in the floriculture industry in the recent years(world floriculture map, 2021).regionally, the recently emerging floriculture suppliers such as Ethiopia, Rwanda and Uganda have designed intensive marketing programs to promote their countries as friendly flower investors, for exporting cut flower mainly to Europe (World floriculture map, 2021).this poses a significant threat to Kenya's regional dominance.

Locally, most flower farms are unable to maintain the expected standards for supply chains and this constitute concerns by governments as well as heightened complaints by customers, surrounding communities (Hsu, et al., 2013). All these have the potential for further reduction of the demand for Kenyan floriculture products and consequently a decline in revenue for the Kenyan floriculture exports, thereby dethroning floriculture as a major foreign exchange earner for the country(Dey et.al, 2011).

Value addition in floriculture is the process of improving the economic value and the appeal of the floricultural products by means of innovative methods such as product differentiation. The objective of value addition is to provide better quality, reduce the post-harvest loss, empower farmers and ultimately satisfy the user or consumer of the products (*Mebakerlin et al*, 2015)

Without a clear understanding of what are the determinants of the value addition in a major foreign exchange earner for the Kenyan economy; floriculture industry and the measures to be undertaken to address the emerging global challenges in the industry, value addition in the floriculture industry in Kenya will continue to be a mirage. The quest for value addition in the Kenya's floriculture industry in the wake of the emerging global, regional and local challenges therefore constitute the most pressing concern for urgent investigation.

It is in this realization that this study, through a comprehensive review and empirical research, sought to determinethe effect of factors affecting value addition in the floriculture industry in Kenya.

1.3. Research objective

The main objective of this study was to determine the effect of factors affecting value addition in the floriculture industry in Kenya.

1.3.1. Specific objectives

1. To determine the effect of factor conditions on value addition in the floriculture industry in Kenya.
2. To determine the effect of demand conditions on value addition in the floriculture industry in Kenya.
3. To determine the effect of related and supporting industries on value addition in the floriculture industry in Kenya.

4. To determine the effect of firm competitive strategy on value addition in the floriculture industry in Kenya.
5. To determine the effect of governance and natural endowments on value addition in the floriculture industry.

1.3.2. Research questions

1. What is the effect of factor conditions on the value addition in Kenya's floriculture industry?
2. What is the effect of demand conditions on the value addition in Kenya's floriculture industry?
3. What is the effect of related and supporting industries on the value addition in Kenya's floriculture industry?
4. What is the effect of firm competitive strategy on the value addition in Kenya's floriculture industry?
5. What is the effect of governance and natural endowments on the value addition in the floriculture industry?

1.4 Significance of the study

This study will be relevant to several stakeholders. Firstly, it is hoped that the study will of benefit to floriculturists who will obtain better quality flowers, reduce the post- harvest loss, and ultimately satisfy the user or consumer of the products as a result of value addition to their flowers.

Secondly, it is hoped that the study will of benefit topolicy makers who will identify priorities, formulate and benchmark government policies based on thisinformation.

Thirdly, it is believed that the private sector stakeholders and multinationals who have an interest in Kenya as their investment destination will benefit from the study as it will enhance their understanding of the significant role of value addition in the floriculture industry which will enable them make informed decisions as they seek to make investments in the Kenya's floriculture industry.

Fourthly, the study may be beneficial to the body of researchers and academic scholars who intend to study on Kenya’s economic development. It will generate empirical and theoretical knowledge, which would be useful for further research for these scholars.

1.5 scope of the study

This study focused on value addition in the floriculture industry in Kenya. It spotlighted on the variables factor conditions, demand conditions, related and supporting industries, firm strategy, structure and rivalry, governance and natural endowments. The study covered Kenyan flower farms that are registered by the Kenya flower council.

1.5 Definition of Key Terms:

Competitive Advantage: This is a Company's ability to perform in one or more ways that competitors cannot or will not match. The three strategies that are integral to designing a value proposition that makes an offering stand out from the competition are to differentiate on an existing attribute, introduce a new attribute and building a strong brand (Kotler et al,2022) The three generic strategies to support organization in gaining competitive advantage are cost leadership, differentiation and focus (Porter,2008)

Floriculture: The segment of horticulture concerned with commercial production, marketing and sale of bedding plants, cut flowers, potted flowering plants, foliage plants, flower arrangement and non-Commercial home gardening (Getu, 2009)

Product Differentiation: The uniqueness of products in some dimensions is sufficiently valued by customers to allow a price premium. Attributes based on which to differentiate include core functionality, features, performance, quality, conformance, quality, durability, reliability, form, style and customization (Kotler et al, 2022)

Value addition: It is a business strategy for creating new market demands or indulging renewed demand from the set of conventional customers (Mebakerlin et al, 2015) Value addition in Floriculture is the process of improving the economic value and the appeal of the Floricultural products by means of innovative methods. The objective of value addition is to provide better quality, reduce the post-harvest loss, empower farmers and ultimately satisfy the user or consumer of the products (*Mebakerlin et al*, 2015) Value addition of the Floriculture products leads to the Competitive Advantage of the Floriculture Industry in the international Export Market.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter is a survey of the relevant scholarly literature that provides a conceptual and theoretical foundation on the factors affecting the value addition in the floriculture industry. The chapter takes into consideration the insights and accomplishment of previous researchers and highlights gaps in the existing literature, whose investigation was the subject of this study.

2.2. Theoretical framework

A theoretical framework is comprised of the concepts and theories relevant to study variables. A theoretical framework is further defined as the structure that can hold or support a theory of a research study. The framework introduces and describes the theory that explains why the research problem under study exists (Swanson, 2013). In this study, theories and concepts relevant study variables are discussed and reviewed.

There is consensus that value addition is a multi-dimensional process that involves interactions among different complex and multi-faceted issues. There is no single cause. It is therefore necessary to take different coordinated pathways. This section therefore discusses the porter's diamond framework for competitive advantage and the generic competitive strategies leading to the conceptual framework upon which the study was anchored.

2.2.1. Porter's diamond framework for competitive advantage

Porter (1990) advanced a new theory of trade to explain national and industry competitive advantage. The diamond model of Michael porter for the competitive advantage of nations offers a model that can help understand the competitive position of a nation and an industry in global competition. Porter (1990) argues that with regard to international competitiveness, the central question to be answered is why firms in particular nations achieve international success in distinct segments and industry. The factors found to

explain international success and the creation of competitive advantage were linked to the Porters framework for competitive advantage. According to Porter, a nation attains a competitive advantage if its firms are competitive. Firms become competitive through innovation. Porter says sustained industrial growth has hardly ever been built on above mentioned basic inherited factors. Abundance of such factors may actually undermine competitive advantage. As a rule, competitive advantage of nations has been the outcome of 4 inter linked advanced factors and activities in and between companies in these clusters. These can be influenced in a pro-active way by government. These interlinked advanced factors for competitive advantage for countries or regions in Porters diamond framework are:

Factor conditions (i.e. the nation's position in factors of production, such as skilled labour and infrastructure), contrary to conventional wisdom, porter argues that the "key" factors of production (or specialized factors) are created, not inherited. Specialized factors of production are skilled labour, capital and infrastructure. "Non-key" factors or general use factors, such as unskilled labour and raw materials, can be obtained by any company and, hence, do not generate sustained competitive advantage. However, specialized factors involve heavy, sustained investment. They are more difficult to duplicate. This leads to a competitive advantage, because if other firms cannot easily duplicate these factors, they are valuable).

Demand conditions (i.e. sophisticated customers in home market. The more demanding the customers in an economy, the greater the pressure facing firms to constantly improve their competitiveness via innovative products, through high quality, etc.

Related and supporting industries (spatial proximity of upstream or downstream industries facilitates the exchange of information and promotes a continuous exchange of ideas and innovations)

Firm strategy, structure and rivalry (i.e. Conditions for organization of companies, and the nature of domestic rivalry) the world is dominated by dynamic conditions, and it is direct competition that compels firms to work for increases in productivity and innovation

The role of government in porter's diamond model is "acting as a catalyst and challenger; it is to encourage or even push - companies to raise their aspirations and move to higher levels of competitive performance"

they must encourage companies to raise their performance, stimulate early demand for advanced products, and focus on specialized factor creation and to stimulate local rivalry by limiting direct cooperation and enforcing anti-trust regulations.

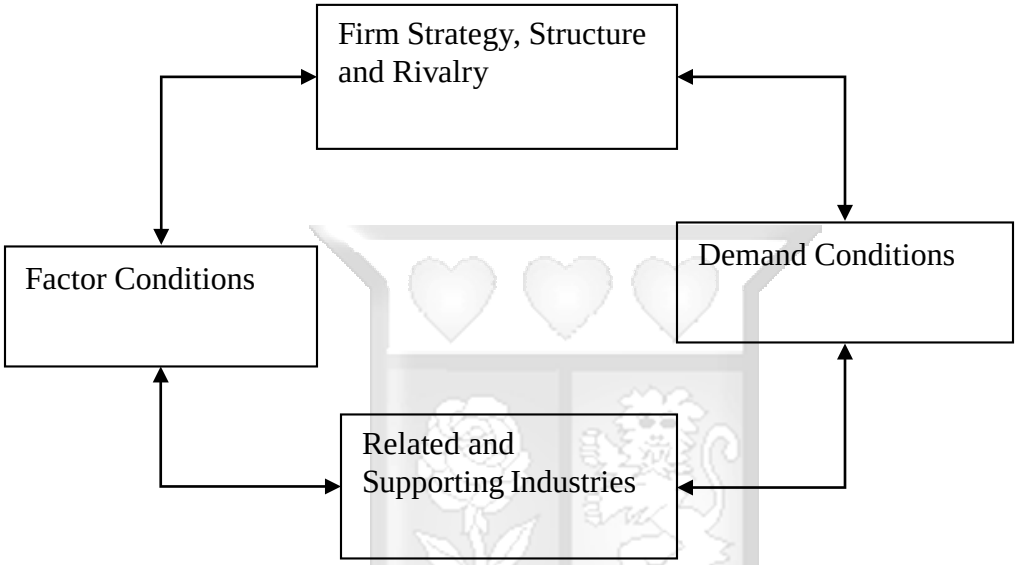

Fig 2.1 porter's diamond model.

Source: porter, 1990.

Critism of the diamond theory comes from two perspectives; the management school which suggests that it does not focus on the home country's largest partner (Krugman, 1990). He suggestsa double diamond approach so as to include the largest trading partner. A.j. Smith (2010) asserts that the diamond framework is not a trade theory about trade, patterns of trade gains from trade but rather a general framework for analyzing a country's specific source of advantage so that managers of the firms can leverage on it to make informed decisions on how to configure their value chains and enhance their internationally competitive position (Krugman, 1994).the economic school criticized porter's view that traditional and new trade theories are inadequate to explain modern patterns (porter,1990). According to Waverman (1995), Davies and Elis (2000), and Botho (1995), Porters diamond has no core theory, relationships between national welfare, productivity, trade, exports and competitiveness are misunderstood and wrongly interpreted.

Waverman (1995) asserts that the diamond is too general that it tries to explain all aspects of trade and competition but ends up explaining nothing.

The Porter's diamond approach is complimentary to the more traditional approach to economic development which emphasizes factors such as institutional development, trade liberalization, privatization and macroeconomic liberalization porter (1995).during the last decade, there has evolved a congruence between Michael porter and the mainstream growth theorists on the recognition of the importance of sound microeconomic fundamentals if an investor friendly environment is to be created that is conducive to sustainable growth as seen in the contributions by Baumol (2002),the World Bank (2005) and the development of the world economic forum's global competitiveness index by Sala-i-Martin and Artadi (2004).the porter's diamond framework explains an industry's international competitiveness (Porter, 1998). It has been widely acknowledged and applied by numerous nations and firms. It is also well accepted in the management literature. In 1993, a complete special edition of the journal of management international review was devoted to debating the diamond framework. In his latest work on the theme "from competitive advantage to corporate strategy" porter focuses on a more micro approach: the micro economic foundations of prosperity focusing on productivity at locations that can improve competitiveness of firms located in those locations. According to porter the competitiveness of a nation has microeconomic foundations. Most discussion of competitiveness and economic development is still focused on the macroeconomic, political, legal, and social circumstances. "These conditions are necessary but not sufficient. They provide the opportunity to create wealth but do not they create wealth. Wealth is actually created at microeconomic level of the economy, rooted in the sophistication of actual companies as well as in the quality of the microeconomic business environment in which a nation's firm compete. Unless these microeconomic capabilities improve, macroeconomic, political, legal, and social reforms will not bear full fruit" (porter, 2004). The diamond model of Michael Porter for the competitive advantage of nations offers a model that can help understand the competitive position of an industry in global competition. Porter (1990) argues that with regard to international competitiveness, the central question to be answered is why firms in particular

nations achieve international success in distinct segments and industry. The factors found to explain international success and the creation of competitive advantage were linked to the Porters framework for competitive advantage. It is in this realization that this study, through a comprehensive review and empirical research, sought to establish the independent variables on the factors affecting Kenya's value addition in the floriculture industry, leading to the conceptual framework upon which the study will be anchored.

