LOGISTICS OUTSOURCING AND PERFORMANCE OF HORTICULTURAL FIRMS IN NAIROBI COUNTY

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DECLARATION

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

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This research proposal has been submitted for examinations with my approval as the university supervisor.

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DEDICATION

This work is dedicated to my Dad Mr. PokoloAndrewson Sr. who is struggling with diabetes mellitus. Thanks Dad for the financial support throughout my studies. May God continued to keep his healing hands on you. I LOVE YOU.

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ABBREVIATIONS AND ACRONYMS

EPZA	Export Processing Zone Authority
HCDA	Horticultural Crops Development Authority
ICT	Information and Communication Technologies
RBV	Resource-Based View
SCMT	Supply Chain Management Theory
SPSS	Statistical Package for Social Sciences
TCT	Transaction Cost Theory

ABSTRACT

The study sought to establish the key logistics practices being outsourced among the horticultural firms in Nairobi County; the relationship between logistics outsourcing and firm operational performance; the enablers of logistics outsourcing and the challenges faced by the horticultural firms when outsourcing logistics services. The researcher administered a total of 78 questionnaires to horticultural firms in Nairobi and obtained 60 filled questionnaires constituting a response rate of 76.9%. The collected questionnaires were inspected for completeness, edited for errors and omission before being coded and keyed into the Statistical Package for Social Sciences (SPSS version 21). Descriptive statistics was used to analyze the data. Measures of central tendency like frequency distribution, mean and standard deviation. The questionnaires contained questions that addressed the objectives of the study. The study established that the key logistics practices outsourced are human resource management practices, packaging practices, information technology services, warehousing practices, transportation practices and inventory management practices. All of them are outsourced to a large extent except human resource management practices which are outsourced to a moderate extent. On the enablers of logistics outsourcing, the study established that the key factors that enable logistics practices outsourcing are improved productivity, focus on core competencies, streamlined operations, innovation and improved service to customers. The study also revealed that challenges are faced to a moderate extent when outsourcing logistics practices. The research findings further indicated that there is a strong and positive relationship (R= 0.721) between logistics outsourcing and operational performance of the horticultural firms. The result of the study also indicated that the value of adjusted R-squared is 0.466. This means that changes in logistics outsourcing accounts for 46.6% of the total variance in operational performance of the horticultural firms in Nairobi. The study established that one of the key challenges faced by the horticultural firms in Nairobi is the possible loss of control through interferences with a firm's data privacy. The researcher recommended that the firms should sign binding contracts with third parties to prevent interferences with a firm's data privacy. On the limitations of the study, most of the respondents were reluctant in filling the questionnaires fearing that the information sought would be used to as leverage against their businesses. The researcher assured the respondents that the information sought would be treated with utmost confidentiality and would only be used for academic purposes. Further, the study was mainly dependent on the data provided by the respondents. This means that the accuracy of the data about the logistics practices outsourcing by horticultural firms in Nairobi was dependent on the information provided by the respondents. The researcher handled the challenge by making calls for clarifications. The following directions should be followed by future researchers in regard to outsourcing of logistics activities. In future, a similar study should be conducted considering non-horticultural firms. This will serve the purpose of comparing how different industries outsource logistics practices.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Numerous organizations have swung to logistic outsourcing as an approach to rebuild their network systems and increase competitive advantage. In spite of the fact that there are plainly advantages and disadvantages of utilizing logistics, firms are centering consideration on production, promoting, human resource management and fund to accomplish consumer loyalty through effective coordination (Watson 2015). Because of enhanced information and communication technology (ICT), logistics has incorporated all types of business. Logistics is hence a wellspring of center competency and a connecting apparatus for achieving upper hand (Muller, 1993). Assist concentrates likewise demonstrate that logistics management has moved from the conventional back-end operations to a key meeting room action (Stock and Lambert, 2009).

Contracting-out has in recent years risen as a key arrangement alternative in some creating nations that are looking to change and enhance their public services since it is progressively being prescribed, particularly where through and through privatization is not quickly practical (Afande& Maina, 2015). According to Afande and Maina (2015), although the motive behind and expectation of advantages of outsourcing may differ from one firm or sector to another, they by and large incorporate change in effectiveness as a consequence of presentation to rivalry, cost investment funds, enterprise and utilization of private area aptitude. McPake and Hongoro (1995) in their study asserts that outsourcings resorted to in most developing countries because of the lack of expertise and technical capacity in the public services and not that it is a more efficient way of delivering services.

Despite the benefits expected from outsourcing, institutions such as the World Bank caution the need to extend its application in a developing country context for various reasons(World Bank, 1997).First, most developing countries have weak or no capacity markets and government regulatory capacity thus the private sector has no capacity to take on the provision of outsourcing services. There is an also institutional constraint that limit the options for outsourcing which might be especially intense in administrations like wellbeing, training and water, where administrators cooperate day by day with the general population they serve, are geologically scattered, have generous prudence, and deliver yields that are hard to screen and not subject to focused weights (World Bank, 1997).

1.1.1 Logistics Outsourcing

Logistics has been defined as the way to arranging, executing and controlling systems for proficient and powerful transportation and capacity of products including services and related information from the purpose of starting point to the point of utilization with the end goal of fitting in with client necessities. According to Helsinki (2000), Logistics is a business planning framework for the management of material service, information and capital flow. The key components of logistics include: Transportation, Material Handling and Packaging, Information systems, Inventory management, Warehousing and Safe disposal of unused goods or waste. According to Corbett (2004), outsourcing is "a management tool which is used to move an organization away from the traditional vertically integrated, self-sufficient structure; one that is increasingly ineffective in today's hyper-competitive, performance-driven environment. Through outsourcing, the organization moves toward a business structure where it is able to make more focused investments in the areas that provide its unique competitive advantage."

Lieb*et al.*(1993) and Londe and Cooper (1998) defined logistic outsourcing as "a process that involves the use of external logistics companies to perform activities that have traditionally been performed within an organization, where the shipper and logistics company enter into an agreement for delivering services at specific costs over some identifiable time horizon."Logistics outsourcing is one of the fastest growing areas. The number of outsourcing companies and logistics service providers has increased mostly due to intensified competition. Both, outsourcing companies and service providers, face great challenges in their outsourcing venture.

Logistics outsourcing is mainly done on logistics practices. Logistics practices are basically the optimum ways to perform a business process (Andersen, 2009). Therefore, logistics practices are the optimum ways of performing the logistics functions in an organization. These practices include; Seeing logistics and production network administration as an intentionally basic course of action of activities and working up a mission statement that portrays their parts, targets, and vision. Incorporating logistics activities into one division or creating systems to organize logistics activities over the inventory network for better execution, Centralizing store network administration at the corporate level. Making a logistics/inventory network pioneer, regularly called a main logistics officer, to distribute assets among store network capacities, to advance exchange offs amongst capacities, and to go about as an interface amongst logistics and the other utilitarian zones inside a firm, and additionally between the firm and different players in the production network, Developing a reasonable and straightforward arrangement of practices to fund inventory network administration, utilizing execution measurements broadly and efficiently to gauge the execution of logistics exercises (Leslie, 2000).

It is often taken for granted that products be available to buy in retail shops. Availability of products in the shop make people forget about the logistics challenges involved in delivering them to their convenient stores or shops. The major challenges include; High operating costs, Inaccurate demand forecasting techniques, dealing with products short cycle, Insecurity, Counterfeit prevention, multiple supply chains, Packaging and handling challenges (Christopher, 2003).

1.1.2 Firm Operational Performance

Firm performance is the ability of a firm to provide the products and services more effectively and efficiently in comparison to its relevant competitors. It is the advantage obtained through superior productivity. Firms will need to seek towards available resource optimization; costs reduction and quality service or product delivery to enable them become attractive such that they develop customer loyalty, and gain competitive advantage. Performance measures and measurements are fundamental for adequately overseeing logistic operations, especially in an aggressive worldwide economy (Livohi, 2012).

The worldwide economy is highlighted with worldwide operations, outsourcing and inventory network and e-business. The genuine test for administrators of this new venture environment is to create appropriate execution measures and measurements to settle on right choices that would add to an enhanced authoritative performance (Gunasekaran, Patel &McGaughey, 2006). Firms will perform and be sustainable if the resources resulting in the firm performance are kept alive and the firm establishes a set of managerial processes where these resources are flourished and utilized, (Cetindamar&Kilitcioglu, 2013).

Measuring the performance of the firm will provide the firm management with the insights of how to improve the things that matters to the firm existence and also find out those things that are value to the stakeholders and the customers as well. According to Santo and Brito(2012) firms measure their performance to obtain information that will enable the firm management to improve their operational and financial outcomes. Kaplan and Norton (1996) proposed that a firm that measures its performance identifies and improves the various internal functions and their resulting external outcomes; and by doing this the firm will redesign its corporate strategies and become a market leader within the industry Porter (1986).

1.1.3Horticultural Firms in Kenya

As indicated by a brief on the agriculture business in Kenya (2009), Kenya is as of now positioned the biggest provider of slice blooms to the European Union. It is the second biggest creating nation exporter of blooms on the planet after Colombia. Kenya is the second biggest green exporter in the sub-Saharan Africa after South Africa, the second biggest creating nation provider of vegetables to the European Union after Morocco. Kenya's optimal tropical and calm climatic condition makes it good for generation of extensive variety of natural products, vegetables and flowers.

According Horticultural Crops Development Authority and Horticulture Sector Performance Report (2013)**,** Kenya has a long history of developing green yields for both domestic and export markets. Throughout the years, the plant business has developed to rise as the most essential sub-segment in the Agricultural area. Kenya's optimal tropical and calm climatic condition makes it positive for agriculture generation and advancement. The atmosphere is profoundly shifted

supporting the development of an extensive variety of agricultural yields. Agriculture in Kenya is predominantly rain encouraged however various ranches, particularly the ones developing green harvests for fare, likewise utilize water system. The sub-part is portrayed by enormous assorted qualities as far as ranch sizes, assortment of deliver, and geological range of creation. Cultivate sizes go from huge scale bequests with significant interests in water system and abnormal state utilization of data sources, contracted work and talented administration to little scale ranches, typically under one section of land.

The aggregate household esteem in the agriculture part in 2012 added up to Ksh. 217 Billion possessing a territory of 662,835 Ha with an aggregate generation amount of 12.6 Million Tons. When contrasted with 2011, the aggregate esteem, zone and generation expanded by 6%, 9% and 38% individually. This was a direct result of positive climate conditions in the creation zones that saw the expanded generation and therefore the esteem. The real supporters of the expanded esteem were bananas and Potatoes. In Table 1, the commitment to the aggregate esteem in 2012 by the sub-divisions was as per the following; Vegetables (48%), Fruits (28%), Flowers (18%), Nuts (3%) and Medicinal and Aromatic Plants (Maps) (2%).

According to a brief on the horticulture business in Kenya (2013),horticulture has contributed significantly to Kenya's economy in a few ways that include: The part is a remote trade worker, it is likewise a noteworthy wellspring of work, the segment has additionally prompted to the extension and advancement of transport foundation, it has guaranteed the viable utilization of land through land recovery for example swampy zones in Central Province are being recovered for generation of vegetables, the division is likewise a noteworthy wellspring of crude materials

for nearby ventures like organic product canning and fabricate of vegetable oils and that the area has additionally given a wellspring of wage to ranchers henceforth raising their ways of life.

1.2 Research Problem

Effective logistics outsourcing leads to a competitive advantage for a firm and increases its market share (Metzer, Flint & Hunt, 2007). Also, logistics outsourcing has been seen to enhance customer value and adds value to a firms output, which is generated from the ability to reduce costs and provide delivery solutions according to customer needs. As indicated by Corbett (2004), outsourcing as a management device is utilized to move an organization far from the customary vertically incorporated, independent structure; one that is progressively insufficient in today's hyper aggressive performance driven environment. Through outsourcing, the organization moves toward a business structure where it can make more engaged interests in the ranges that give its exceptional upper hand.

Agriculture is the foundation for economic growth, employment creation and foreign exchange earnings in most African countries (Irungu, 2011). Irungu (2011) asserts that the sector contributes more than 50% of the Kenya’s foreign exchange earnings and employs 80% of the population. Horticulture is one of the contributors towards the performance of agriculture. Horticulture is important to the country’s economy through productivity of the land, generating employment, improving economic conditions of the farmers and entrepreneurs and enhancing exports. According to SoftKenya.com horticulture is important to the Kenyan economy in many ways such as; it earns the country foreign exchange, it is also a major source of employment, it has led to the expansion and development of transport infrastructure. Horticulture also ensure the effective use of land, it is a major source of raw materials for local industries such as

manufacturing and processing. Horticulture is also of importance since it is a source of income to farmers thus raising their standards of living (SoftKenya.com).The importance of horticulture makes it worth to go into the depths to find out how they are performing.

Several studies both local and international have been done on logistics outsourcing and firm performance. McPake and Hongoro (1995) in their study suggested that most developing countries outsource because of the lack of expertise and technical capacity in the public services rather than a belief that it is a more efficient way of delivering services. Rushton *et al.* (2006) investigated the effect of logistics management on businesses in England. Rushton *et al.* (2006) found out that logistics affects many procedures and activities in a business, particularly allowing th firm to focus on its core activity. Aramyan*et al.* (2007) studied the effect of logistic management on financial performance of firms in agri-food supply chains among European countries and found out that the quality performance of a firm logistics management or the supply chain management are determined by qualitative factors such as customer complaints and customer response time.

Locally, Kamuri (2010) studied the challenges that face the implementation of logistics outsourcing strategy on the Kenyatta National Hospital and established that in order for firms to realize the competitiveness resulting from logistics outsourcing, they should be able to develop a cordial relationship between both internal and external parties. Gwaro (2011) investigated the effect of logistics innovation in the road transport sectors and found a positive relationship between logistic innovation and road transport sector performance. Afande and Maina (2015) assessed the drivers for effectiveness of outsourcing of catering services in Public Hospitals in

Kenya and found out that public hospitals outsource activities such as: Information Technology; Facilities and real-estate management; Accounting and Auditing and Cleaning Services.

Basedon the empirical review above, there are few studies done on logistics outsourcing and performance in developing countries such as Kenya. The local studies that investigate the relationship between logistics outsourcing and firm performance are carried out in other sectors other than the horticulture industry. This forms a gap in knowledge that this study seeksto bridge by answering the question: what is the relationship between logistic outsourcing and performance among horticultural firms in Nairobi County?

1.3 Research Objectives

i. To establish the key logistics practices being outsourced among the Horticulturalfirms in Nairobi County.
ii. To determine the relationship between logistics outsourcing and performance among Horticultural firms in Nairobi County.
iii. To establish the enablers of logistics outsourcing among the Horticultural firms in Nairobi County.
iv. To establish the logistics outsourcing challenges faced by the Horticulture firms in Nairobi County.

1.4 Value of the Study

The study will provide adequate information to the management of horticulture firms in Kenya that will help them make informed decisions to either make or buy thus help them improve their performance with respect to cost of producing and delivering horticultural products.

The government may benefit through improved logistics in the horticulture that will enable horticulture industry to do well which in turn contributes positively to the GDP of the country, the public benefit more through supply of quality horticulture products in the market.

Academicians and scholars could also find this research valuable to their study and advancement of knowledge. Through this study, they will be able to improve on their knowledge under logistics outsourcing among horticulture firms in Nairobi Country. In addition to this, the study will enable the buyers to reduce costs by minimizing the cost tied up with inventory and at the same time meeting the customer service requirements and quick delivery.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature that forms the basis of this study. Literature related to the study will be reviewed with the aim of identifying literature gaps. Theoretical and empirical literature is reviewed through evaluation of the various models and empirical studies on the relationship between logistic outsourcing and the performance among horticultural firms. The empirical literature will be evaluated basing on past studies to provide new knowledge on the topic followed by the summary of the literature and then the research gap. The literature review will guide the relevance of the study findings.

2.2 Theoretical Review

This study will be based on three major approaches that predict the decision to make or buy. These include: the Agency Theory, the Transaction Costs Approach; the Resource-Based Approach and the Core Competencies Theory.

2.2.1 Agency Theory

Agency theory is coordinated at the universal office relationship, in which one gathering (the vital) delegates work to another (the specialist), who plays out that work (Eisenhardt, 1989). In this relationship there are two levels of issues. The primary level is that the objectives of the central and operator are frequently not the same. Second, there is data asymmetry between the operator and the key; consequently it is troublesome for the main to check what the specialist is doing and which target he is following. Common examples of principal agent relationships

include; Owner of a company and manager of a company; Investor and portfolio manager; Creditor and debtor; Insurer Company and insured person (Laffont&Martimort, 2002).

This theory can be applied in the logistics outsourcing by the horticultural firms. The horticultural firms act as principals when they contract the services of the logistics firms which now act as the agent. In agency theory, one gathering (the foremost) delegates work to another gathering (the operator) (Jensen and Meckling, 1976; Ross, 1973; Eisenhardt, 1989). At the point when the operator is representing the vital it looks like practices, for example, performing for the advantage of the important or going about as the key's illustrative or worker (Mitnick, 1973). In this study, the logistics firms (agents) will be acting for the benefit of the horticultural firms (principal).

2.2.2 Transaction Cost Theory

The Transaction Cost Theory was developed by Coase (1937) who suggested that transaction cost drives the governance structure. This approach is based on the work of Williamson (1985). Coase's (1937) concept was farther elaborated and operationalized by Williamson (1985). According Williamson (1985), the Transaction cost theory's core focuses is on the costs of completing transactions by one institutional mode rather than another. Many scholar support the Transaction Cost Theory through their research for instance Aubert*et al.*, (2004); Robertson and Gatignon (1998) and Hair *et al.*, (1998). The transaction cost theory suggests that in a transaction, the transfer of goods or service is the unit of analysis. This theory's primary assumptions are bounded rationality and opportunism which cause transaction difficulties. The theory suggests that transactions difficulties and associated cost increase when transactions are

characterized by three main attributes: asset specificity, uncertainty and frequency of the transaction.

As indicated by the transaction cost framework, outsourcing is the organization limit change, capacities exchange and revision inside a firm. Davidow and Malone (1992) propose that outsourcing is the worldwide common pattern essential for the monetary survival in business firms and would result to the "virtual enterprise" with "very much characterized structures" step by step losing their edges. Song and John (1999) inspected the diverse governance components substitute each other under the distinctive effects of exchange expenses to clarify the impacts of transaction cost on outsourcing.

2.2.3 Core Competencies Theory

This theory was created from the work of Arnold, (2000) who holds that the organization center exercises are not legitimate to be outsourced. As per Arnold, (2000) outsourcing center exercises may diminish the motivations in organizations advancement, uncover of the basic advances and increment the potential contenders which balance the advantages brought by outsourcing. Hence the chiefs ought to want to work the center exercises and outsource the "dispensable and center particular exercises" to outside suppliers (Arnold, 2000). This theory includes a general outsourcing model that isolates the company's exercises and outlines the entire methodology of outsourcing configuration.

The model separates the firm’s activities into four elements which include outsourcing subject, outsourcing object, outsourcing partner and the outsourcing design (Arnold, 2000). The

outsourcing subject refers to the economic institutions that make outsourcing decision. Outsourcing object on the other hand involves the processes and productions. The firm's activities are distinguished into four levels which include: core-close activities (the most important level that include the crucial activities), Then the activities importance gradually decline with different kinds of activities. The last level includes the activities with general availabilities. In this theory, outsourcing is a way to help the firm to "transfer its decision rights and accountability" to vendor and pay more attention to its core competencies.

2.3 Logistic Outsourcing Practices

Logistics management practices are divided into core practices and the support practices. The core practices include; human resource management services, inventory management, transportation, and IT services, while the support practices on the other hand include warehousing, and packaging (Ballou,2003).