2.2.2. Generic competitive strategies

Competitive strategy is concerned with how a strategic business unit achieves competitive advantage in its domain of activity (Gerry Johnson et.al, 2011). Competitive advantage is a company's ability to perform in one or more ways that competitors cannot or will not match. The three strategies that are integral to designing a value proposition that makes an offering stand out from the competition are to differentiate on an existing attribute, introduce a new attribute and building a strong brand (Kotler et al, 2022) according to porter (2008) the three generic strategies that support organizations in gaining competitive advantage are cost leadership, differentiation and focus. They are detailed as follows:

Cost leadership (low cost) strategy

Cost leadership emphasizes on creating standard product with lower cost per unit for the consumers who are sensitive in price changes.

Differentiation or unique product

Differentiation is a strategy to create and provide a unique product and service in the entire industry to consumers who do not care about price changes.

Focus or competitive strategy

Focus means creating and providing a product and service that fulfil the needs of several consumers.

As the floriculture companies implement the three generic strategies, the value addition of the floriculture products will be increasing and subsequently the competitive advantage of the floriculture industry in Kenya will increase. It is in the realization that these generic competitive strategies formed the subject of investigation, which narrowed on the differentiation strategy as the dependent variable that this study will measure to establish the factors affecting Kenya's valueaddition in the floriculture industry.

2.3. Empirical review

2.3.1. Factor conditions and value addition

Swaleh, M. S. Mathuva, e & Mwenda, p. K. (2020) conducted a study on factors influencing value addition among fish traders in Mombasa County. The specific objective was to determine the influence of infrastructure on fish value addition. The research employed a descriptive research design and a census methodology. The target population was 76 registered fish traders involved in fish business. Structured and semi-structured questionnaires were employed. Quantitative and qualitatively analysis using frequency table proportions (percentage) was used to interpret the data,inferential statistics was used to analyze the data. The study established that infrastructure has significant causal effect on fish value addition in Mombasa County. It was concluded that support towards enhancement of infrastructure is necessary if value addition is to be uplifted.

Korir, c. K. (2018) conducted a study on factors affecting value addition of Irish potato and effects on smallholder farmer's income generation in Bomet, Kenya. The study identified and characterized Irish potato producers in Bomet county, determined factors affecting value addition in potatoes, compared profitability of raw and value-added Irish potato products in county and finally determinedthe effects of value-addition on farmers' welfare. A structured questionnaire was used to collect cross-sectional data from 200 respondents selected randomly through multistage sampling procedure. To characterize Irish potato producers in Bomet County, descriptive statistics were used while factors affecting value

addition of potatoes in Bomet county were analyzed using binary logistic regression

Model. Gross margin analysis (GMA) was used in determining profitability of raw and value added Irish potato products. The statistical packages for social scientists (SPSS) was used in data analysis, results presented in tables, and graphs. From the study, the results show that non-value adders had more land under potatoes than value adders at an average of 0.1 to 3 acres. The most common form of value addition practiced by the farmers was sorting (66.5%) while grading, chipping and frying was practiced by 0.5 % of farmers in each case. Most farmers, who were not employed, carried out value addition at 70.5 % followed by the employed and students, respectively. Majority of the farmers with no education carried out value addition at 67.5% as compared to those who had primary education at 32.5%. Group membership, cost per unit of potatoes and total land size are key variables influencing value addition. Sorting was found to be the most profitable form of value addition. It was also found out that value adders earned more income than non-value adders per unit area. The study identified need to identify cost-cutting technologies for grading, chipping and frying as these forms of value addition are not profitable to the farmers.

The research findings by Swaleh, m. S. Mathuva, e & Mwenda, p. K. (2020) and Korir, c. K. (2018) allude to the significant contribution of the factor conditions to the efficient industries and ultimately leading to a healthy business environment of a country. Their research is therefore relevant to this study; however, the studies were on the effect of factor conditions on value addition in the fishery industry and the Irish potatoes, which were limited to Mombasa and Bomet counties respectively. The dynamics of the floriculture industry are different from the fishery industry and Irish potatoes respectively. A similar study needed which sought to narrow the investigation of these factor conditions as they specifically relate to the flower industry in Kenya.

2.3.2 demand conditions and value addition

Birachi, e., et.al (2013) conducted a study on expanding market access and value addition in selected agricultural value chains: the role of iar4d in the Lake Kivu pilot learning site.

The study established that limited access to profitable markets and production resources by

small holders restricts expansion and investment in technologies that could increase efficiency and add value to primary production. Two cases from the DRC and Rwanda, targeting the collective marketing, value addition and processing of banana and Irish potatoes, were used to demonstrate the iar4d approach. The results show that, through collective marketing and banana processing, farmers are able to increase their returns by about 50% compared to the period before iar4d interventions. The shelf life of the products was also increased drastically. Market efficiency improved for Irish potatoes by reducing transaction costs and decreasing the market intermediaries who would extract larger margins at the expense of the producers. Thus the tonnage of potatoes marketed increased from about 3 to 15 metrics in less than one year, while farmers were able to earn up to 10% higher prices through the IPS. Transformation to prevent postharvest losses experienced by farmers in general and members of IPS in particular is recommended. The use of flexible contracts, coupled with support from credit institutions, is also recommended.

Orinda, m. A. (2013) conducted a study that established different value addition techniques being practiced in Rachuonyo district and evaluated the factors influencing value addition and extent. Systematic sampling method was used to obtain an appropriate sample size. Questionnaires were administered to the respective farmers. Data analysis was done using SPSS statistical software. Descriptive statistics was used to analyze different value addition techniques practiced in the district. Independent t- test and chi square were used to establish if there were any significant differences of socio economic characteristics between value adders and non-value adders. Heckman two-stage model was used to examine the factors influencing value addition. Results showed that majority of the farmers in the district were involved in grading and packaging, slicing and sun drying, grinding the sweet potatoes into flour, baking, preparing additives and juice and jam as forms of sweet potato value addition. Some of the factors that were found to influence the decision to add value and extent of value addition were household size, total quantity produced, credit access, land size of the respondents, distance to the market and group membership, from the findings of this study, the policy makers should encourage farmer group formation, value addition loan packages for smallholder farmers, seminars,

Farmer field days, workshops to enable exchange of ideas among different farmers and further encourage farmers to produce more to enjoy economies of scale there. Marketing of the processed sweet potato products remain a challenge, which calls for proper marketing strategies such as linking farmers with supermarkets. Inadequate product development, proper packaging and labeling are other challenges that require urgent attention through acquiring certification from Kenya bureau of standards. The common findings by of these two studies by Birachi, e., et.al (2013**)** and Orinda, m. A. (2013) is that local demand for value added products is overshadowed by export segment but growing. Indigenous Kenyans are increasingly the source of local demand Sales Avenue for "rejects" that do not meet the stringent export requirements. There is need for packaging and aggressive marketing of the local products with the assistance of the government to the export markets. The studies are therefore relevant to this study. However, they could have been improved by studying the value addition on the floriculture industry in Kenya. This study therefore focused on the effects of demand on value addition of the floriculture industry in Kenya.

2.3.3. Related and supporting industries and value addition

Ketels (2003) did a paper that highlighted an overview of the current research on clusters and cluster based economic development is presented, looking at the definition, of clusters; related and supporting industries, different types of clusters, the economic benefits that clusters provide and factors that that influence cluster performance. Ketels suggested that clusters are important instruments, which enable higher levels of productivity, innovation and growth. He reviews the theoretical rationale for upgrading the competitiveness of clusters, followed by the evidence of existing cluster initiatives. He then characterized his own view of a broader cluster based approach to achieving microeconomic competitiveness.

The study determined that clusters generate many economic benefits. Firstly, they allow for the higher level of efficiency. Secondly, they account for a high level of innovation due to close relationships with research institutions. Thirdly, it encourages the formation of businesses due to low costs of startups as well as reduced costs of failure. Clusters are also important for public policy as they influence the

prosperity of a region.

A study by Delgado (2010) has shown that clusters have positive effects on countries, regions and industries through enabling higher levels of productivity and growth. This is achieved through access to specialized human resources and suppliers, better access to knowledge and innovations and the learning from the close relations between cluster participants.

The common findings by of these two studies by Ketels (2003) and Delgado (2010) is that clusters have a positive effect on industries. The studies however, were limited to ten countries in America and Europe. There was no attempt to provide a comparative overview of how other countries are faring on cluster development. There was therefore need to conduct an empirical research in Kenya to test the cluster concept and its effects on value addition in the Kenyan floriculture industry.

2.3.4. Firm competitive strategy and value addition

Omete, v. M. (2015) conducted a study on relationship between tea value addition strategies and performance of Kenyan tea exporting companies. The researcher observed that firms are increasingly adopting value addition strategies in order to reduce costs, increase market share and sales, and build solid customer relations. The study was to establish relationship between tea value addition strategies and performance in the Kenyan tea exporting companies. The research design adopted was cross sectional descriptive design. The population of the study comprised of all the 64 tea exporting companies operating in Kenya. The study used primary data, which was collected using self-administered questionnaires. The data collected was analyzed using statistical package for social sciences and presented in tables. The study found out that value addition helps the companies create awareness among customers for their products and services but also serves as a useful vehicle in promoting brand image of products and services offered at the target market. The study further established that tea value addition enables an organization to change the rules of the game and create that uniqueness that is more valuable and with the rising global competition in the value Added market, and particularly for the value added black tea, factors such as quality, standards on

Food safety, maximum residue levels, and labeling rules are expected to have a major effect on price realization. The study recommends that with rising global competition in the value added market, and particularly for the value added black tea, Kenya exporters should be conscious of the need to bring about vertical integration in its traditional tea bulk exports and are now into converting a major portion of tea exports to consumer packs and other forms of value added exports, meeting the requirements of more sophisticated markets. The study recommends that a further research should be undertaken to further explore the relationship of value addition to the tea industry employing bigger samples and carrying out a more detailed analysis of firms, the study concluded that there exists a relationship between tea value addition and organizational performance.

Herath, H.M.U.N., et.al. (2011) conducted a study on strategies for competitive advantage in value added tea marketing. The study recognizes that at present the world tea market is rapidly growing with emerging customer needs. The importance of a change from bulk tea exports to value added tea products is highlighted in literature to face the challenges in an increasingly competitive beverage market. Firms failing to address the competitive forces by developing their marketing strategies will lose out to competitors. Thus, marketing strategies adopted by the company leaders, directing their firms towards gaining competitive advantage in the value added tea industry are discussed in this paper. Data were gathered through interviews with the founders of nine firms using an interview guide and using records at the Sri Lanka tea board and the Sri Lanka customs. The results revealed that brand building, niche marketing, product differentiation, cost leadership, and customer focus were the most prominent strategies adopted by the firms. Opening up new markets abroad, fair trade, environmental sustainability, and faster delivery were identified as important strategies that differentiated firms from competitors and placed them among the market leaders. It was also revealed that the strategic decisions could have been accredited to vision of the leaders, risk taking, their enthusiasm and commitment. Identifying marketing strategies depending on the firm's capabilities and innovations, is therefore, Found vital for the value added tea export firms to achieve business success as well as to make

Substantial contribution to the Sri Lankan economy.

The studies by Omete, v. M. (2015) and Herath, H.M.U.N., et.al. (2011) are relevant to this study as they show the relationship between firm strategy, structure, and rivalry and value addition. However, the research findings are on the tea industry, which has different dynamics from the floriculture industry. The study by Herath, H.M.U.N., et.al. (2011) relates to Sri Lanka and not Kenya. It was therefore necessary to conduct a study on the effects of value addition on the floriculture industry in Kenya so as be contextually relevant to the floriculture industry in Kenya.

2.3.5. Governance and value addition

Eze, a. V. Et.al. (2022). In their study on factors influencing value addition to cashew products processed in the south-east zone, Nigeria: a multinomial logistic regression approach concluded that Nigeria is a leading cashew producer, but this has not been reflected in the development of the downstream cashew value chain industry. The launch of the "agriculture promotion policy (2016 – 2020)" document was designed to encourage value addition to export crops such as cashew as ways of creating jobs and wealth to value chain actors. However, it is still unclear why cashew processors are unable to exploit this opportunity to improve value addition to cashew. This makes it imperative that factors influencing value addition to cashew products in the southeast zone, Nigeria be analyzed. A cross-sectional survey design involving a structured questionnaire was used to obtain data from 353 randomly selected respondents from the southeast zone, Nigeria. The study found that income, access to market, product characteristics, and cost of cashew processing technology significantly influence value addition to cashew products in the two models, whereas government policy on cashew processing and market facilities were significant in the second model. The relative risk ratios for age, educational level, income, processing experience, access to market, distance to market, government policy on cashew processing and market facilities were > 1, suggesting the Likelihood of processor is preferring to add value to cashew kernel, and both cashew products

As against cashew nut for any unit increase in these variables. This study provided vital insights about how the relative significance of these factors will aid policy analysts and decision-makers to determine which of the factors to focus on while developing specific policies for the cashew value chain industry.

Ernesto (2007) did an article that surveyed the Columbian export business and determines the Columbian-American partnership in the Columbian floriculture industry. This is a survey of secondary data on Columbian exports that determines the history of floriculture in Columbia, flower export trends and the Columbian government support through the Columbian association of flower exporters Asoclflobes, an association that exists to promote flower exports, maintain access to international markets, developing Columbian flower industry through research, technological improvements, training of workers, transport and logistics, organization of trade fairs, environment management, social development and lab our welfare programs, policy development and implementation. The article highlights key achievements of the Columbian- American connection, which has resulted in the improvement of marketing channels, high trade volumes of Columbian flowers to the United States of America, of $740 million per year, which accounts to 80% of Columbian total exports of $930 million worldwide, making Columbia the largest flower exported to the U.S.A. With a total market share of 70%.

Hornberger (2007) did a study to analyze Kenya's cut flower cluster. In this study, he reviewed the Kenya's cut flower cluster by looking at Kenya's competitiveness in the world flower market as well as the regional competitiveness. The study then looked at Kenya's cluster history, value chain, value chain and cluster diamond framework and finally the government's role in the sector, the cluster challenges and recommendations. The researchers conducted a secondary review of World Bank doing business surveys data to analyze trends in the cut flower industry. The research recommended that the government's role should be facilitative and not intervention list. It also recommends integration of small and medium scale growers

into large scale producers' supply and to continue to integrate technology and tougher environmental standards into production practices. The study by Hornberger (2007) is relevant to this study, however, it analyzed secondary data to determine its findings. There was need for a primary data collection on flower farms to validate these results.

The studies by Eze, a. V. Et.al. (2022) and Ernesto (2007) are relevant to this study as they show the relationship between governance and value addition. However, the research findings by Eze, a. V. Et.al. (2022) are on the cashew nuts industry, which has different dynamics from the floriculture industry. The study by Ernesto (2007) relates to Columbia and not Kenya. It was therefore necessary to conduct a study on the effects of value addition on the floriculture industry in Kenya so as be contextually relevant to the floriculture industry in Kenya.

There was also a contrasting view between the studies on the significance of government Intervention to the success of the floriculture industry. Whereas Eze, a. V. Et.al. (2022) and Ernesto (2007 view the government's role as significant to the value addition in the floriculture industry, Hornberger (2007) recommended that the government's role should be facilitative and not intervention list. The contradicting results from past studies offered an opportunity for a study that would illuminate the role of governance in the value addition of the floriculture industry in Kenya. This formed part of this study's research question.

2.3.6. Natural endowments and value addition

In this study, Halemichael (2013) mapped out details of floriculture supply chains from the cut processing, logistics to the point of export in Ethiopia. He then determined the main bottlenecks in logistics and developed an efficient and effective logistic system to solve the main logistic problems in the floriculture supply chain. Primary data collection is through distribution of questionnaires to selected 81 flower farms. Interviews were also held with farm managers from the selected farms. Secondary data collection was from publications from the Ethiopian horticultural agency. Data analysis was in form of statistical analysis of data collected regarding the transport costs, vehicle load.It is then

presented by use of tables, graphs and charts. The study identified climate and topographicalfactors as being key to the success of the industry. The Ethiopian highlands and the flat lands on altitudes of between 1500 and 2500 meters with fertile soils, sufficient sunlight, cool nights, adequate rainfall all offer very good climatic conditions for the cultivation of flowers. The study recommended proper routine and periodic maintenance of roads to create good transportation service and training of workers on use of chemicals and fertilizers to reduce environmental impact. The importance of the research to this research is that it determines the importance of governance and natural endowments ascontributors to the success of the floriculture industry. These form part of the independent variables inthis research. The limitation of the study, however, is that it focuses primarily on the logistic processes of the floriculture value chain with a view of making recommendations that would make it more efficient. Whereas this is significant to the success of the industry, it does not look at the floriculture industry from a holistic perspective. A study that determines all the variables that are key to the value addition of this industry was therefore necessary.

Kangogo (2013) conducted an empirical research that had the overall objective of investigating the Factors contributing to supply chain disruption in the industry and used equator flowers ltd in Eldoret, Kenya as a case study. The study found out that most significant amongst the factors contributing to supply chain disruption in the floriculture industry in Kenya are natural disasters, logistic process design, lab our union actions and production function mechanics. The study recommended implementation of comprehensive business continuity plans to mitigate against the supply chain effects of natural disasters. This compares favorably with the study by Halemichael (2013) with regard to the effect of natural endowments on the value addition in the floriculture industry, a factor that formed part of investigation in this research.

The main limitation of the studies by Halemichael, (2013) and Kangogo (2013) was the focus on supply chain disruption whereas there are many factors, which contribute to the value addition in the floriculture industry. They could have been enriched by inclusion of other key variables.

2.4. Research gaps

Various local and international scholars have conducted several studies on the floriculture industry. Their perspectives and conclusions are divergent and intellectually stimulating. A literature survey of the existing empirical studies reveal consistency in lack of a clear conceptual framework, leading to unclear parameters against which value addition in the floriculture industry can be measured. The studies overlook other significant variables that are critical to assessing the value addition in the floriculture industry, such as the role of government, which also play a role in the value addition in the floriculture industry, hence the need to a holistic approach in looking at the value addition in the floriculture industry where the study is guided by a clear conceptual framework that is well structured and which encompasses more variables in order to enrich the study and enhance the validity if the research findings. This research addressed the gap of lack of a consistent conceptual framework. Unlike previous studies that have investigated a single variable that affect value addition in the industry. This study provided a holistic view with regard to the value addition in the floriculture industry from all stakeholders. The Porter's diamond framework for competitive advantage explains the determinants of a country and industry's sustainability in international competitiveness (porter, 1998). It has been

Widely acknowledged and applied in numerous nations, industries and firms. The study therefore uses the Porters diamond framework for competitive advantage to explain the determinants of value addition in the floriculture industry in Kenya in order to enhance the validity of the research findings.There was over reliance of secondary data and other researchers, hence a lack of rigor of primary datacollection by the researchers. Primary data collection could have enhanced the generalizability and validity of the research findings. Current primary data collection from flower farms was conducted tocompliment the secondary data. This enhanced the rigor of the data collection process.

It is clear from the recommendations of the past studies that there are conflicting opinions on the role of the government in the value addition in the floriculture industry, hence the need for an in- depth study that will illuminate on this discrepancy and give explanations for such contradictory findings as well as provide fresh insights on the matter. The study's role was to bridge the gap on contradicting

findings from previous studies by conducting an in-depth study that would illuminate on these discrepancies and explain such contradictory findings.

Most research findings agree that there is need for further study in the value addition in order to get in depth information and thereby generate empirical evidence in the area. This study therefore addressed this need by providing fresh insights on the matter by contributing to new understanding of the factors affecting value addition in the floriculture industry in Kenya and how the highlighted knowledge gaps from past studies could be addressed.

Most studies tend to focus on the value addition of the flower industry in 10 countries from Europe and America, Columbia and Ethiopia and a few on Kenya. However, the political, socio- economic and geographical realities in Kenya are different from other countries, this study therefore focused on the value addition in the floriculture industry in Kenya using empirical data from Kenyan flower farms. A number of studies focused on the effect of value addition on other industries namely the tea industry, bananas, sweet potatoes, cashew nuts, Irish potatoes and the fishery industry. The researchfindings are therefore on these particular industries, which have different dynamics from the floriculture industry. This study therefore focused on the value addition in the floriculture industry In Kenya.

Some studies focused on one flower farm, which excessively low and inadequate as a sample size, hence the findings are not representative of the floriculture industry, which comprises 85 flower farms. The choice of one farm could also not be justified. This study addressed the gap regarding non-representative samples by conducting a survey of 85 flower farms hence these are representative of the floriculture industry.

2.5. Conceptual framework

Figure 2.2 below shows the conceptual framework of the factors affecting value addition of Kenya's floriculture industry:

Independent variables **dependent variable**

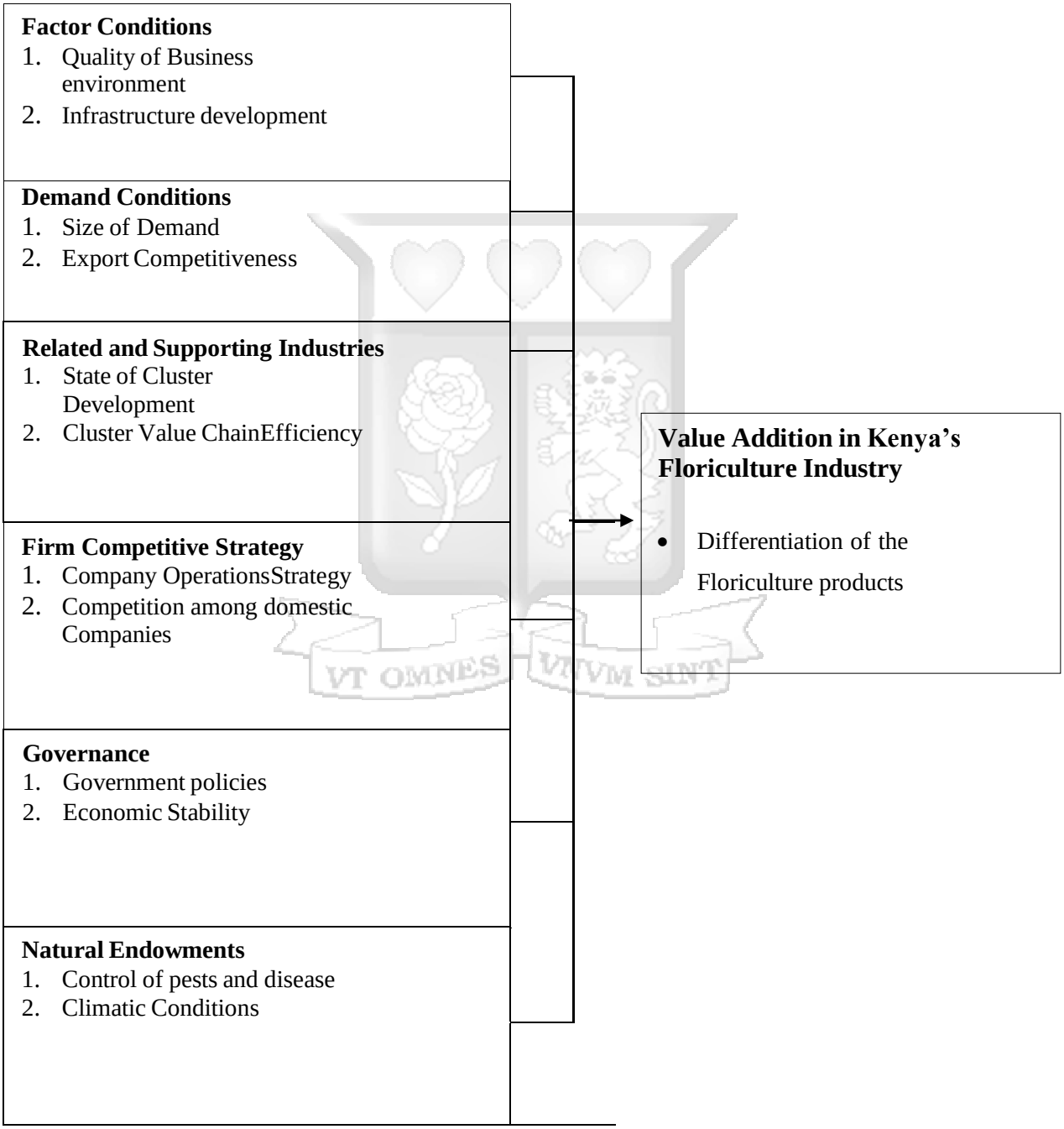

Figure 2.2. Conceptual relationships between variablessource:

researcher (2021).