2.3.1 Human Resource Management Practices

Human Resource Management Practices includes everything the company does to get the best from the organizations most important asset: the representatives (Cultural Human Resources (CHRC), 2004). Human resource management hones incorporate staffing, performance management, worker relations, pay and advantages, work put wellbeing and security, HR information management, preparing and advancement (CHRC, 2004). Studies demonstrate that human management practices can make firms that are more smart, adaptable, and able than their opponents through the use of approaches and practices that focus on enrolling, selecting, preparing gifted representatives and guiding their earnest attempts to collaborate inside the asset

heap of the organization (Rawashdeh and Al-Adwan, 2012). Outsourcing of human resource practices guarantees expanded performance through quality confirmation and liberating assets tied up in the human asset work. Armstrong (2010) contends that HR management practices can enhance efficiency through: (1) expanding representative aptitudes and capacities (2) advancing uplifting mentalities and expanding inspiration and 3) furnishing workers with extended duties so they can make full utilization of their abilities and capacities.

2.3.2 Packaging Practices

Packaging practices are involved in designing, handling, storage and protection from loss and damage. According to Ballou (2003), packaging of products serves the marketing need of branding and promotional purposes whereas protection from loss and damage requires the packaging to enable the product to reach the end customer in the right condition. Sagir (2004) suggests that packaging is a coordinated system that supports logistics by preparing the product for secure, efficient and effective handling, transport, distribution, storage retailing, consumption and recovery, reuse or disposal to meet the customer value.

Pfohl (2004) also asserts that packaging supports logistics through protection, storage, transport, information and handling of the product and the correct design of the packaging can lead to the overall low logistics costs or supply or service delivery.

2.3.3 Information Technology Services

The arrival and use of advanced information technology to control and report shipment status has helped logistics managers seek faster movement of goods while maintaining consistency

(Nyaberi & Mwangangi, 2014). According Nyaberi & Mwangangi (2014), information technology is important to a company because it is capable of handling the most demanding customer requirements. Information technology practices enables exchange of information between trading partners' thus fast flow of information which enhances work balancing. Instead of accumulating orders at a local sales office for a week and them emailing them, information technology enables making use of internet communication. Internet communication uses internet to communicate arranges coordinate from the client, joined with slower, less expensive surface transportation, may accomplish considerably speedier and more steady conveyance benefit at a lower add up to cost. The key target is to adjust segments of the calculated framework (Masella, and Rangone, 2000). Guaging and correspondence of client necessities are the two practices in strategic work that are driven by data innovation (Nyaberi & Mwangangi, 2014).

2.3.4 Warehousing Practices

Warehousing practices involves space determination, stock layout, configuration, and stock placement (Ballou, 2003). Warehousing mostly ensures flexibility in delivery that is delivering the right product in the right quantity. Warehousing also ensures cost efficient operation by delivering the product at the right price, and in perfect order and condition (Richards, 2011) thus minimizing fines and late delivery compensations. The effective customer service depends on the firm warehousing operations (Pienaar & Voght, 2006). The three operational functions performed by the warehouse in the firm include; receiving and transfer of customer orders, information transfer through use of technology and storage of product temporarily or permanently.

2.3.5 Transportation Practices

Transportation involves moving the product from point A to point B.Wisner *et al*, (2011) suggests that transportation is a vital strategic link between firms in a supply chain thus must be managed effectively to meet customer due date and other shipping requirements. Kasilingam and Kluwer (1998) supports Wisner *et al*, (2011) by saying that transportation links firms and activities through providing the flow of materials, products and persons between productions facilities, warehouses, the distribution centers, the terminals and the customers. Thus transportation is the only practice that provides the time and place utilities through the outbound and inbound logistics. Goldsby*et al*.(2014) asserts that an inefficient transportation system may lead increased costs in the firm this may make the firm incur losses thus the transport system addresses the major issues of the mode selection, route selection and fleet size because it is the vital force for competition for the firm.

2.3.6 Inventory Management Practices

These practices provide for the upstream and downstream inventory visibility in the logistics. Lysons and Farrington (2012) inventory management practices provide both internal and external customers with the required service level ascertain the present and future requirement for all types of inventory, keep costs at minimum. According to Cox (2011) inventory policies must be of benefit by driving period operating expenses and working capital requirements. Measuring the effectiveness and efficient performance of inventory depends on the extent of the firm has the right quantity of inventory in the right place and at the right time (Lysons& Farrington, 2012).

2.4 Operational Performance

Operational performance is defined "as the firm's performance measured against standard indicators of effectiveness, efficiency and environmental responsibility such as cycle time, productivity, waste reduction and regulatory compliance" (BusinessDictionary.com).Many firms look to continuously improve their operations to enhance core competitiveness using supply chain measurement (Gunasekaran, *et al.*, 2004).According to Aronovich*et al.*, (2010), the way to effectively enhancing supply chain performance is to concentrate on those zones that are failing to meet expectations as well as, additionally, those that are adjusted to the general inventory network procedure. It is a constant procedure that requires both a scientific execution estimation framework, and an instrument to start ventures for acknowledging key execution markers (KPI).

According to CIPS (2013), the Key performance indicators (KPIs) of supply chain performance can have both quantitative and qualitative aspects. Quantitative KPIs include cost, time and quantity while qualitative aspects include degree of satisfaction expressed by customers, proportion of outcomes rated satisfactory, proportion of requests and proposals responded to, how quickly they are responded to, scores on commitment to quality obtained via attitude surveys, number of critical incidents illustrating irresponsible conduct. According to Gichuhi, (2011), numerous measurements utilized as a part of store network execution assessment have been intended to gauge operational execution, assess enhanced viability, and analyze key arrangement of the entire inventory network administration. Be that as it may, since numerous estimation frameworks needed procedure arrangement, an adjusted approach and systemic considering, they experienced issues in deliberately distinguishing the most suitable measurements.

Njuguna (2013) indicated that there are three major approaches for supply chain performance measurement for the manufacturing industry. These include: management approach, time based approaches and qualitative and quantitative approaches. Management approach which focuses on strategic, tactical and operational level (Gunasekaran*et al.*, 2004). Time based approaches identifies as most wide known supply chain management capability. It is identified as the important source of competitive advantage. Time is identified as the most accurate and useful measure. The organizations levels, strategic, tactical and operations use time measurement in terms of lead time, order cycle time, time- to market and other time measures (Sillanpää, 2010). Lastly qualitative and quantitative approaches-quantitative measures are cost that is distribution, manufacturing, inventory, incentive, warehouse and any other sensitivity cost that occur in the long-term. Resource utilization which covers labor, energy, machine and capacity where the under or over utilization of these resources is measured. Qualitative measures are quality, flexibility, visibility, trust and innovativeness. The type of measure chosen must coincide with organizations strategic goal (Kess& Sillanpaa, 2011).

As indicated by Gunasekaran et al. (2004), successful performance measurement frameworks have various attributes that can be utilized as a part of assess these measurement frameworks. These qualities include: comprehensiveness (estimation of every single apropos angle), all inclusiveness (take into account correlation under different working conditions), quantifiability (information required are quantifiable), and consistency (measures predictable with organization objectives). Other than breaking down the measures in view of their adequacy, benchmarking is another vital technique that is utilized as a part of execution measure assessment. Benchmarking

can be valuable in that it can serve as a method for recognizing change openings. Gunasekaran (2004) additionally contends that a production network performance estimation framework that comprises of a solitary execution measure is for the most part insufficient since it is not comprehensive, disregards the connections among imperative store network attributes and overlooks basic parts of hierarchical vital objectives.

Hartman (2004) proposed that there are four keys to operational performance which incorporate; Operations Improvement, Productivity Tracking, Engineered Standards and Performance Incentive Programs. Operations change – operations are proficient when they are streamlined, disentangled and institutionalized. Organizations ought to lessen or dispense with wasteful item stream and non-esteem included exercises. Efficiency Tracking – operations likewise include following of merchandise which should be possible in an assortment of ways, however progresses in innovation has prompted to another era of robotized profitability following programming devices which can be effectively interfaced with different advances to track profitability and compute singular partner performance (Hartman, 2004).

Engineered Standards – this provide for setting accurate and fair goals for associates since they take multiple production variables for instance unit or carton into consideration. Performance Incentive Programs – this include rewards and Pay-for-Performance which enhance motivation. Benefits that can be derived from focusing on the "Four Keys", include; reduced labor cost through increased productivity, expanded visibility of partner performance, expanded office throughput, amplifying limit, expanded partner maintenance and spirit, enhanced management

aptitudes and viability, empowered a self-coordinated work drive through measurements and responsibility and enhanced service levels (Hartman, 2004).

2.5 Logistic Outsourcing Practices and Firm Performance

All Logistic Outsourcing Practices are related to the material movement till the dispatch of the products. The creation of value in the products depends upon availability of inputs on time which minimizes cost. Due to the stiff competition in the markets today, companies are employing logistic outsourcing practices boost their performance through minimization of costs and time used to create products. Logistics practices in business contributes to achieving maximum customer service level at a minimum possible cost, ensures high product quality and flexibility in the constant market changes all this boost performance(Ballou, 2003).

According to Aron (1999) most firm's activities are tied around logistics management practices, encompassing a broad sweep of corporate supply-demand strategies that stretch from the raw materials to the ultimate customer and productivity-boosting tools. A firm can only achieve a superior performance through its logistics practices by aligning its key logistics practices with business strategy and measured against predetermined performance objectives (Keebler & Durtsche, 2001). In production, logistics management is used to buffer stock which supports a production push philosophy, on the other hand from the marketing point; logistics is used to carry a speculation stock to support a market expansion philosophy with short lead times, which is intended to achieve an improved performance (Lysons & Farrington, 2013).

Logistic outsourcing practices such as transportation are important in firm's performance for instance transportation is the operational territory of logistics that topographically moves and

positions stock for organization adaptability in conveyance (Wiendahi, 2009). Transportation has generally gotten extensive managerial consideration in firms as a result of its major significance and unmistakable cost. Stock control logistics then again helps the in execution of firms through diminishing expenses of support of stock with the nature of the item staying in place, generation stream enhances and cost of breakages decreases will prompt to client cooperative attitude in this manner high volume of offers, consequently change in general performance of the business (Nyaberi & Mwangangi, 2014).

Logistics management practice are found to synchronize and enhance corporate performance, increases corporate value by realizing fulfillment of customer's satisfaction, cutback of unprofitable inventory and minimization of its transfer, and reduction of supply costs (Japan Institute of Logistics System, 2011). According to Pienaar and Vogt (2006), in supporting corporate strategy, logistic practices incorporate having the right item at the opportune place joined with the right advancement and accessible in the correct place which prompts to consumer loyalty. This in this way demonstrates the significance of logistics outsourcing hones in any organizations can't be underrated it ought to be the center business of the business to plan, outline logistics and make decisions as to whether to outsource or not which will enhance performance.

2.6 Empirical Literature

The empirical literature of this study includes the global studies and the local studies on the topic for the period 2002-2015.

Huiskonen and Pirttilak (2002) studied the Lateral coordination in a logistics outsourcing relationship. The researchers investigate the coordination of activities between two different organizations. The study's object of analysis was a logistics outsourcing relationship and its inter-organizational coordination requirements. The study discussed the possibilities of using different forms of lateral coordination mechanisms such as informal coordination, formal inter-organizational teams, and integrating roles. The study concluded that developing of lateral organizational capability through practicing the different lateral coordination mechanisms, and actively promoting it to customers, can become a potential source of competitive advantage for logistics service providers. However the study did not review the effect of logistic outsourcing practices on horticulture industry.

Rushton *et al.* (2006) in their study on the effect of logistics management on businesses found out that logistics affects many procedures and activities in a business. The researchers also established that bad logistics management leads to increasing operational costs and decreased customer service. The study then concluded that logistics interferes with many business areas and, thus it is suggested to identify and determine service cost trade-offs in order to provide a positive benefits to the logistics system as a whole.

Jiang and Qureshi (2006) carried out a study to determine the effect of logistics management on manufacturing firm's performance. The researchers, through their research findings pointed out that the effect of logistics management is still vague and an unexplained puzzle. The study also pointed out that although the core business of large manufacturing firms is basically to manufacture, they still need to procure materials for production, warehouse, and manage inventory and transports manufactured products to the end users and that's where logistics comes

in. However the study did not review the effect of logistic outsourcing practices on horticulture industry.

Aramyan*et al.* (2007) through their study findings, suggested that the quality performance of a firm logistics management or the supply chain management are determined by qualitative factors of customer complaints, customer response time, on time delivery, lead time, fill rate and accuracy. Kamuri (2010) studied the challenges facing the implementation of logistics outsourcing strategy on the Kenyatta National Hospital. The researcher used questionnaires to collect data. The researchers established that among others for an organization to realize the competitiveness resulting from logistics outsourcing, it should be able to develop a cordial relationship with all the supplier of goods and services which will facilitate efficient and effective delivery of services. However the study did not review the effect of logistic outsourcing practices in horticulture firms.

Bosire (2011) investigated the Impact of logistics outsourcing on lead time and customer service among supermarkets in Nairobi. The study established that outsourcing of logistics services in supermarkets has a direct effect with the lead times of product delivery. The study also established that those supermarkets that have outsourced procurement of products from the suppliers have reduced the time taken to deliver the same products to their warehouses tremendously. The study however did not review the effect of logistic outsourcing practices on horticulture industry. The Japan Institute of Logistics System (JILS) (2011) also established that, logistics management is an enhancement to corporate superior performance and management should adopt logistics as a management strategy to be profitable.

Nyaberi and Mwangangi (2014) investigated the effects of logistics management practices on organization performance in Kenya. The study employed a case study design. The researchers used a sample size of 80 employees drawn from different department. The researchers employed questionnaires and interview schedules to collect data and analyzed it using descriptive statistics such as factor analysis and weighted averages. The study established that logistic outsourcing practices such as order process management contributes to increase in profit, sales volume, service delivery, production levels and quality of product. The researchers also established that inventory control logistics management assists the performance of rift valley bottlers limited through costs of maintenance of stock reduces, quality of the product remains intact, production flow improves and cost of breakages reduces, this leads to customer good will and a high volume of sales, hence improvement in overall performance of the business. The researchers carried out their study on Rift Valley Bottlers Limited instead of horticulture firms thus results cannot be generally used to represent the condition with the horticulture firms.

Afande and Maina (2015) assessed the drivers for effectiveness of outsourcing of catering services in Public Hospitals in Kenya. The study employed a descriptive survey focusing on Coast Provincial General Hospital and Nyeri General Hospital was undertaken. The study established that the types of services outsourced by public hospitals in Kenya include: Information Technology; Human Resources; Facilities and real estate management; Accounting and Auditing; Cleaning Services; Customer Care; Security services; and Maintenance of the Information Technology system and equipment. The study however did not review the effect of logistic outsourcing practices on horticulture firms.

2.7Enablers of Logistics Outsourcing

Outsourcing enablers include: information technology, focus on core competencies, globalization, financial incentives, improved productivity, streamlined operations, improved service to customers and innovation. Firms have limited investment budget, the funds must be used for investment in core activities which are the reason for their existence and thus their long term decision and leave non-core activities to outsiders to do them (Frankwood & Santer, 2006).This is because in today's business, for firms to survive they must focus on core competencies and adopt outsourcing as a strategic solution to improve quality of service and reduce cost of important as well as non-core processes with a goal of maximizing value (Watson & Pitt, 1998).

Langley *et al.* (2002) asserts that many firms outsource services in order to improve customer service efficiency and greater service integration economies of scale and global supply and solutions. Another enabler is the firm's need to go global. According to Sheffi (1990) globalization of firms in business is viewed as the most prominent driver of outsourcing. The effects of global markets has led to complex supply chain in businesses hence need for more experienced logistics practitioners in international logistics operations which has raised the need for outsourcing(Bradely, 1994).Innovation is also an important enabler of outsourcing because it helps logistics service providers differentiate themselves from their competitors, within the domain of innovation relationship.

Outsourcing of logistics can improve services to consumers; an integrated logistics provider has a greater visibility into all the elements of an order. Logistic outsourcing helps ensure the

predictability and reliability of delivery and increase speed to market. Thus the logistics service provider ensures that they provide customers with adequate service in terms of on time delivery and quality service. Streamlined operations make the customers satisfied because it enables them to get quality services and on time delivery of the goods or services (Wagner, 2008). Thus the desire to streamline operations drives firms to outsource to a coordinated supplier on the grounds that a powerful other gathering can give a solitary purpose of contact for all logistics operations from conventional warehousing and transportation services to bundling, light assembling and multi-channel satisfaction which will enhance improved customer satisfaction.

Availability of logistics service providers is also an enabler and driver of outsourcing in that, various outsourcing firms can be linked to several consumers of outsourcing service providers hence; gain the benefits at a reduced cost than that of developing or owning similar techniques. Firms that join such a link will be in position to benefit from economies of scale generated as well as expertise from other experienced parties in the link. According to Bradley (1995), this will give small firms also a chance to consolidate resources thereby benefit from the resulting synergies such as consolidation and bulk breaking gains.

Information technology changes the way the tasks are performed and how the information flow (Nyaberi & Mwangangi, 2014). According to Nyaberi and Mwangangi (2014), the growth of information technology over the last three decades has severely changed the way business practices and procedures are carried out. El Gawady (2005) asserts that, the introduction of various technologies such as Electronic Data Interchange (EDI), E-Commerce and E-Purchasing has changed the way logistics practices are carried out thus in order for firms to remain relevant

and competitive, they must adopt such technologies. For instance the Electronic Data Interchange (EDI) will enable real time business transactions in standardized electronic forms in an automated manner directly from a computer application in one firm to the other (El Gawady, 2005). This enables the customer and the logistics providers to be in constant communication thus enhance flexibility and management of unpredictable demand (Nyaberi & Mwangangi, 2014).

2.8 Challenges of Outsourcing

Although outsourcing is undertaken with high sense of advantages in mind, both the outsourcing companies and service providers face great challenges in the outsourcing venture. This may include: the possibility of over depending on leveraged suppliers, loss of control, cost of managing logistics, loss of logistics skills, the failure of third party logistic service provider to meet a shipper future growth needs, incompatibility of information system between shipper and third party logistic service provider and the fear of the unknown by staff and management. Sometimes the suppliers charge high prices for their services which makes it costly to the demanders of the services to cope. The high costs being forced by providers because of expanding patterns in outsourcing the interest for providers is so high and has pushed the rates being charged by the providers to be high (Eyaa, 2006).

Manzi (2005) asserts that, with outsourcing, there is a plausibility that crucial organization data might be at a danger of being spilled to the organization contender which is hazardous, since a few providers might be spies to the organization. Switching costs is also a challenge since outsourcing of logistics operations leads to reorganization of the existing assets to adapt to new

operation structure as set out by the service provider failure to reorganize to pick up, will result in reverse of the forward switching process and will be costly and time consuming for companies given resource constraint (Komen 2005).The challenge of low quality logistics services and contract non fulfillment may also occur due to an appropriate selection of the logistics provider is not selected which might then lead to the damaged repetition, image and trust by the firm's customers. Fawcett (2003) asserts that there is also the challenge of fear of the unknown by staff and managers of the loss of control over suppliers and is mostly brought about by the service providers having their own set of rules and guidelines that they follow.

The objective of the firm outsourcing its logistics action is for the most part altogether not quite the same as that of the administration supplier and because of these distinctions, the components that decide the business value of the organization are likewise significantly unique. The contemplations of these elements are essential in guaranteeing the practicality of the communitarian wander and the future achievement of the sourcing organization. Along these lines the organizations that that outsources their logistics activities to other strategic suppliers risk getting to be over subject to the suppliers (Piachaud, 2002).

Monitoring outsourced logistic activities is regularly a testing and complex undertaking. A compelling observing framework guarantees that the business did by the outsider logistics suppliers meets the standards. Assets, for example, cash, time and mastery are expected to build up a powerful observing framework. Quickly outsourcing logistics actuates has been started, dealing with the outsourced movement is likewise troublesome in this way there is a requirement for acutely screen. That is if the outsider logistics suppliers change the way they gives the

outsourced exercises, the firm should likewise figure out how to acclimate to the new framework.