2.6. Operationalization of the variables

This section looked at the secondary literature on the value addition in the floriculture industry and the independent variables: factor conditions, demand conditions, related and supporting industries, firm structure, strategy and rivalry, governance and natural endowments. It also looked at the sub variables in each of the variables.

2.6.1. Factor conditions

2.6.1.1. Quality of business environment

Quality of the business environment refers to a fair and just business environment that facilitates ease of doing business because of low cost of production. This is facilitated by an efficient administrative infrastructure that is devoid of government bureaucracy in the areas of dealing with licenses, enforcement of contracts, acquiring land, paying taxes, starting a business, employing workers, registering property, closing a business, obtaining credit, investor protection and trading across borders. These have a significant contribution to the efficient industries (World Bank, 2010).

2.6.1.2. Infrastructure development

There are several studies that point physical infrastructure as having contributed to improved productivity, and hence an industry's success. There remains a debate concerning the size of its effects though (Calderon & Serven, 2004). Access to capital efficiently contributes significantly to industries as companies in these industries access capital to make long-term investments (Ang, 2008). The quality and quantity of higher education, staff and management training, research and development all contribute to a positive impact on the industries (Barro, 2002). This is true for the institutions that support innovation (Euasch, 2005).

2.6.2. Demand conditions

2.6.2.1. Size of demand

It is agreed that local regulations that are stringent do encourage industries to innovate due to technological opportunities that create future opportunities to the markets (Esty & Porter, 2005).

2.6.2.2. Export competitiveness

In Africa, floriculture is new to export and contains huge potential to earn foreign currency through balanced export and diversification (Belwal et al., 2008). Export performance in selected industries is a reflection of microeconomic competitiveness (Delgado, 2012). Trade and investments lead to an open economy, which is good for an industry's productivity. Studies have determined a positive influence between trade and innovation (Branstetter, 2006). The European regulatory environment is characterized by a number of standards with regard to codes of practice, certification schemes and consumer labels. The European retailers have adopted their own standards that meet their needs (Proverde, 2010). Failure by exporters to comply with these standards could adversely affect trade relations and future market opportunities for the East African region floriculture produce (Belwal et al., 2008). This has forced governments to introduce new laws for controlling pollution. Moreover, asa form of industry regulation, producer associations in developing countries have also introduced new standards and codes of practice. Examples are Kenya flower council with the KFC code of practice, Ascolflores, Columbia with the florverde standard and the code of practice for sustainable flower production by the Ethiopian horticultural producer and exporters association. (Proverde, 2011). According to McKinnon et al., (2007) the floriculture supply chains are inflexible and susceptible to disruption since they are unable to swiftly and suitably respond to emerging international protocols, certification requirements and regulatory changes. This view is shared by the horticultural directoratein Kenya who states that there are heightened concerns for international compliance in qualitystandards, environment conservation, product traceability and safety by the European Union, the singlelargest market for Kenyan floriculture products (HCD, 2015).

2.6.3. Related and supporting industries

2.6.3.1. State of cluster development

Clusters are geographic agglomerations of companies, suppliers, service providers, and associated institutions in a particular field, linked by externalities and complementarities of various types. According to porter (1990), clusters arise because they increase the productivity with which companies

Can compete. Several studies have shown that clusters have positive effects on countries, regions and industries through enabling higher levels of productivity and growth. This is achieved through access to specialized human resources and suppliers, better access to knowledge and innovations and the learning from the close relations between cluster participants (ketels, 2003).

2.6.3.2. Value chain efficiency

Porter's concept of value chain presents the integration of firm's functions within the value chain. He views firm's functions within the value chain as a collection of key functions and supporting activities. In maximizing the linkages between these activities, companies maximize the efficiency of the firm (Cormack, 2001). The increase in export of floricultural products has meant an increase in production activities such as warehousing, tracking and air transport. Developing countries are heavily dependent on foreign investors and trade partners to meet the required value chain standards in the industry processes like production, logistics, distribution, marketing across the value chain (Wijnands, 2005).

2.6.4. Firm competitive strategy

2.6.4.1. Company operations and strategy

This refers to the strategy and operational effectiveness of companies in terms of their firm level technology absorption, company spending on research and development, nature of competitive advantage, value chain breath, capacity for innovation, production process sophistication, extent

Of marketing, degree of customer orientation, their organizational practices, extent of staff training, willingness to delegate authority, extent of incentive compensation, reliance on professional management and the internalization of firms in terms of prevalence of foreign technology licensing, control of international distribution, extent of regional sales and breath of international market (Delgado, 2010).

2.6.4.2. Competition among domestic companies

Competition among domestic companies is necessary for high industrial performance (porter & Sakakibara, 2004). This affects the entry of new firms and exit of old firms (bloom, et al., (2009). Studies reveal that the quality and sophistication of company operation strategies differ because of

Differences in managerial expertise in competitiveness even across countries with similar institutions and businesses (Delgado, 2010).

2.6.5. Governance

The worldwide governance indicators are a summary of research dataset that offer views of the quality of governance provided by a large number of enterprises, citizen and expert survey respondents in industrial and developing countries. The six governance indicators cover voice and accountability, political stability and absence of violence or terrorism, government effectiveness, regulatory quality, rule of law and control of corruption (World Bank, 2014).

A number of institutions and policies referred to as social infrastructure (Hall & Jones, 1999) drives macroeconomic competitiveness. There is a strong empirical evidence of a relationship between the rule of law (La-Porta et al., 1998), security (Stone, 2006) and productivity of industries. Governance also influences macroeconomic stability. Macroeconomic stability refers to the set of government policies framed to meet the macroeconomic goals. The two main regulatory macroeconomic policies are fiscal policy and monetary policy. Fiscal policy is the macroeconomic policy where the government makes changes in government spending or tax to stimulate growth. Monetary policy deals with Changes in money supply or changes with the parameters that affects the supply of money in the economy. Contract laws, debt management policy, income policy are some of the other macroeconomic policies designed to modify macroeconomic indicators of the economy (Economic Times, 2016).

2.6.6. Natural endowments

Natural endowments are inherited and given, such as rainfall, natural resources, climatic conditions. The enhancement of economic value of these endowments is affected by policy. Natural resources have a positive effect on total output and can erode industry competitiveness by distorting economic policy choices (Sachs & warner, 2001). A country's geographic location can affect the ease with which it trades, affect the prevalence of diseases and pests (Boulhol et al., 2008).

Figure 2.1 below shows the operationalization of the study variables and how the measurement of each variable was carried out.

Table 2.1 operationalization of variables

Research Objectives	Variable	Indicators	Data collection Instrument	Data analysis
1. To determine the effect of factor conditions on the value addition in Kenya's floriculture industry	Factor conditions (independent variable)	1. Quality of business environment 2. Infrastructure development	Semi structured questionnaire	Descriptive and Inferential (multiple non linear regression)
2. To determine the effect of demand conditions on the value addition in Kenya's floriculture industry	Demand conditions (independent variable)	1. Size of demand 2. Export Competitiveness	Semi structured questionnaire	Descriptive and Inferential (multiple non linear regression)
3. To determine the effect of related and supporting industries on value addition in Kenya's floriculture industry.	Related and supporting industries (independent variable)	1. State of cluster development 2. Cluster value chain efficiency	Semi structured questionnaire	Descriptive And Inferential (multiple non linear regression)
4. To determine the effect of firm competitive strategy on the value addition of Kenya's floriculture industry.	Firm competitive strategy (independent variable)	1. Company operations strategy 2. Competition among domestic companies	Semi structured questionnaire	Descriptive And Inferential (multiple non linear regression)

5. To determinethe effect of governance And natural Endowments on The value addition in the floriculture industry.	Governance (independent variable) Natural endowments (independent variable)	1. Effective Government policies in the flower industry 2. Economic stability 1. Control of pests and disease 2 Climatic Conditions	Semi structured questionnaire	Descriptive And Inferential (multiple non linear regression)
	Value addition in Kenya's floriculture industry (dependent variable)	1. Differentiation strategy	Semi structured questionnaire	Descriptive and Inferential (Probit model: multiple non linear Regression)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

In this chapter, the overall methodology used in to address the questions being posed in the study is discussed. The chapter has been structured in the following way: section 3.2 determines the research philosophy. Section 3.3 details the research design; section 3.4 examines the target population of the study; 3.5 expounds on the sampling frame used; 3.6 elaborates on the sample and sampling technique; 3.7 delves in to the data collection procedures; and 3.8 expounds the data processing and analysis.

3.2. Research philosophy

Research philosophy is the underlying belief held by a researcher on the way data for a particular study should be collected, analyzed and applied (Creswell, 2012) it defines the orientation of the person carrying out research. The type of research philosophy used in the study is positivism. Thisis an empirical, quantitative approach in which hypothesis testing is used to discover facts generalizable to the population.

3.3. Research design

Research design is defined as the decisions regarding what, where, when, how much, by what means concerning a research study (Kothari, 2008). The research design captures the structure of the research. It is a master plan, framework or blue print specifying the methods and procedures for collecting and analyzing the needed information (Mugenda, 1999). Kombo and tromp (2006) view research design as the conceptual structure within which research is conducted. It constitutesthe blue print for the collection, measurement and analysis of data to address the research question (Kothari, 2008).

The research adopted a descriptive research design. A descriptive research design is a method of collecting information by way of questionnaires to individuals (Kothari, C.R. (2008). The study That attempts to determine or define a subject, often creating a profile of a group of problems, people

Or events, through the collection of data and the tabulation of frequencies on research variables or their interaction; the study reveals who, what, when, where or how much (Cooper & Schindler, 2008). A descriptive study determines the situation as it exists and results in the formulation of important principles of knowledge and solution of significant problems (Kombo *etal*, 2006).

According to Sekaran (2006), a descriptive study is undertaken to ascertain and be able to determine the characteristics of a variable of interest in a situation. In this sense, the goal of a descriptive study is to offer to the researcher a profile or to determine relevant aspects of the phenomena of interest from an individual, organizational, industry-oriented, or other perspective. According to Zikmund (2010), descriptive research is designed to determine characteristics of a population or a phenomenon and seeks to determine answers to *who, what, when where* and *how* questions. The research had the overall objective of investigating the factors affecting value addition in the floriculture industry in Kenya. It determines the behavior of all the independent and dependent variables with a view to outlining their relationships. This design was adopted since the research is concerned with assessing the relationships between the variables and the description of things and as such, it focuses on the factor conditions, demand conditions, related and supporting industries, firm competitive strategy, governance and natural endowments as the independent variables. The research data was summarized in a way that provides the designed descriptive information. The design adopted assisted in tackling the research questions such as what is the problem, how, when and why it is a problem. The selected research design contributed to the accurate and fair interpretation of results. The design also clarified to the researcher and respondents the means by which the study was conducted and produce an accurate representation of the situation (Saunders, Lewis & Thorn Hill, 2009).

3.4. Target population

The target population for the questionnaires was targeted at 85 flower farms in Kenya who are members of the Kenya flower council (KFC, 2021). The targeted respondents group in the 85 flower farms were farm owners or senior managers of the flower farm who have an understanding of the

general operations competitive information and market dynamics. These were perceived to be conversant with the matters pertaining to value addition of the floriculture industry at the farm level and therefore appropriate as respondents to the research questionnaires.