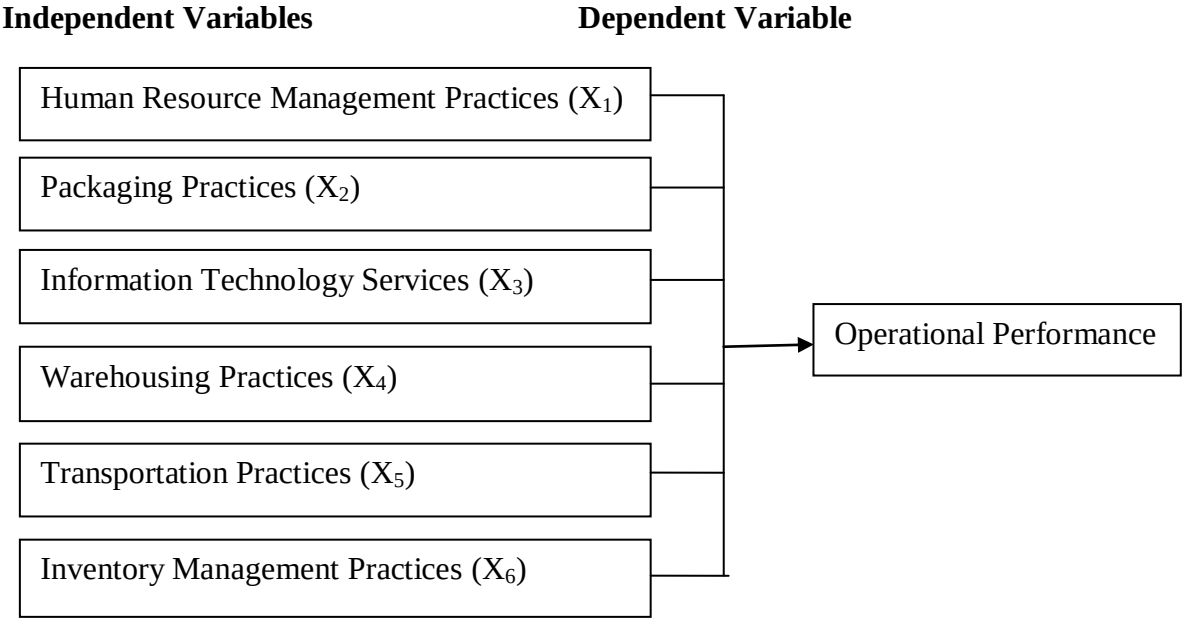
2.8Summary of the Literature and Research Gap

Table 2.1: Summary and Research Gap

Author(s)	Focus of the Study	Methodology	Major finding	Knowledge gap
Huiskonen and Pirttilak (2002)	The Lateral coordination in a logistics outsourcing relationship	A case study analysis.	Developing of lateral organizational capability through practicing the different lateral coordination mechanisms, and actively promoting it to customers, can become a potential source of competitive advantage for logistics service providers.	The study did not review the effect of logistic outsourcing practices on horticulture industry.
Rushton *et al.* (2006)	The effect of logistics management on businesses.	A case study analysis.	Found out that logistics affects many procedures and activities in a business	The study was not based on horticultural firms in Nairobi County.
Jiang and Qureshi (2006)	The effect of logistics management on manufacturing firm's performance	A case study analysis.	The effect of logistics management is still vague and an unexplained puzzle	The study did clearly outline the effect of logistics management
Kamuri (2010)	the challenges facing the implementation of logistics outsourcing strategy on the Kenyatta National Hospital	A case study analysis of outsourcing strategy on the Kenyatta National Hospital.	Established that among others for an organization to realize the competitiveness resulting from logistics outsourcing, it should be able to develop a cordial relationship with all the supplier of goods.	The study did not cover the strategies involve in outsourcing
Bosire (2011)	The Impact of logistics outsourcing on lead time and customer service among supermarkets in Nairobi	A case study analysis of the supermarkets in Nairobi	Outsourcing of logistics services in supermarkets has a direct effect with the lead times of product delivery	The study was not based on firms in the horticulture industry
Nyaberi and Mwangangi (2014)	The effects of logistics management practices on organization performance in Kenya.	A case study analysis of Valley Bottlers Limited	established that inventory control logistics management assists the performance of rift Valley Bottlers Limited through reducing costs	The study was not based on firms inhorticulture industry.
Afande and Maina (2015)	The drivers for effectiveness of outsourcing of catering services in Public Hospitals in Kenya	A case study analysis of Public Hospitals in Kenya	Public hospitals in Kenya outsource services such as Information Technology; Human Resources; Facilities and real estate management	The study did not examine the challenges and enablers of outsourcing.

2.9 Conceptual Model

Figure 2.9: Conceptual Model



Source: Researcher (2015).

Logistic Management Practices and Performance

Inventory management practices enables control of items that contribute to firm's product output, thus efficient inventory management practices will enhance firm performance through ensuring convenience in material handlers (Sanam, 2010). Sreeniva (2009) asserts that since transportation practices occupies about one third of the amount in the logistics systems thus reducing its cost reduces operation costs thus improved performance. Warehousing practices on the other hand includes the activities involving storage of good on a large scale in a systematic and orderly manner conveniently (CII institute of logistics, 2010).Warehousing bridges the gap between production and consumption of goods thus reducing the losses and penalties as a result of wastage and delayed delivery thus enhancing firm's operational efficiency hence performance.

Packaging practices enables coordination systems of get ready merchandise for sheltered, secure, productive and compelling transport, conveyance, stockpiling, retailing, utilization, recuperation, reuse or transfer, consolidated with augmenting purchaser esteem, deals and thus profitability of the firm (Saghi, 2002). Human resource management practice ensures the effectiveness in employee performance which in-turn improves organizational performance. The reasons for IT outsourcing include lack of resources and cost reduction all these point to the direction of improved organizational performance.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology that was used in the research study. It gives the details of the research design, population, data collection methods and procedures as well as data analysis methods that were used in the study. This chapter gives the direction and procedures that were used to carry out the study effectively.

3.2 Research Design

Descriptive survey research design was utilized as a part of this study. A descriptive survey research design is the gathering of data from a common group through interviews or the utilization of questionnaires to a sample of that group (Mugenda and Mugenda, 2003). This plan is favored on the grounds that extensive samples are plausible, making the outcomes measurably huge notwithstanding while examining various factors. The fundamental motivation behind this plan is to portray what is common as for the issue under study. It likewise gives answers to inquiries like who, what, when, where and once in a while how. It empowers respondents to give more data uninhibitedly. It additionally decides and reports the way things are and endeavors to portray such things as would be prudent conduct, states of mind, values and characters.

3.3 Population of the Study

The target populations for this study were the firms in the horticultural industry in Kenya. According to the Export Processing Zone Authority (EPZA, 2015), there are a total of 39horticultural firms in operating in Nairobi. The list of cut flower, vegetable and fruit companies in Nairobi is as shown in Appendix II. Since the population of this study is small, this study was a census where all the members of the population were considered.

3.4 Data Collection

Primary data was used in this study. The respondents of the study were the general manager and the supply chain/ operation/ logistics/ procurement managers of each of the horticultural firms based in Nairobi County as per the firm structure. The data was collected using self-administered questionnaires. A "drop-and-pick-up later" method will be used to administer the questionnaires. This method was considered appropriate in view of the fact that most of the companies are located in Nairobi.

The questionnaire were structured in four sections as follows: Section A contained questions on general information about the horticultural firms under the study; Section B comprised of questions on the extent to which logistics outsourcing has been done; Section C comprised of questions on the supply chain performance. Section D contained questions on the enablers of logistics outsourcing while Section E contained questions on the challengers of logistics outsourcing.

3.5 Data Analysis

After data collection, the questionnaires were inspected for completeness, edited for errors and omission before being coded and the data being captured. On instances where corrections were not plausible, the questionnaires were discarded. The researcher tabulated the collected data systematically and analyzed the findings of the study with the aid of Statistical Package for Social Sciences (SPSS version 21). Since the study is descriptive in nature, descriptive statistics was used to analyze the data. Measures of central tendency like frequency distribution, mean and standard deviation was used analyze Logistics Outsourcing Practices, Enablers of logistics

Outsourcing and Challenges of logistics Outsourcing Practices. The findings were presented in form of tables, graphs and pie charts to give a representation of the research findings.

Correlation and regression analysis was used to explain the relationship between logistics outsourcing and operational performance in the horticultural firms in Nairobi. The variables measured on nominal scale were quantified using dummy variable for purposes of attaining higher level of analysis.

Table 3.1: Summary of Data Collections and Analysis

Objective	**Questionnaire**	**Data Analysis**
General Information	Section A	Descriptive Statistics
Logistics Outsourcing Practices	Section B	Descriptive Statistics
Relationship between dependent and independent variables	Section C	Regression and Correlation Analysis
Enablers of logistics Outsourcing	Section D	Descriptive Statistics
Challenges of logistics Outsourcing Practices	Section E	Descriptive Statistics

Source: Researcher (2015)

To establish the relationship between logistics outsourcing practices and the firm performance of the firm, the study used the following multivariate regression model:

$$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Where:

Y – Operational Performance (Dependent variable)

X_1- X_6 – The independent variables

X_1- Human Resource Management Practices

X_2- Packaging Practices

X_3- Information Technology Services

X_4- Warehousing Practices

X_5- Transportation Practices

X_6- Inventory Management Practices

β_0 - Is the constant of the model

β_1- β_6 – Are the regression coefficients

ε – Stochastic error term estimate

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis, presentation and interpretation of data collected from the administered questionnaires. The collected questionnaires were inspected for completeness, edited for errors and omission before being coded and keyed into the Statistical Package for Social Sciences (SPSS version 21). Descriptive statistics was used to analyze the data. Measures of central tendency like frequency distribution, mean and standard deviation were used to analyze Logistics Outsourcing Practices, Enablers of logistics Outsourcing and Challenges of logistics Outsourcing Practices. The findings are presented in form of tables, graphs and pie charts to give a representation of the research findings. Correlation and regression analysis were used to explain the relationship between logistics outsourcing and operational performance in the horticultural firms in Nairobi. The variables measured on nominal scale were quantified using dummy variable for purposes of attaining higher level of analysis.

4.2 Response Rate

The researcher administered a total of 78 questionnaires to horticultural firms in Nairobi and obtained 60 filled questionnaires constituting a response rate of 76.9%. This is adequate according to Richardson (2005) who said that 50% response rate is considered adequate when carrying out a research.