3.5. Sampling frame

A sampling frame is an exhaustive list of individuals from which a sample is derived (Kothari, 2008).in this study, the sampling frame was 85 flower farms who are members of the Kenya flower council (KFC, 2021). The sampling frame was extracted from the website of the organization. This is justified given that the Kenya flower council is the major flower farm organization in Kenya (Gudeta, 2012)

Table 3.1. Sampling frame

Target population	Questionnaires Issued	Questionnaires returned	Response rate
85	85	57	67%

3.6. Sample and sampling technique

The study used census survey to collect data in form of questionnaires to the target population of registered flower farms registered by the flower council of Kenya. A census survey is the procedure of systematically acquiring and recording information about the members of a given population (cooper et al, 2008). Census surveys involve the process of collecting information about each member of a given population and is suitable for descriptive research designs where there is a possibility of reaching each member of a finite population cost effectively (Cauvery et al, 2010)

3.7. Data collection procedures:

The data collection period was three months. During fieldwork, ethical matters were well taken care of during the data collection process. For confidentiality, names were not required to be disclosed. Participants were assured that their responses would not be used against them. The respondents were also briefed on the purpose of the research. A letter of introduction from Strathmore University accompanied the questionnaires. This is attached on appendix 1

Research instruments are the testing devices that aid the researcher to gather relevant data analysis to answer the research questions and solve the research problem (Kombo *et al*, 2009). The following research instruments were used:

3.7.1. Questionnaire

The research used questionnaires to facilitate collection of data on employee and firm backgrounds, and also on both independent and dependent variables. This was based on the fact that questionnaires are the most appropriate tools for collecting data in survey studies and in the cases where the respondents are quite many (Kothari, 2008). The questionnaires were administered to farm owners or senior managers of the flower farm who have an understanding of the general operations competitive information and market dynamics. Online questionnaires were also developed on Google form and send to the respondents through email. The questionnaire is attached on appendix 2. The questionnaires se were semi-structured comprising both open and closed-ended questions. The open-ended questions were used in order to collect data on respondents' perceptions of the issues under study. The closed ended questions were formulated on a five point Likert scale where respondents were required to make choices that best determine the situation regarding the issues under question.

The list of flowers registered with the Kenya flower council are listed in appendix 3.

3.7.2. Desk studies

Secondary data collection involved a desk study of journals, periodicals and publications of floriculture related institutions, literature review on value addition in the floriculture industry, economic, development, international management books and web sites of standard setting bodies. These were reviewed to help the researcher corroborate the primary data collected through questionnaires and help the researcher reach a conclusion, identify activities and actors involved in determining value addition in the floriculture industry in Kenya.

3.8. Data processing and analysis

Data analysis is a body of methods that help to determine facts, detect patterns, develop explanations, and test hypotheses. The data collected was then examined and checked for completeness and clarity.

Quantitative data was obtained through administering questionnaires. The data obtained from the physical questionnaires obtained was entered into a computer on Google form and compiled with the data received on-line through Google form. The data obtained was then converted to numerical codes, which represented measurements of variables using Microsoft excel worksheet.

The aim of coding was to reduce and categorize large quantity of data into more meaningful units for interpretation. The coded data was analyzed quantitatively using descriptive methods. This was by utilization of the statistical package for social scientists (SPSS) version 25.

Quantitative data analysis was carried out using descriptive statistics. Descriptive statistics includes statistical procedures that we use to determine the population we are studying (Kothari, 2008). The study used the mode measure of central tendency to determine the data. This generated the frequencies and percentages to interpret and test the research question. According to Ary, Jacobs and Sorensen (2010), descriptive statistics recommended for ordinal measurement scale items include a mode or median for central tendency.

The relationship between the variables was analyzed using regression analysis. This is a set of technique that can enable the researcher to predict the value of a dependent variable from one or more independent variables. In addition, the tool can also be useful for performing the coefficient of multiple determination, which is used to assess the strength of a relationship between one dependent and two or more independent variables. (Saunders et.al 2011). The relationship between the independent variables and the dependent variable were analyzed using the Probit model (non-linear multiple regression analysis)

Data presentation was by use of descriptive statistics using spreadsheets analyzed in form

of frequency distribution tables expressed in percentages, which was used to illustrate the proportions of the findings in a clear picture at a glance, aiding fast comparisons to interpret and test the research question.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This study had the overall objective of investigating the factors affecting value addition in the floriculture industry in Kenya. To achieve the stated objective, primary data collected by use of questionnaires administered to the owners and top management at the selected flower farms secondary data was captured through journals and periodicals.

To capture the required information, the data was recorded by documenting the responses as provided by the respondents, after which it was coded and analyzed based on the information provided. These were used to determine the factors affecting value addition in the floriculture industry in Kenya. This chapter presents the analysis and the results of the study.

4.2 Respondents findings

4.2.1 Response rate of the study

Out of 85 questionnaires which were administered to the respondents (departmental managers and supervisors) 57 were completed which represents sixty-seven percent (67%) response rate response rate approximating 50% for most research should be the goal of researcher (mugenda,2012)

Table 4. 1: response rate

Questionnaire issued	Returned	Response rate
85	57	67.06%

4.2.2 General information on the respondent findings

The section depicts the frequency tables for the respondents attributes. It assesses the gender, designation, age distribution, number of years in schooling and number of years in the floriculture industry.

On gender response rate, the results as in the table 4 above shows that majority of the respondent were male at 69.1 % while female was 30.9 % implying that most of the workers were male.

In terms of designation, the results as in the table 4 above shows that senior management were 41.8 % while owners were 32.7 %. Middle management were 16.4 % while board members were 9.1%.

In terms of age, the results presented in table 4 above show that a large proportion of 42 % of the respondents were aged from the ages over 50 years; this was followed by a significant percentage 26 % that were aged between 31 and 40 years while 24% of the respondents were aged between 41and 50 years. 8% were between 21 and 30 years while none of the respondents was below 20 years. The age composition shows that most of the respondents were over 50 years and therefore had rich experiences, could also appreciate the importance of the study.

On the respondents' number of years in schooling as indicated on table 4 above, majority of the respondents 81% indicated they had between 11 and 20 years in schooling. Those who indicated they had over 20 years of schooling 9 % followed this. 8 % of the respondents indicated they had between 5 and 10 years of schooling while 2 % indicted they had less than 5 years in schooling.

On the experience in the floriculture industry as indicated on table 4 above, majority of the respondents 42 % indicated they had 11 to 20 years in the floriculture industry. Those who indicated they had 5 to 10 years in the floriculture industry 25 % followed this. 23 % of respondents indicated they had over 20 years in the floriculture industry. 10% had less than 5 years in the floriculture industry.

The results are tabulated in the table 4.2 below.

Table 4. 2: respondents characteristics

Respondents characteristics	Frequency	Percentage
Gender		
Male	38	69.1%
Female	17	30.9%
Total	**55**	**100%**
Designation		
Owner	18	32.7%
Board member	5	9.1%
Senior management	23	41.8%

Middle level management	9	16.4%
Total	**55**	**100%**
Age distribution		
Less than 20	0	0%
21-30	4	8%
31-40	13	26%
41-50	14	24%
Over 50	22	42%
Total	**53**	**100%**
Number of years in schooling		
Less than 5	1	2%
5-10	4	8%
11-20	43	81%
Over 20	5	9%
Total	**53**	**100%**
Number of years in the floriculture industry		
Less than 5	6	10%
5-10	14	25%
11-20	24	42%
Over 20	13	23%
Total	**57**	**100%**

4.2.3. General information on the flower farms findings

The section depicts the frequency tables for the flower farms attributes. It assesses the legal set up of the farms, ownership, monthly revenues, sales revenue growth, net profit, acreage of the farms and the number of employees of the farms. On legal set up of the farms as indicated on table 5 above, majority of the firms were registered as limited liability companies at 84.2 %. This was followed by those, which were registered as sole proprietor at 12.3 %. 3.5 % of the firms were registered as partnerships. None of the farms was registered as an NGO.

On ownership of the farms, as indicated on table 5 above, majority of the firms were local at 63.2 %. This was followed by those, which were both local and foreign at 19.3 %. 17.5 % of the firms were foreign.

On level monthly revenues of the farm as indicated on table 5 above, majority of the firms had a monthly revenue of over Kes 10,000,000 at 56.6 %. Those followed this, which had a monthly revenue of between Kes 1,000,000 and 10,000,000 at 34%. Kes 0 to Kes 500,000 at 7.5% and Kes 500,000 to Kes 1,000,000 at 1.9 %.

On sales revenue growth of the farm as in the last five years as indicated on table 5 above, majorityof the firms were between 0 and 25% growth at 92%. This was followed by those, which were below 0 %growth at 4 % and farms with growth of between 26% and 50% at 4%. On net profit growth ofthe farm as in the last five years as indicated on table 5 above, majority of the firms were on a net profit growth of 0 to 25 % at 87%. This was followed by 11% those which were between 26% to 50% and those between 76% and 100% growth at 2%. On average export volumes increase of the farm as in the last five years as indicated on table 5 above, majority of the firms had an increase of between 0 to 25% at 77 %. Those followed this, which had an increase of between 26% and 50% at 13%. 4% of the farms had an increase of 51% to 75% and 76% to 100% respectively. 2% of the farmshad less than 0% growth. On average production in acreage increase of the farm as in the last five years as indicated on table 5 above, majority of the firms at 78% had a production increase of 0 to 25% in the last five years. This was followed by 14% of the farms, which were between 26% and 50%. 4 % of the farms were between 51 % and 75% and between 76% and 100% respectively.

On average, number of employees of the farm as indicated on table 5 above, majority of the firms had over 200 employees at 66.7%. This was followed by those who were less than 50 at17.5%.8.8 % were between 50 and 100. 7% of the farms had between 100 and 200 employees. On average, increasein the number of employees of the farm in the last five years as indicated on table 5 above, majority of the firms at 84% had an average increase of 0% to 25%. Those followed this, which had less than 0% increase in employees at 11 %. 5 % of the farms had an increase of between 26% and 50%.

The results are tabulated in the table 4.3 below.

Table 4. 3: flower farms characteristics

Flower farms characteristics	Frequency	Percentage
Legal set up		
Sole proprietor	7	12.3%
Partnership	2	3.5%
Limited company	48	84.2%
Ngo	0	0%
Total	**57**	**100%**
Ownership of the farm		
Local	36	63.2%
Foreign	10	17.5%
Both local and foreign	11	19.3%
Total	**57**	**100%**
Level monthly revenue of the farm (Kes)		
0-500,000	4	7.5%
500,000-1,000,000	1	1.9%
1,000,000 to 10,000,000	18	34%
Over 10,000,000	30	56.6%
Total	**53**	**100%**
Average sales revenue growth in the last five years (2015 to 2019)		
0%<	2	4%
0-25%	43	92%
26-50%	2	4%
1-75%	0	0%
76-100%	0	0%
Total	**47**	**100%**
Net profit growth in the last five years (2015 to 2019)		
0%<	0	0%
0-25%	39	87%
26-50%	5	11%

51-75%	0	0%
76 – 100%	1	2%
Total	**45**	**100%**
Export volumes increase in the last five years (2015 to 2019)		
0%<	1	2.0%
0-25%	34	77.0%
26-50%	6	13.0%
51-75%	2	4.0%
76-100%	2	4.0%
Total	**45**	**100%**
Production in acreage increase in the last five years (2015 to 2019)		
0%<	0	0%
0-25%	35	78.0%
26-50%	6	14.0%
51-75%	2	4.0%
76-100%	2	4.0%
Total	**45**	**100%**
Average number of employees in 2018/2019		
Less than 50	10	17.5%
50-100	5	8.8%
100-200	4	7.0%
Over 200	38	66.7%
Total	**57**	**100%**
Average increase in number of employees in the last five years (2015 to 2019)		
0%<	2	11.0%
0-25%	16	84.0%
26-50%	1	5.0%
51-75%	0	0%
76-100%	0	0%
Total	**19**	**100%**

4.3. Factors affecting value addition in the floriculture industry in Kenya.

4.3.1. Descriptive statistics on factors affecting Kenya's value addition in the floriculture industry

The objective of the study was to determine the effect of factors affecting value addition in Kenya's floriculture industry. The respondents were asked to indicate the extent they concur with the statements below using a Likert scale of 1-5, with **5** being '**strongly agree'**, **4** being **'agree', 3** being '**neutral'**, **2** being **'disagree'** and **1** being '**strongly disagree'**, on the effects of factors affecting value addition in Kenya's floriculture industry. The threshold for satisfaction was above mean of above 3 while degree of dissatisfaction was below 3 this was due to the Likert scale applied ranged from 1 to 5

On the quality of the business environment, the factors on whether the cost of floriculture productionis low, the amount of tax being paid from the flower business is fair, the government is protecting investors when it comes to matters that relate to the industry, it is easy to obtain a loan for the flower business, it is easy to acquire land for a flower farm and it is easy to obtain license to start a flower business, were represented by mean of 1.81,2.19,2.44,2.60,2.72 and 2.74 respectively, standard deviation of 0.895,1.060,1.195,0.979,1.114 and 1.158 respectively. This implies that the respondents were dissatisfied with the quality of business environment in the floriculture industry. Additionally,the degree of dissatisfaction differed significantly since the standard deviation were more 1

The question on whether the floriculture industry has a fair and just business environment that facilitates ease of doing business, it is easy to conduct cross border trade in the flower industry and that the flower business owners and management understand the type and amount of taxes that they are expected to pay the government during the production and export of the flowers were represented with mean of 3.26, 3.28 and 3.28 and standard deviation of 0.992, 1.176 and 0.978 respectively were found to be satisfactory to a small extent since they were above the cut point of 3. Their degree of satisfaction did not differ significantly owing to the standard deviations being less than1

On the infrastructure development, the question of whether the physical infrastructure (roads, railways)

for transporting floriculture products if efficient and of good quality, our education system prepares students for productive work in the industry, we have high quality research institutions with available relevant research to our needs in the industry, were represented by mean of 2.67, 2.70 and 2.95 and standard deviation of 1.091, 1.085 and 1.093 respectively. This implies that the respondents were dissatisfied with degree of the infrastructure development to support the infrastructure industry. Additionally, the degree of dissatisfaction differed significantly since the standard deviation were more than 1

The question on whether we have highly skilled staff in the industry. With mean of 3.47 and standard deviation of 1.002 respectively were found to be satisfactory largely since they were above the cut point of 3. However, their degree of satisfaction differed significantly owing to the standard deviationsbeing more than 1

The results imply that the respondents were partly satisfied with degree of factor conditions on the value addition of Kenya's floriculture industry since the aggregate mean was 2.77 however; the aggregate standard deviation of 1.063 implies that the degree of satisfaction differed significantly.

On the size of demand, the factors on whether the size of local demand is high compared to the opportunities for export, efforts are being made by the government and the flower farms to createmore local demand for flowers were represented by mean of 1.39 and 1.96 respectively, standard deviation of 0.726 and 0.95 respectively. This implies that the respondents were dissatisfied with the question on whether the size of local demand is high. Additionally, the degree of dissatisfaction did not differ significantly since the standard deviation were less than 1

On the export competitiveness, the question of whether there is creation of trade and investment opportunities and dissemination of information by the government to ensure that there is market access for the Kenyan flowers to the international market, the concerns of non-tarrif barriers to European markets as well as renewal of trade agreements have been addressed, there is creation of awareness of the importer requirements regarding the quality of flowers from the flower farms, there is awareness of the new international standards on environmental safety and code of practice and the need to comply

with the same, were represented by mean of 3.05,3.25,3.56,3.67,3.81,4.09 and standard deviation of 1.156,0.912,1.053,0.852,0.789 and 0.739 respectively.

The results imply that the respondents were satisfied with the effects of demand conditions on the value addition of Kenya's floriculture industry largely since the aggregate mean was 3.21 Additionally; the aggregate standard deviation of 0.887 implies that the degree of satisfaction did not differ significantly.

On the state of cluster development, the factors on whether the flower farms have access to Universities and research institutions(KARLO, ICIPE), government ministries (ministry of agriculture livestock and fisheries, ministry of EA community and trade), linkage to small and medium scale out growers for purposes of exporting their products, access to financial institutions (banks, insurance, private equity and venture capital firms), regulatory institutions (Kephis, KRA,HCD), local and international certifications (KFC, MPS, CGAP, fair trade, Euro GAP), logistics and freight companies (transport, clearing agents, flight companies and unpack agingagents), umbrella bodies (Kenya flower council, FPEAK) were represented by mean of 3.05,3.09,3.42,3.49,4.19,4.19,4.19 and 4.35 respectively, standard deviation of 1.076,1.138,1.051,1.151,0.895,0.915,0.854 and 0.790 respectively. This implies that the respondents were satisfied with the state of cluster development largely since they were all above the cut point of

3. Additionally, the degree of satisfaction differed significantly since the standard deviation were more than 1.

On the cluster value chain efficiency, the question of whether we are able to achieve large scale production of good quality flowers for lower prices due to the ability to use technology, we use machinery for purposes of production, packaging, storage and transport of flowers, we have been exposed to the latest technology and innovation by way of coolers, refrigerated trucks and ships and shades in order to enable faster transportation and export of flowers and preservation of the quality of the flower products were represented by mean of 3.42,3.63,4.05 and standard deviation of 1.051,0.879 and 0.718 respectively. This implies that the respondents were satisfied with degree of cluster value

chain efficiency largely since they were all above the cut point of 3. Additionally, the degree of satisfaction did not differ significantly since the standard deviation were less than1.

The results imply that the respondents were satisfied with degree of related and supporting industrieson the value addition of Kenya's floriculture industry largely since the aggregate mean was 3.73 additionally, the aggregate standard deviation of 0.956 implies that the degree of satisfaction did not Differ significantly.

On the company operations strategy, the question on whether the flower farms the farms are committed to research and development, production process sophistication, innovation and adoptionof foreign technology, good incentives and staff compensation, international distribution, sales and marketing, reliance on professional management, marketing and customer orientation and staff training were represented by mean of 3.89,4.00,4.07,4.12,4.18,4.19,4.21 and 4.32 respectively, standard deviation of 0.817,0.732,0.704,0.709,0.710,0.766,0.647 and 0.572 respectively. This impliesthat the respondents were satisfied with the state of their firms' company operation strategy largely since they were all above the cut point of 3. Additionally, additionally, the degree of satisfaction did not differ significantly since the standard deviation were less than1.

On the competition among domestic companies, the question of whether we have a large exit of old firms from the industry, we have a large entry of new firms in the industry, we have several competitors in our industry were represented by mean of 3.37,3.46,4.16 and standard deviation of 1.144,1.087 and 0.819 respectively. This implies that the respondents were satisfied with degree of competition among domestic companies largely since they were all above the cut point of 3. However, the degree of satisfaction differed significantly since the standard deviation were more than 1.the results imply that the respondents were satisfied with degree of firm competitive strategy on the value addition of Kenya's floriculture industry largely since the aggregate mean was 3.99 additionally, the aggregate standard deviation of 0.792 implies that the degree of satisfaction didnot differ significantly.

On governance, the question on whether the general governance of our country is characterized by

goodwill in control of corruption, the government has ensured that the reforms of the flower industry are trickling down to the flower farmers, voice and accountability, government effectiveness and whether we have effective government policies in the flower industry were represented by mean of 2.39, 2.86, 2.89, 2.93, and 2.98 respectively, standard deviation of 1.250, 0.972, 1.030 ,1.015 and 1.009respectively. This implies that the respondents were dissatisfied with the state of the general governance of our country. Additionally, the degree of dissatisfaction differed significantly since the standard deviation were more than 1.

On the economy being stable in terms of money supply, control of inflation and interest rates, whether the general governance of our country is characterized by goodwill in the rule of law, there is political stability and absence of terrorism and violence, these were represented by mean of 3.04,3.35,3.40 and standard deviation of 1.101,0.876 and 0.942 respectively. This implies that the respondents were satisfied with degree of economic and political stability in the country to a small extent since they were above the cut point of 3. However, the degree of satisfaction did not differ significantly since the standard deviation were less than1.

On the natural environment, the question on whether flower farming is favored by the amount of rainfall, control of pests and disease and climatic conditions were represented with mean of 4.21, 4.30 and 4.35 and standard deviation of 0.773, 0.731 and 0.694 respectively were found to be satisfactory to a great extent since they were all above the cut point of 3. Their degree of satisfaction did not differ significantly owing to the standard deviations being less than1.

The results imply that the respondents were satisfied with degree of governance and natural endowments on the value addition of Kenya's floriculture industry to a great extent since the aggregate mean was 3.34 additionally, the aggregate standard deviation of 0.945 implies that the degree of satisfaction did not differ significantly.

The results are tabulated in the table 4.4 below.

Table 4.4: descriptive statistics on the factors affecting value addition in Kenya's floriculture industry.

factors affecting value addition in Kenya's floriculture industry	N	Mean	Std. Deviation
Factor conditions and value addition	57	2.77	1.063
demand conditions and value addition	57	3.21	0.887
related , supporting industries and value addition	57	3.73	0.956
firm competitive strategy and value addition	57	3.99	0.792
governance and natural endowments on valueaddition	57	3.34	0.945

Table 4.5: descriptive statistics for Kenya's value addition in the floriculture industry.

Productivity in revenue generation in Kes:	N	Mean	Std. Deviation
There is value addition to the floriculture products through differentiation to make them more competitive (through sleeving, Labeling, bouquet production, mixed floral arrangements)	57	4.09	0.830

4.3.2. Inferential statistics on factors affecting value addition in the floriculture industry in Kenya

The study sought to determine the effect of factor conditions, demand conditions, related and support industries, firm strategy, structure and rivalry, and governance and natural endowments on value addition of floriculture industry in Kenya. The dependent variable value addition is a dummy variable taking a value of 1 if there was value addition and 0 if no value addition. Due to the binary nature of the dependent variable, the most suited model is a Probit model.

The first objective of study was to determine the effect of factor conditions on value addition in Kenya. The marginal effects for factor conditions are negative and non-significant. Therefore, there is an

inverse relationship between factor conditions and value addition of the floriculture industry in Kenya But not statistically significant.

The second objective of study was to determine the effect of demand conditions on value addition of floriculture in Kenya. The marginal effects for demand conditions are positive and significant. Therefore, 1% improvement of the demand conditions yields to 33.0 percentage point's increase of the value addition of floriculture industry in Kenya.

The third objective of study was to determine the effect of related and support industries on value addition in Kenya. The marginal effects for related and support industries are positive and non-significant. Therefore, there is a direct positive association between related and support industries and value addition of floriculture in Kenya but not statistically significant.

The fourth objective of study was to determine the effect of firm competitive strategy on value addition of floriculture in Kenya. The marginal effects for competitive strategy are positive and significant. Therefore, 1% improvement of the firm strategy, structure, and rivalry results to 24.0 percentage points increase of the value addition of floriculture industry in Kenya.

The fifth objective of study was to determine the effect of governance and natural endowments on value addition of floriculture in Kenya. The marginal effects for governance and natural endowments are positive and significant. Therefore, 1% improvement of the governance and natural endowments leads to 28.0 percentage points increase of the value addition of floriculture industry in Kenya.

Based on the above findings, the study concludes that demand conditions, firm competitive strategy, and governance and natural endowments significantly influences value addition of floriculture industry in Kenya.

To achieve the study objectives, the researcher estimated a probit model and tabulated the results on table 4.6 below.

Table 4. 6: Probit Model on Floriculture in Kenya

Variable	Coefficient	Marginal effects
Factor conditions	-0.44	-0.13
	(0.398)	(0.122)
Demand conditions	1.11**	0.33**
	(0.457)	(0.136)
Related and supporting industries	0.35	0.10
	(0.396)	(0.121)
Firm Competitive Strategy	0.80*	0.24*
	(0.447)	(0.134)
Governance and natural endowments	0.95**	0.28**
	(0.459)	(0.131)
Constant	-10.73***	
	(2.740)	
N	57	
LR $\chi^2(5)$	22.08***	
Dependent variable: Value addition of floriculture in Kenya		

*, ** and *** denote significance at the 10%, 5% and 1% levels respectively.

From table 4.5 above, the overall model is statistically significant (LR test p-value <1%) thus the model can be used for prediction of the independent variables.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a discussion of findings to the study, and in the process, draws conclusions based on the finding of the study. The chapter subsequently, makes recommendations arising from the conclusions of the study and the limitations of the Study. Finally, the chapter makes suggestions for further research in connection with certain specific areas of this study.

5.2 Summary of Study

This study focused on investigating the factors affecting Value Addition in the Floriculture Industry in Kenya. It is important for Kenya's floriculture industry to remain competitive in the wake of the emerging global, regional and local challenges. The study was therefore critical to determine the factors affecting Value Addition in the Floriculture Industry. The study conducted an empirical research, guided by a conceptual framework that highlights on the factor conditions, Demand conditions, Related and supporting industries, firm Competitive Strategy, Governance and natural endowments as the independent variables. The qualitative data collected was analyzed using descriptive statistics to generate the required frequencies and percentages to interpret and test the research question. To achieve the Research objectives on the relationship between the various independent variables and the dependent variable, multiple non-linear regression analysis was conducted.

5.3 Discussion of findings

5.3.1 Factor Conditions and Value Addition

The First objective of study was to determine the effect of Factor conditions on value addition of floriculture in Kenya. From the study findings, the coefficient for Factor Conditions was determined as -0.44% which is negative and statistically insignificant. The marginal effects for factor conditions are negative and non-significant; 1% improvement of the Factor conditions yields to 13.0 percentage points decrease of the value addition of floriculture industry It was therefore determined that there is an inverse relationship between factor conditions and value addition of

Floriculture in Kenya, an indication that an investment in factor Conditions will not lead to value addition in the Floriculture Industry. These results are surprising given the level of investment in infrastructure that the Flower farms have put in place, but the results are well received and understood since most Flower Farm owners were not happy with the level of infrastructure that the Government has put in place in terms of road network from the Flower farms to the Airport.