Table 4.2: Response Rate

Response Rate	Frequency	Percentage
Filled and Returned	60	76.9
Not Returned	18	23.1
Total	78	100.00

Source: Research Data (2015)

4.3 Data Presentation

4.3.1 Data Validity

The researcher pre-tested the research instrument by issuing six questionnaires to horticultural firms in Nairobi. The purpose of the pre-test was to assure that the data collected was of high quality. This was done by ensuring that all the respondents interpreted the questions the same way. Wording and grammar of the research questionnaire was clarified so as to avoid ambiguous questions and misinterpretations.

4.3.2 Data Reliability

Further, reliability analysis was conducted to test the internal consistency of the research instrument. The reliability was tested using Cronbach's Alpha with a co-efficient $\alpha \geq 0.7$ being considered the minimum requirement.

Table 4.3.2: Reliability Analysis

Reliability Statistics		
Cronbach's Alpha	**Cronbach's Alpha Based on Standardized Items**	**N of Items**
.746	.753	82

Source: Research Data (2015)

The study reliability analysis established a Cronbach's Alpha co-efficient of 0.746indicating that the research instrument had a high level of internal consistency for the Likert scale used. This implies that the Likertscale was reliable enough to test the extent to which horticultural firms in Nairobi outsource logistics practices.

4.4General Information

In this section, the study sought to understand the general information regarding respondents and firm demographics. The information collected was on nature of the firms, gender, age bracket, level of education, position held, work experience, size of the firm and the number of years in operation.

4.4.1 Nature of the Firm

The respondents were requested to indicate the nature of their horticultural firms. The obtained responses were analyzed as shown in Table 4.4.1.

Table 4.4.1: Nature of the Firm

Nature of the Firm	Frequency	Percent
Vegetables and fruits company	35	58.3
Cut flowers company	25	41.7
Total	60	100.0

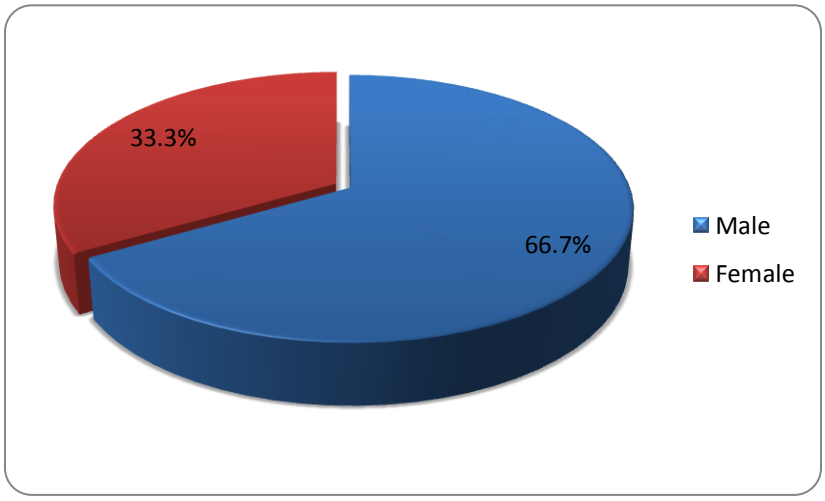
Source: Research Data (2015)

The study established that majority (58.3%) of the respondents was from vegetables and fruits companies while 41.7% were from Cut flowers companies. This implies that the researcher sought her answers from different types of horticultural firms in Nairobi.

4.4.2 Gender of Respondents

Further, the study sought and obtained gender details of the respondents from the horticultural firms in Nairobi. The responses obtained were analyzed and the results are as shown in Figure 4.4.2.

Figure 4.4.2: Gender of Respondents



Source: Research Data (2015)

The study found out that majority (66.7%) of the respondents was male while the female accounted for 33.3%. This indicates that all the genders participate in horticultural business in Kenya and that gender balance was observed during the administration of the questionnaires. It also implies that the number of men in this business is twice the number of women.

4.4.3 Age Bracket of Respondents

The study further sought to know the age bracket to which the respondents belonged to. The responses were analyzed and the findings are as shown in Table 4.4.3.

Table 4.4.3: Age Bracket of Respondents

Age Bracket	Frequency	Percent
20-25	3	5.0
26-30	19	31.7
31-35	12	20.0
36-40	16	26.7
41 -50	10	16.7
Above 50 years	0	0.0
Total	60	100.0

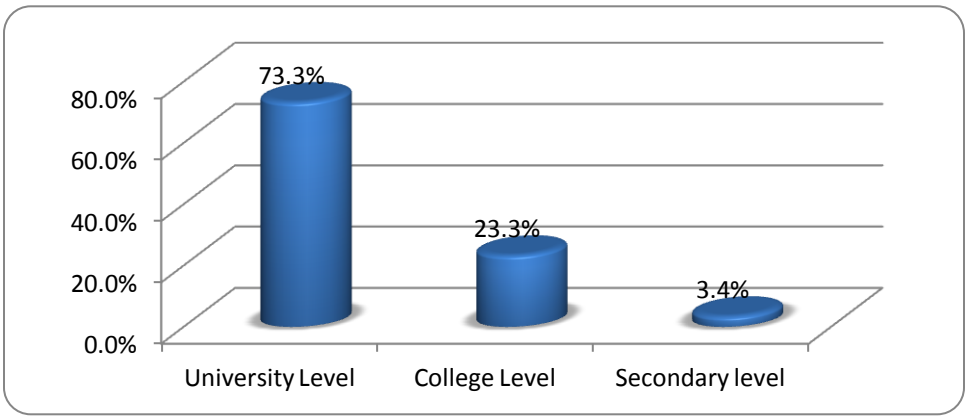
Source: Research Data (2015)

The study established that 31.7%% of the respondents were aged between 26-30 years followed by those aged between 36-40 years at 26.7% and then those aged between 31-35 years at 20%. Those in the 20-25 years bracket were the least at 5%. This implies that the researcher sourced responses from people of diverse age brackets and most of them are young people aged between 26-30 years.

4.4.4 Level of Education

On the level of education of respondents from horticultural firms, data obtained was analyzed and is as shown in Figure4.4.4.

Figure 4.4.4: Level of Education



Source: Research Data (2015)

The study established that majority (73.3%) of the respondents had a university level of education followed by 23.3% of the respondents who had a college level of education and then 3.4% who had a secondary level of education. This indicates that the respondents hadadequate levels of education to understand and respond to the issues sought by the researcher appropriately.

4.4.5 Job Position Held

The study sought to know the various job positions held by the respondents. The results of the study are as shown in the Table 4.4.5.

Table 4.4.5: Job Position Held

Job Position Held	Frequency	Percent
Procurement Officer	19	31.7
Assistant Supply Chain Manager	19	31.7
Operations Manager	17	28.3
Supply Chain Manager	5	8.3
Total	60	100.0

Source: Research Data (2015)

The study found out that 31.7% of the respondents were Procurement Officers followed by Assistant Supply Chain Managers also at 31.7% and then Operations Managers at 28.3%. Supply Chain Managers were the least at 8.3%. This implies that the respondents were in a position to understand the logistics issues sought by the researcher based on the job positions they held.

4.4.6Work Experience

The study further sought to establish the number of years the respondents had been serving their job positions. The obtained data was analyzed as shown in Table 4.4.6.

Table 4.4.6: Work Experience

Work Experience	Frequency	Percent
1 - 5 years	22	36.7
6 – 10 years	22	36.7
Less than 1 year	14	23.3
Above 10 years	2	3.3
Total	60	100.0

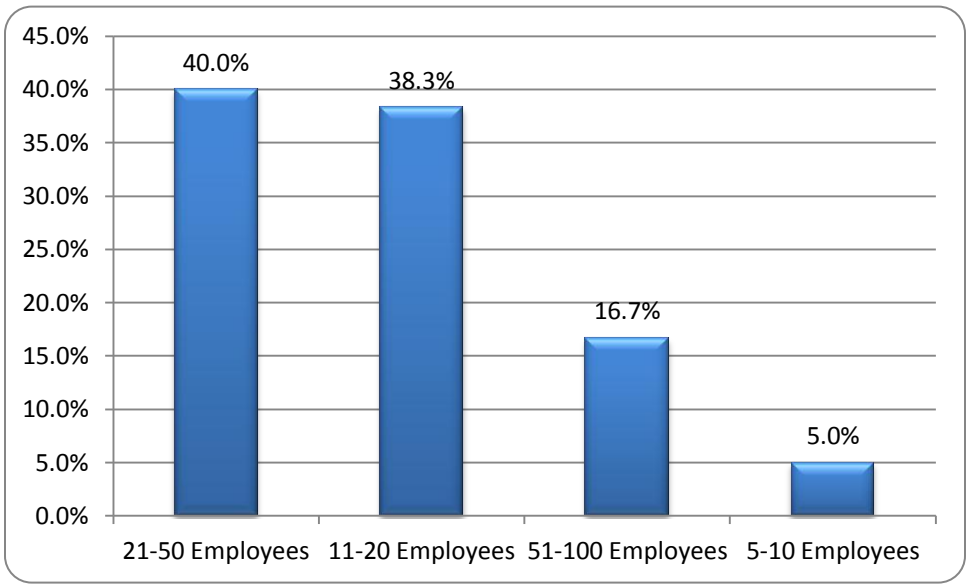
Source: Research Data (2015)

The study established that 36.7% of the respondents had been holding their job positions for 1-5 years followed by those who held theirs for 6-10 years also at 36.7%. Those with an experience of above 10 years accounted for 3.3% only. This indicates that the respondents had adequate working experience to understand the logistics procurement issues sought by the researcher.

4.4.7 Size of the Firm

The study further sought to know the size of the horticultural firms by virtue of the number of employees they had. The results of the study area as shown in Figure 4.4.7.

Figure 4.4.7 Size of the Firm



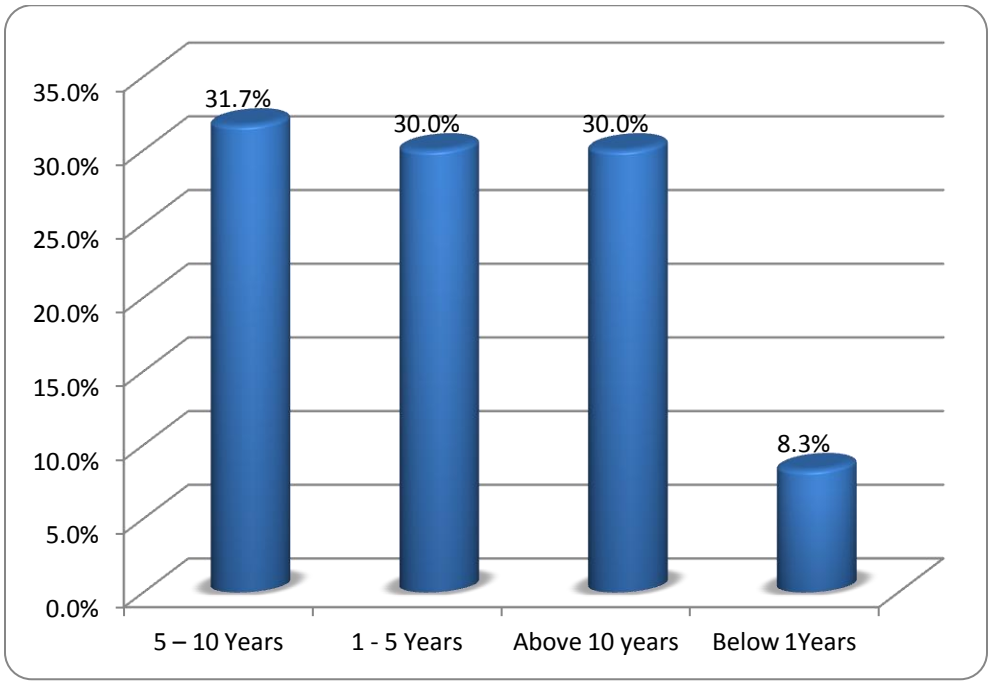
Source: Research Findings (2015).

The study revealed that 40% of the horticultural firms had 21- 50 employees followed by those with between 11-20 employees at 38.3%. Those with between 51-100 employees accounted for 16.7% each. Only 5% of the firms had 5-10 employees. This indicates that horticultural firms of differing sizes were included in the administration of questionnaires.

4.4.8 Years of Operation

The study looked to know the quantity of years the horticultural firms had been in operation. The gathered information was examined and the discoveries are as appeared in Figure 4.4.8.

Figure 4.4.8: Years of Operation



Source: Research Data (2015)

The study found out that 31.7% of the horticultural firms had been in operation for between 5-10 years followed by those in operation for 1-5 years at 30% and then those existing for over 10 years also at 30%. Those existing for below1 year were the least at8.3%. This indicates that the researcher covered horticultural firms that have been in operation for different durations to avoid biasness.

4.5 Logistics Management Practices

The study sought to know the extent to which horticultural firms in Nairobi had been outsourcing logistics practices. Analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1-1.49 = No Extent; 1.5-2.49 = Little Extent; 2.5-

3.49 = Moderate Extent; 3.5-4.49 = Large Extent; 4.5-5.0 =Very Large Extent. The results of the study are as discussed below.

4.5.1 Human Resource Management Practices

The study sought to determine the extent to which horticultural firms outsource human resource management practices. The study findings are as shown in Table 4.5.1.

Table 4.5.1: Human Resource Management Practices

HRM Practices	Mean	Std. Deviation
The firm outsources training and development	4.32	0.81
The firm outsources employee recruitment services	4.17	0.87
The firm outsources work place health services	4.05	0.70
The firm outsources employee performance management	4.02	0.75
The firm outsources payroll services	4.00	0.76
The firm outsources work place safety services	3.67	1.04
Aggregate	**4.04**	**0.82**

Source: Research Data (2015)

An aggregate mean of (*M*=4.04, *SD*= 0.82) was recorded indicating that horticultural firms outsource human resource management practices to a large extent. The firms outsources training and development (*M*= 4.05, SD= 0.70), employee recruitment services (*M*= 4.02, SD= 0.75), work place health service (*M*= 4.00, SD= 0.76), employee performance management (*M*=4.04, *SD*= 0.82) and payroll services (*M*=4.04, *SD*= 0.82) to a large extent. The least rated was outsourcing of work place safety services with mean of (*M*= 3.67, SD= 1.04) indicating that it is outsourced to a large extent. These findings are in line with the observations of Rawashdeh and Al-Adwan (2012) that human resource management practices can make firms that are more canny, adaptable, and able than their adversaries through the use of strategies and practices that focus on enlisting, selecting, preparing talented workers and guiding their earnest attempts to coordinate inside the asset heap of the organization.

4.5.2 Packaging Practices

The study sought to determine the extent to which horticultural firms outsource packaging practices. The results of the study are as shown in Table 4.5.2.

Table 4.5.2: Packaging Practices

Packaging Practices	Mean	Std. Deviation
The firm outsources design of packaging materials	4.52	0.57
The firm outsources Packaging of finished goods	4.45	0.57
The firm outsources packaging compliance services	4.43	0.59
Aggregate	**4.47**	**0.58**

Source: Research Data (2015)

An aggregate mean of (*M*=4.47, *SD*= 0.58) was recorded indicating that horticultural firms outsource packaging practices to a large extent. The firms outsources design of packaging materials to a very large extent as evidenced by a mean of (M= 4.52, SD= 0.57). The firm outsources packaging of finished goods (M= 4.45, SD= 0.57) and packaging compliance services (M= 4.43, SD= 0.59) to a large extent. However, the respondents' opinions were diverse as indicated by the registered standard deviations. These findings concur with the assertions of Pfohl (2004) that packaging supports logistics through protection, storage, transport, information and handling of the product and that the correct design of the packaging can lead to the overall low logistics costs or supply or service delivery.

4.5.3 Information Technology Services

The study sought to determine the extent to which horticultural firms outsource information technology services. The results of the study are as shown in Table 4.5.3.

Table 4.5.3: Information Technology Services

Information Technology Services	Mean	Std. Deviation
The firm outsources IT maintenance services	4.57	0.50
The firm outsources inventory control system	4.32	0.81
The firm outsources order processing system	4.30	0.74
The firm outsources ERP system	4.25	0.77
The firm outsources its payment management system	4.10	0.73
Aggregate	**4.31**	**0.71**

Source: Research Data (2015)

The horticultural firms outsource information technology services to a large extent as evidenced by the aggregate mean of (M= 4.31, SD= 0.71). IT maintenance services are outsourced to a very large extent (M=4.57, SD= 0.50) followed inventory control system outsourcing which is outsourced to a large extent as shown by a mean of (M= 4.32, SD= 0.81).Order processing system (M= 4.30, SD= 0.74), ERP system (M= 4.25, SD= 0.77) and payment management system (M= 4.10, SD= 0.73) are also outsourced by horticultural firms to a large extent as evidenced by the means shown alongside. The recorded standard deviations indicate the level of variation in respondents' opinions. According Nyaberi and Mwangangi (2014), information technology is important to a company because it is capable of handling the most demanding customer requirements. It can be used to control and report shipment status hence leading to faster movement of goods while maintaining consistency (Nyaberi & Mwangangi, 2014).

4.5.4 Warehousing Practices

The study sought to determine the extent to which horticultural firms outsource warehousing practices. The results of the study are as shown in Table 4.5.4.

Table 4.5.4: Warehousing Practices

Warehousing Practices	Mean	Std. Deviation
The firm outsources the storage of its finished products	4.37	0.66
The firm outsources the storage of its flowers materials.	4.30	0.72
The firm outsources the storage of its unfinished products	4.30	0.77
Dispatching of orders is done in outsourced warehouses	4.25	0.68
Processing of orders is done in outsourced warehouses	3.13	0.91
Aggregate	**4.27**	**0.75**

Source: Research Data (2015)

The study established that horticultural firms outsource warehousing practices to a large extent as indicated by the aggregate mean of (M= 4.27, SD= 0.75). The firm outsources the storage of its finished products to a large extent (M= 4.37, SD= 0.66) followed by outsourcing of storage of its flowers materials also to a large extent (M= 4.30, SD= 0.72). The least rated was outsourcing of processing of orders which being done in outsourced warehouses with a mean of (M= 3.13, SD= 0.91) indicating that it is outsourced to a moderate extent. According to Pienaar and Voght, (2006), effective customer service depends on the firm warehousing operations. These include efficient receiving and transfer of customer orders, information transfer through use of technology and storage of product temporarily or permanently.

4.5.5 Transportation Practices

The study sought to determine the extent to which horticultural firms outsource transportation practices. The results of the study are as shown in Table 4.5.5.

Table 4.5.5: Transportation Practices

Transportation Practices	Mean	Std. Deviation
The firm outsources transportation of its finished goods to warehouses	4.18	0.70
The firms outsources electronic system to track transportation vehicles	4.08	0.77
The firm outsources transportation of its raw materials	3.75	0.97
The firms outsources customer order delivery services	3.18	1.07
Aggregate	**3.80**	**0.87**

Source: Research Data (2015)

The study found out that horticultural firms outsource transportation services only to a large extent (M= 3.80, SD=0.87). Outsourcing transportation of its finished goods to warehouses (M= 4.18, SD= 0.70), electronic system to track transportation vehicles (SD= 4.08, SD= 0.77) and transportation of its raw materials (M= 3.75, SD= 0.97) is done to a large extent. Outsourcing of customer order delivery services is done to moderate extent (M= 3.18, SD= 1.07). Goldsby*et al.* (2014) asserts that an inefficient transportation system may lead increased costs in the firm and this may make the firm incur losses.

4.5.6 Inventory Management Practices

The study sought to determine the extent to which horticultural firms outsource inventory management practices. The results of the study are as shown in Table 4.5.6.

Table 4.5.6: Inventory Management Practices

Inventory Management Practices	Mean	Std. Deviation
The firm outsources inventory tracking services	4.10	0.88
The firm outsources inventory forecasting	3.50	1.08
The firm outsources lead-time analysis	3.42	1.09
The firm outsources inventory planning and replenishment	3.40	1.14
The firm outsources reduction services	3.20	1.09
The firm outsources inventory auditing services	3.17	1.09
The firm outsources inventory demand management	3.08	1.27
Aggregate	**3.41**	**1.09**

Source: Research Data (2015)

The study established that horticultural firms outsource inventory management practices only to a moderate extent (M= 3.41, SD= 1.09). The firms outsource inventory tracking services (M= 4.10, SD= 0.88) and inventory forecasting (M= 3.50, SD= 1.08) to a large extent. However, lead-time analysis, inventory planning and replenishment, reduction services, inventory auditing services and inventory demand management are only outsourced to a moderate extent as evidenced by their respective means. The findings above concur with the study findings of Lysons and Farrington (2012) who found out that the main aim of the firm inventory management is keep costs at minimum. The standard deviations indicate that the respondents had differing opinions.