The findings from the study are largely inconsistent with those of Swaleh, M. S. Mathuva, E & Mwenda, P. K. (2020) and Korir, C. K. (2018) allude to the significant contribution of the factor conditions to the efficient industries and ultimately leading to a healthy business environment of a country.

5.3.2 Demand Conditions and Value Addition

The second objective of study was to determine the effect of demand conditions on value addition of floriculture in Kenya. From the study findings, the coefficient of demand conditions was determined as 1.11%. The coefficient was positive and statistically significant at 5% level of significance. The marginal effects for demand conditions are positive and significant; 1% improvement of the demand conditions yields to 33.0 percentage points increase of the value addition of floriculture industry. It was therefore determined that demand conditions have a direct positive effect in the value addition in the floriculture industry in Kenya. This implies that an increase in local demand for the floriculture products will lead to value addition in the floriculture products. These results were expected given that most floriculture products are marketed outside Kenya, mainly in Europe. The local demand and uptake for flowers in Kenya is still significantly low.

The findings are consistent with those of by Birachi, E., et.al (2013**)** and Orinda, M. A.(2013) whose view is that local demand for value added products is overshadowed by export segment but growing. Indigenous Kenyans are increasingly the source of local demand. Sales- avenue for "rejects" that do not meet the stringent export requirements.

5.3.3 Related and Supporting Industries and Value Addition

The third objective of study was to determine the effect of related and supporting industries on value addition of floriculture in Kenya. From the study findings, the coefficient of related and supporting industries was determined as 0.35%. This is positive and non-significant. The marginal effects for related and support industries are positive and non-significant; 1% improvement of the related and supporting industries results to 10.0 percentage points. Therefore, there is a direct positive association between related and support industries and value addition of floriculture in Kenya but not statistically significant. This is an indication that the clustering of support services around the floriculture industry has significantly contributed to value addition of the floriculture industry.

These results were expected given the level of engagement that the Kenya flower council of Kenya has had with the various stakeholders in the floriculture industry (the regulators, flower farms, research institutions, breeders, propagators, consolidators, logistic companies, agro vet firms) and constantly hold exhibitions where all the stakeholders meet and network with each other.

The findings from the study are largely consistent with those of Ketels (2003) whose study determined that clusters generate many economic benefits. Firstly, they allow for the higher level of efficiency. Secondly, they account for a high level of innovation due to close relationships with research institutions. Thirdly, it encourages the formation of businesses due to low costs of startups as well as reduced costs of failure. Clusters are also important for public policy as they influence the prosperity of a region. The view is further supported by the study by Delgado (2010) has shown that clusters have positive effects on countries, regions and industries through enabling higher levels of productivity and growth. This, according to Delgado is achieved through access to specialized human resources and suppliers, better access to knowledge and innovations and the learning from the close relations between cluster participants. The common findings by of these two studies by Ketels (2003) and Delgado (2010) is that clusters have a positive effect on industries.

5.3.4 Firm Competitive Strategy and Value Addition

the fourth objective of study was to determine the effect of firm competitive strategy on value addition of floriculture in Kenya. From the study findings, the coefficient of firm competitive strategy was determined as 0.80%, which is positive and statistically significant at 10%level of significance. the marginal effects for firm strategy, structure, and rivalry are positive and significant; 1% improvement of the firm strategy, structure, and rivalry results to 24.0 percentage points increase of the value addition of floriculture industry. It was therefore determined that firm competitive strategy has a positive effect in the value addition in the floricultureindustry. This implies that where flower farms are intentional on being competitive through their strategies, their structures, e.g. board and top management decisions and actions that are in favor ofcompetitive advantage, rivalry among flower farms that leads to healthy competition, then there will be value addition in the floriculture industry. This was expected since the flower farms in the country have set a very high bar in terms of management practices and standards.

The findings from the study compare favorably with those Omete, v. m. (2015) and Herath, H.M.U.N., et.al. (2011) which found out that brand building, niche marketing, product differentiation, cost leadership, and customer focus were the most prominent strategies adopted by the firms. Opening up new markets abroad, fair trade, environmental sustainability, and faster delivery were identified as important strategies that differentiated firms from competitors and placed them among the market leaders. Value addition therefore helps the companies create awareness among customers for their products and services but also serves as a useful vehicle inpromoting brand image of products and services offered at the target market.

5.3.5 Governance, Natural Endowments and Value Addition

The fifth objective of study was to determine the effect of governance and natural endowments on value addition of floriculture in Kenya. From the study findings, the coefficient governance and natural endowments was determined as 0.95%. The coefficient was positive and statistically

Significant at 5% level of significance. The marginal effects for governance and natural endowments are positive and significant; 1% improvement of the governance and natural endowments leads to 28.0 percentage points increase of the value addition of floriculture industry. It was therefore determined that governance and natural endowments have a direct positive effect in the value addition in the floriculture industry. This implies that if there is a supportive government in terms of provision of a healthy atmosphere for conducting business and if the climatic conditions are in favor of the floriculture production, then there will be an increase in value addition in the floriculture industry. This was expected since the government has been supportive to the floriculture industry as a major foreign income earner through engaging the Kenya flower council on several roundtable meetings and adopting recommendations by the Kenya flower council to facilitate growth in the industry. Kenyalies at the equator whose climate favorable to flower production. The results of the effects of governance and natural endowments were therefore expected.

On governance, the findings from the study are largely inconsistent with those of Hornberger (2007) whose research recommended that the government's role should be facilitative and not interventionist. The results however are consistent with the study Eze, a. v. et.al. (2022) and Ernesto (2007) who share the view on the significance of government intervention to the success of the floriculture industry.

On natural endowments, the findings from the study are largely consistent with those of Halemichael (2013) which identified climate and topographical factors as being key to the success of the floriculture industry. the study findings are also consistent with those of Kangogo (2013) which found out that most significant amongst the factors contributing to supply chain disruption in the floriculture industry in Kenya are natural disasters, logistic process design, lab our union actions and production function mechanics.

5.4 Conclusion

From the summary of findings and discussions, it can be concluded that the Kenyan floriculture industry will sustain its competitive advantage in the long term due to the following factors that have contributed to value addition in the floriculture industry in Kenya: the demand for the Kenyan

flowers overseas has increased over the years with opportunities created in new markets, the presenceof related and supporting industries such as the Kenya flower council that has been prominent in providing networking opportunities for stakeholders in the industry as well as lobbying for better terms for the flower farmers to the government and international players such as the compliance certification bodies. Proper management of the flower farms as well as a comprehensive value chain,good governance in enabling a conducive business environment for the Kenyan floriculture farmers,natural endowments such as the amount of rainfall, control of pests, disease, and good climatic condition for the flower production are also important contributors to value addition in the floriculture industry. Whereas factor conditions such as a supporting infrastructure from production, post-harvest to export of the flowers to the market has been provided, the results of the study did notidentify them as critical to the value addition of the Kenyan floriculture industry.

5.5 Study Contributions

Various local and international scholars have conducted several studies on the competitive advantage of the floriculture industry. Their contributions to research in this subject is commendable. a literature survey of the existing empirical studies on the subject reveal consistency in the conclusion that the floriculture industry in Kenya is competitive. however, there was need to illuminate on how stakeholders in the floriculture industry in Kenya can actively sustain this competitive advantage in the long term into the future through a practical and innovative solution at the organization level; value addition to the floricultural products.

It is in response to this need that this study has provided fresh insights on the competitive advantageof the floriculture industry by providing new knowledge and understanding on the determinants of value addition in the floriculture industry in Kenya with a view to enhancing sustainability of the competitive advantage of the floriculture industry in the future.

guided by a holistic approach to value addition, a clear conceptual framework that is well structured and which encompasses more variables in order to enrich the study and enhance the validity if the research findings. Likewise, a strong empirical grounding and an in-depth, rigorous primary data

Collection process through Census Survey to All 85 Flower Farms who are members of the Kenya Flower Council has been used. The study has come up with current data with up to date information on Floriculture stakeholders' perceptions of factors affecting Value Addition to the Floriculture Industry that is contextually relevant to the Kenyan Floriculture Industry Stakeholders by providing the current Socio-Cultural, Administrative and Political, Geographical and Economic realities.

The study has also been instrumental in bridging the gap on past contradictory research findings on the subject by providing explanations for conflicting opinions and discrepancy on past research on the subject such as the Role of Government in the value addition of the Floriculture Industry in Kenya where this study clarifies that Government contributes to Value addition.

It is therefore clear that this Study has made significant contribution by providing Knowledge and information that is useful in sustaining the Competitive Advantage of the Floriculture Industry in Kenya in the future through Value Addition.

5.6 Recommendations

Based on the study findings and conclusions, the study recommends the following measures to be observed in order to improve the value addition in the floriculture industry:

In order to increase market access for Kenya floriculture products, the government, the private sector and donors should play an important role in strengthening capacities to floriculture stakeholders for value addition to the floriculture products while meeting private-sector standards thus resulting to sustainable benefits. There should be a concerted effort by both the government and the Kenya flower council to provide information and lobby for direct sales to increase direct sales to emerging markets. The government of Kenya should also engage the government of Netherlands where there is cut flowerauction market so that there are more bilateral trades that can position Kenyan cut flower to be more competitive in the world. This in turn will increase the sales volume and more expansion in the sectorand hence more foreign exchange.

The Kenyan government and the Kenyan flower council should lobby so that the costs associated with international standards compliance should reduce and be made adoptive to Kenyan situation.

There should also be joint effort to train more personnel on disciplines like international business, international relations and international laws so that such personnel can be asset to cut flower sector as far as compliance with international standards are concerned.

The Kenya Cut-Flower Sector should take advantage of Information and Communication Technologies (ICT) to develop effective systems that monitor the movement of the supplies and the products based on real time data transmission as a way of making the Kenya cut flower more competitive in the international market due to innovation.

5.7 Limitations of the Study

Due to covid-19 access to the farms was a limitation. Observation was therefore not possible. To overcome this, the researcher resulted to online questionnaires as opposed to physical meetings to collect data at the farms.

The study involved primary data collection on sensitive competitor information from the flower farms as well as governance matters, which the respondents were not willing to provide for the purposes of this study. Restriction on available financial data was therefore a limitation to the study. This limitation was overcome by providing the necessary assurance to the respondents of data confidentiality.

5.8 Suggestions for Future Research

The researcher recommends that further studies should be done to determine the extent of Kenya's floriculture competitive advantage in the export retail market. This is due to the fact that most of the flower farms and experts interviewed expressed the need to understand the retail market since most of the flower exports end up in the Dutch auction market who in turn sell to the export retail market in Europe, America, Australia and Asia at a margin.

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APPENDIX 1: SAMPLE INTRODUCTION LETTER

Strathmore Business School

Tuesday, 25 April 2017

To Whom It May Concern

Dear Sir/ Madam,

RE: FACILITATION OF RESEARCH – ANTHONY ICHARIA NG'ETHE

This is to introduce Anthony Icharia Ng'ethe, who is a Master of Business Administration student at Strathmore Business School, admission number **MBA/77599/12.** As part of our MBA Program, Anthony is expected to do applied research and to undertake a project. This is in partial fulfillment of the requirements of the MBA course. To this effect, he would like to request for appropriate data from your organization.

Anthony is undertaking a research paper on **"Factors influencing the sustainability of Kenya's competitiveness in the floriculture industry: A test of Porter's diamond framework for competitive advantage."** The information obtained from your organization shall be treated confidentially and shall be used for academic purposes only.

Our MBA seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and we shall be willing to provide any further information if required.

Yours sincerely,

Muriithi Njogu

Director – MBA Programs

Strathmore UNIVERSITY

Ole Sangale Road, Madaraka Estate P.O. Box 59857 - 00200 Nairobi, Kenya
Cell: +254 703 034 414
Email: info@sbs.ac.ke or visit www.sbs.ac.ke
Twitter: @SBSKenya.

APPENDIX 2: SAMPLE DATA COLLECTION QUESTIONNAIRE

DATA COLLECTION QUESTIONNAIRE TO FLOWER FARMS

Dear Sir/Madam,

I am an MBA student at Strathmore Business School, and currently doing a study on **"Factors affecting Value Addition in the Floriculture Industry in Kenya"**

I request you to fill the questionnaire below and assure you that the responses you provide will be strictly confidential. No reference will be made to you without prior permission from you.

How to complete the questionnaire:

1. Most of the questions simply require you to tick the options in an appropriate space.

2. A few questions do, however provide spaces to write a few words if you wish to.

3. The questionnaire will take 20 -30 Minutes of your time.

SECTION A

General information on the Respondent:

1. Gender of respondent

A) Male B) Female

2. Category of the Respondent's Designation

A) Owner

B) Board Member

C) Senior Management

D) Middle Level Management

3. Age

4. Number of years in schooling

5. Experience in the floriculture industry in years

General Information on the farm:

6. Legal set up of the farm

A) Sole proprietor

B) Partnership

C) Limited Company

D) NGO

7. Ownership

A) Local

B) Foreign

C) Both local and foreign

8. Level monthly Revenue (Kes)

A) 0-500,000

B) 500,000-1,000,000

C) 1,000,000 to 10,000,000

D) Over 10,000,000

9. How have your Sales Revenues increased in percentage in the last five years?

10. How have your Net Profit grown on average in percentage in the last five years?

11. How have your Export Volumes increased on average in percentage in the last five years?

12. How have your Production in Acreage increased on average in percentage in the last five years?

13. Average Number of employees in 2018/2019

A) Less than 50

B) 50-100

C) 100-200

D) Over 200

14. How have your number of Employees increased on average in percentage in the last five years?

SECTION B

Effects of Factor Conditions on the Value Addition in Kenya's Floriculture Industry

Using a scale of **1-5** where **1= strongly disagree** and **5=strongly agree**, kindly indicate by ticking the blank space the extent to which you agree or disagree with each of the statements below:

ITEM	**RATING SCALE**				
A)Quality of Business Environment	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
1) The floriculture industry has a fair and just business environment that facilitates ease of doing business.					
2) The cost of floriculture production is low.					
3) It is easy to obtain license to start a flower business.					
4) It is easy to acquire land for a flower farm					
5) The amount of tax being paid from the flower business is fair.					
6) It is easy to obtain a loan for the flower business.					
7)The Government is protecting investors when it comes to matters that relate to the industry					

8) It is easy to conduct cross border trade in the flower industry. 9) I understand the type and amount of Taxes that I am expected to pay the Government during the production and export of the flowers					
B)Infrastructure Development:					
1) The Physical infrastructure (Roads, railways) for transporting floriculture products if efficient and of good quality. 2) Our Education system prepares students for productive work in the industry. 3) We have highly skilled staff in the industry. 4) We have high quality research institutions with available relevant research to our needs in the industry.					

SECTION C:

Effects of Demand Conditions on the Value Addition in Kenya's Floriculture Industry

Using a scale of **1-5** where **1= strongly disagree** and **5=strongly agree**, kindly indicate by ticking the blank space the extent to which you agree or disagree with each of the statements below:

ITEM	**RATING SCALE**				
A) Size of Demand:	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
1) The size of local demand is high compared to the opportunities for export 2) Efforts are being made by the Government and the flower farms to create more local demand for Flowers.					
B) Export Competitiveness: 1) There is creation of Trade and investment opportunities and dissemination of information by the government to ensure that there is market access for the Kenyan flowers to the international market.					

2) There are attempts to diversify the destination of the flower products from the Country. 3) The concerns of non-tarrif barriers to European markets as well as renewal of trade agreements have been addressed 4) There is creation of awareness of the importer requirements regarding the quality of flowers from the flower farms 5) I am aware of the new international standards on environmental safety and code of practice and the need to comply with the same.					

SECTION D:

Effects of Related and Supporting industries on the Value Addition in Kenya's Floriculture Industry

Using a scale of **1-5** where **1= strongly disagree** and **5=strongly agree**, kindly indicate by ticking the blank space the extent to which you agree or disagree with each of the statements below:

ITEM	**RATING SCALE**				
A)State of Cluster Development:	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Agree 5**
1) Our farm has been linked to small and medium scale out growers for purposes of exporting their products. 2) We have access to the following institutions: a) Financial Institutions (Banks, Insurance, Private Equity and Venture Capital Firms) b)Umbrella Bodies (Kenya Flower Council, FPEAK) c) Regulatory institutions (Kephis, KRA, HCD) d) Local and International Certifications (KFC, MPS, CGAP, Fair Trade, Eurep GAP).					

e) Logistics and Freight Companies (Transport, Clearing Agents, Flight Companies and Unpack aging Agents) f) Universities and Research Institutions (KARLO, ICIPE) g) Government Ministries (Ministry of Agriculture Livestock and Fisheries, Ministry of EA Community and Trade) h) Supplier to Flower Farms (Farm inputs, Chemicals, Breeders, propagators etc.) i) Consultant in the Flower Industry (Trade, Market Linkage, Exhibitions etc.)					
B)Cluster Value Chain Efficiency:					
1) We use machinery for purposes of production, packaging, storage and transport of flowers. 2) We have been exposed to the latest technology and innovation by way of coolers, refrigerated trucks and ships and shades in order to enable faster transportation and export of flowers and preservation of the					

Quality of the flower products. 3) We are able to achieve large scale production of good quality flowers for lower prices due to the ability To use technology.					

SECTION E:

Effects of Firm Competitive Strategy on the Value Addition in Kenya's Floriculture Industry

Using a scale of **1-5** where **1= strongly disagree** and **5=strongly agree**, kindly indicate by ticking the blank space the extent to which you agree or disagree with each of the statements below:

ITEM	**RATING SCALE**				
A) Company Operations Strategy:	**Strongly Disagree 1**	**Disagree 2**	**Neutral 3**	**Agree 4**	**Strongly Disagree 5**
1) Our farm is committed to the following: a) Production process sophistication b) Research and Development c) Marketing and Customer Orientation d) Staff Training. e) Reliance on Professional					

management f) Innovation and adoption of foreign technology g) Good incentives and staff compensation. h) International distribution, sales and Marketing					
B) Competition among Domestic Companies:					
1) We have several competitors in our industry. 2) We have a large entry of new firms in the industry. 3) We have a large exit of old Firms from the industry.					

SECTION F:

Effects of Governance and Natural Endowments on the Value Addition in Kenya's Floriculture Industry

Using a scale of **1-5** where **1= strongly disagree** and **5=strongly agree**, kindly indicate by ticking the blank space the extent to which you agree or disagree with each of the statements below:

ITEM	RATING SCALE				
A) Governance:	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Disagree**
	1	**2**	**3**	**4**	**5**
1) The general governance of our Country is characterized by goodwill in the following: a) Voice and Accountability b) Political stability and absence of terrorism and violence. c) Government effectiveness. d) Rule of Law. e) Control of corruption. 2) We have effective government policies in the flower industry. 3) The economy: This is stable in terms of money supply, control of inflation and interest rates. 4) The Government has ensured that the reforms of the flower industry are trickling down to the Flower farmers.					
B) Natural Endowments:					
1)The following favor flower farming					

a) Amount of rainfall b) Climatic conditions c) Control of pests and disease					

SECTION G:

The Value Addition in Kenya's Floriculture Industry

Kindly indicate the requested figures by filling in the blank space below:

ITEM		
Value Addition:	**YES**	**NO**
There is value addition to the Floriculture products through Differentiation to make them more competitive (through sleeving, labeling, bouquet production, mixed floral arrangements)		

APPENDIX 3: LIST OF FLOWER FARMS REGISTERED BY THE KENYA FLOWER COUNCIL

	LIST OF FLOWER FARMS CONTACTED
1	Africa Bloom Ltd
2	Africalla lilies Ltd
3	Batian Flowers Ltd
4	Beauty Line Ltd
5	Benev Flora Ltd
6	Bilashaka Flowers Ltd
7	Black Petals Ltd
8	Bloom Valley Ltd
9	Blooming Africa Ltd
10	Bloomingdale Roses K Ltd
11	Carzan Flowers Ltd –Rongai Farm
12	Carzan Flowers Ltd-Njoro Farm
13	Carzan Flowers Ltd-Molo Farm
14	Credible Blooms Ltd
15	Eco Roses Ltd
16	Equinox Horticulture Ltd
17	Fides Kenya Ltd
18	Finlay Flowers Ltd-Lemotit Farm
19	Flamingo Horticulture Kenya Ltd –Flamingo Farm
20	Flamingo Horticulture Kenya Ltd-Kingfisher Farm
21	Flamingo Horticulture Kenya Ltd-Siraji Farm
22	Flora Ola Ltd
23	Florencia Blooms Ltd
24	Florensis (K) Ltd
25	Galaxy Flowers Ltd
26	Gatoka Ltd
27	Golden Tulip Farms Ltd
28	Groove Ltd
29	Highlands Plants Ltd

30	Imani Flowers Ltd
31	Kariki Ltd – Nanyuki Farm
32	Kariki Ltd – Molo Farm
33	Kariki Ltd – Naivasha Farm
34	Kariki Ltd –Juja Farm
35	Kisima Farm Ltd
36	Kongoni River Farm Ltd –Liki Division
37	Lamorna Ltd
38	Laurel Investments Ltd
39	Lauren International Flowers Ltd
40	Lamiflora Ltd
41	Lathyflora (K) Ltd
42	Live Wire Ltd
43	Lolomarik Limited
44	Mount Kenya Astromeria
45	Maaskant Flowers Ltd
46	Mt. Kenya Elgon Ochards Ltd
47	Mzurrie Flowers -Maji Mazuri Flowers Ltd
48	Mzurrie Flowers –Winchester Bahati
49	Mzurrie Flowers –Molo River Roses Ltd
50	Maridadi Flowers Ltd
51	Murara Plants Ltd
52	Nathe Enterprises Ltd
53	Nini Ltd
54	Ol Njorowa Ltd
55	P J Dave Flora Ltd
56	Panocal Int. Ltd
57	Petra Flora Company Ltd
58	PentaTrancom Ltd/ A Penta Flowers
59	PJ Dave Flowers Ltd Timau
60	Primarosa Flowers Ltd
61	Rain Forest Farmlands Kenya Ltd
62	Red Lands Roses Ltd

63	Rift Valley Roses (K) Ltd
64	Rimi Flora Ltd
65	Sian Flowers - Agriflora (K) Ltd
66	Sian Flowers –Equator Flowers (K) Ltd
67	Sian Flowers –Sololo Agriculture Ltd
68	Sian Flowers –Maasai Flowers (K) Ltd
69	Simbi Roses Ltd
70	Sojanmi Springfield Ltd
71	Sosiani Flowers Ltd
72	Sun Floritech Ltd
73	Sygenta Kenya Cuttings Ltd
74	Syngenta Pollen Ltd
75	Tambuzi Ltd
76	Terrasol (K) Ltd
77	Timaflor Limited
78	Tulaga Flowers Ltd
79	Uhuru Flowers Ltd
80	Utee Estate Ltd
81	Valentine Growers Co. Ltd
82	Waridi Ltd
83	Wilmar Flowers Ltd
84	Windsor Flowers Ltd
85	Xpressions Flora Ltd

APPENDIX 4:

RESEARCH BUDGET:

Item	Details	Cost (Kes)
1. Proposal Research	Internet research	10,000
	Printing, photocopies &	
	Binding	10,000
	Purchase of research material:	
	Economic survey	5,000
2. Project	Data Analysis	20,000
	Printing, photocopies and binding	10,000
3. Others	Transport	45,000
TOTAL		**100,000**

APPENDIX 5: ETHICAL EXEMPTION LETTER

Strathmore UNIVERSITY

17th August 2022

Antony Icharia Ng'ethe

MBA/77599/12

antony.ngethe@sbs.ac.ke

Dear Antony,

RE: Factors affecting the Value Addition in the Floriculture Industry in Kenya

This is to inform you that the Research Services Office and the Office of Graduate Studies have received your above Thesis for Ethical Clearance. However, we cannot review your study since you have already collected data and written the Thesis. The ethics approval process is ONLY done before any collection of primary or secondary data.

The office notes that: On the grounds of not having submitted your research proposal, with reason of ethical approval not being compulsory at the time of your research study in the University. This is a letter for you to proceed with the next steps of your academic requirements.

Please be advised, that in future, all research proposals should be submitted to the SU-IERC through the RHInnO Ethics platform: https://strathmoreuniversity.rhinno.net/login

Disclaimer: 1) This is not in any way an ethical approval letter. 2) Should there be any legal implications/actions emanating from the research in terms of any ethical violations, you will be personally liable.

Yours sincerely,

Dr. Bernard Shibwabo

Director of Graduate Studies