4.6Firm Operational Performance

In this section, the study sought to know the extent to which outsourcing various horticultural firms logistics practices affects firms' operational performance. Analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1-1.49 = No Extent; 1.5-2.49 = Little Extent; 2.5-3.49 = Moderate Extent; 3.5-4.49 = Large Extent; 4.5-5.0 =Very Large Extent. The results of the study are as discussed below.

Table 4.6.1 Effect of Outsourcing HRM Practices on Firm Performances

Outsourcing HRM Practices	Mean	Std. Deviation
Reduction in operational cost	4.12	0.80
Increased efficiency	3.35	1.07
Timely Delivery of orders	2.75	1.00
Reduction in lead time	2.65	1.13
Improved product quality	2.53	0.95
Increased Customer Satisfaction	2.28	0.85
Aggregate	**2.95**	**0.97**

Source: Research Data (2015)

Outsourcing Human Resource management Practices affects firm Supply Chain Performance to a moderate extent as evidenced by an aggregate mean of (M= 2.95, SD= 0.97). Outsourcing of Human Resource management practices leads to reduction in operational cost to a large extent as shown by the mean of (M= 4.12, SD= 0.80). It lead to increased efficiency, timely delivery of orders, reduction in lead time, and improved product quality to a moderate extent while it leads to increased customer satisfaction only to a little extent.

Table 4.6.2: Effect of Outsourcing Packaging Practices on Firm Performances

Outsourcing Packaging Practices	**Mean**	**Std. Deviation**
Improved product quality	4.35	0.68
Increased efficiency	4.17	0.76
Increased Customer Satisfaction	3.88	0.99
Timely Delivery of orders	3.50	5.31
Reduction in operational cost	2.82	1.20
Reduction in lead time	2.50	1.27
Aggregate	**3.54**	**1.70**

Source: Research Data (2015)

Outsourcing Packaging Practices affects supply chain performance to a large extent (M= 3.54, SD= 1.70). It leads to improved product quality, increased efficiency and increased customer satisfaction to a large extent while it leads to reduction in operational cost to moderate extent while it leads to reduction in lead time only to a little extent.

Table 4.6.3: Effect of Outsourcing IT Services on Firm Performances

Outsourcing IT Services	**Mean**	**Std. Deviation**
Increased efficiency	4.48	0.50
Increased Customer Satisfaction	4.38	0.52
Reduction in operational cost	4.17	0.91
Improved product quality	3.67	0.99
Reduction in lead time	3.25	1.14
Timely Delivery of orders	3.15	1.07
Aggregate	**3.85**	**0.86**

Source: Research Data (2015)

Outsourcing IT Services affects supply chain performance of horticultural firms to a large extent (M= 3.85, SD= 0.86). It leads to increased efficiency, increased customer satisfaction, reduction in operational cost and improved product quality to a large extent. It affects reduction in lead time and timely delivery of orders only to a moderate extent.

Table 4.6.4: Effect of Outsourcing Warehousing Practices on Firm Performances

Outsourcing Warehousing Practices	Mean	Std. Deviation
Increased efficiency	4.60	0.49
Increased Customer Satisfaction	4.48	0.50
Reduction in operational cost	4.37	0.58
Reduction in lead time	4.33	0.63
Timely Delivery of orders	4.27	0.63
Improved product quality	3.70	0.74
Aggregate	**4.29**	**0.60**

Source: Research Data (2015)

Outsourcing Warehousing Practices affects supply chain performance of horticultural firms to a large extent (M= 4.29, SD= 0.60). It leads to increased efficiency to a very large extent (m= 4.60, SD= 0.49) while it leads to increased customer satisfaction, reduction in operational cost, reduction in lead time, timely delivery of orders and improved product quality to a large extent.

Table 4.6.5: Effect of Outsourcing Transportation Practices on Firm Performances

Outsourcing Transportation Practices	Mean	Std. Deviation
Timely Delivery of orders	4.68	0.47
Reduction in lead time	4.53	0.50
Increased efficiency	4.40	0.56
Increased Customer Satisfaction	4.33	0.51
Reduction in operational cost	4.08	0.67
Improved product quality	2.63	1.13
Aggregate	**4.11**	**0.64**

Source: Research Data (2015)

Outsourcing Transportation Services affects performance of horticultural firms to a large extent as evidenced by the mean of (M= 4.29, SD= 0.60). It leads to timely delivery of orders to a very large extent (M= 4.60, SD= 0.49) while it leads reduction in lead time, increased efficiency, customer satisfaction, reduction in operational cost and improved product quality.

Table 4.6.6: Effect of Outsourcing Inventory Management on Firm Performances

Outsourcing Inventory Management	**Mean**	**Std. Deviation**
Reduction in lead time	4.43	0.83
Increased Customer Satisfaction	4.40	0.62
Timely Delivery of orders	4.35	0.58
Reduction in operational cost	4.33	0.63
Improved product quality	4.13	0.62
Increased efficiency	3.83	0.72
Aggregate	**4.25**	**0.67**

Source: Research Data (2015)

Outsourcing Inventory Management Services affects supply chain performance of horticultural firms to a large extent as evidenced by the mean of (M= 4.25, SD = 0.67). It leads to reduction in lead time to a very large extent (M= 4.60, SD= 0.49). Further, it leads to increased customer satisfaction, timely delivery of orders, and reduction in operational cost, improved product quality and increased efficiency to large extent.

4.6.7 Summary of Variable Means

Table 4.6.7 summarizes the extent to which various horticultural firms in Kenya outsource various logistics services.

Table 4.6.7: Summary of Variable Means

Variable	Mean
HRM Practices	4.04
Packaging Practices	4.47
Information Technology Services	4.31
Warehousing Practices	4.27
Transportation Practices	3.80
Inventory Management Practices	3.41
Aggregate	**4.05**

Source: Research Data (2015)

This indicates that Packaging Practices (M= 4.47) are the most outsourced logistics activities followed by Information Technology Services, followed by Warehousing Practices (M= 4.31) and then HRM Practices (M= 4.27). Inventory Management Practices is the least outsourced with a mean of (M= 3.41).

4.7Enablers of Logistics Outsourcing

The respondents were requested to indicate the extent to which various factors have enabled outsourcing of logistics services among horticultural firms in Nairobi. The means recorded were interpreted as follows: 1-1.49 = No Extent; 1.5-2.49 = Little Extent; 2.5-3.49 = Moderate Extent; 3.5-4.49 = Large Extent; 4.5-5.0 =Very Large Extent. The results are shown in Table 4.7.

Table 4.7: Enablers of Logistics Outsourcing

Enablers of Logistics Outsourcing	Mean	Std. Deviation
Improved productivity	4.68	0.47
Focus on core competencies	4.53	0.60
Streamlined operations	4.47	0.62
Innovation	4.40	0.67
Improved service to customers	4.30	0.72
Information technology	3.90	0.75
Financial incentives	3.73	0.86
Globalization	3.55	0.67
Aggregate	**4.20**	**0.67**

Source: Research Data (2015)

Improved productivity (M=4.68, SD= 0.47) and Focus on core competencies (M= 4.53, SD= 0.60) enable outsourcing of logistics services among horticultural firms to a very large extent. Streamlined operations, innovation, improved service to customers and information technology enable outsourcing of logistics services to a large extent. Financial incentives (M= 3.73, SD=0.86) and Globalization (M= 3.55, SD= 0.67) were the least rated but they also enable outsourcing of logistics services to a large extent. According to Nyaberi and Mwangangi (2014), the growth of information technology over the last three decades has severely changed the way business practices and procedures are carried out. El Gawady (2005) asserts that, the introduction of various technologies such as Electronic Data Interchange (EDI), E-Commerce and E-Purchasing has changed the way logistics practices are carried out thus in order for firms to remain relevant and competitive, they must adopt such technologies.

4.8 Challenges of Logistics Outsourcing

Lastly, the respondents were requested to indicate the extent to which they faced various challenges when outsourcing logistics services. The means recorded were interpreted as follows: 1-1.49 = No Extent; 1.5-2.49 = Little Extent; 2.5-3.49 = Moderate Extent; 3.5-4.49 = Large Extent; 4.5-5.0 =Very Large Extent. The results of the study are as shown in Table 4.7.

Table 4.8: Challenges of Logistics Outsourcing

Challenges of Logistics Outsourcing	Mean	Std. Dev
Outsourcing critical components may open up opportunities for competitors	4.18	0.68
Compromised product and service quality	3.73	0.90
Loss of control e.g. interferences with a firms data privacy	3.62	0.96
The risk of discontinuity in the service delivery	3.60	0.96
The risk of incompetent suppliers of the products as well as services	3.05	0.98
Increased competition due to information leaks	3.00	1.04
Supplier complacency over time	2.77	1.03
Negative impact on employees through reduced morale	2.42	0.77
Aggregate	**3.30**	**0.91**

Source: Research Data (2015)

Outsourcing critical components may open up opportunities for competitors (M=4.18, SD=0.68) and compromised product and service quality (M=3.73, SD= 0.90) were the most faced challenges to a large extent. Other challenges like loss of control e.g. interferences with a firm's data privacy and the risk of discontinuity in the service delivery were faced to a large extent. The risk of incompetent suppliers of the products as well as services; increased competition due to information leaks and Supplier complacency over time were faced to a moderate extent. Negative impact on employees through reduced morale was the least faced to a little extent (M=2.42, SD= 0.77). According to Manzi (2005), with outsourcing, there is a possibility that vital company information may be at a risk of being leaked to the company competitor which is dangerous, since some suppliers may be spies to the company.

4.9 Regression Analysis

Regression analysis was used to explain the relationship between logistics outsourcing and operational performance in the horticultural firms in Nairobi. The variables which were measured on a nominal scale were quantified using dummy variable to obtain scores for regression analysis. The results obtained are as discussed next.

4.9.1 Regression Coefficients

The regression coefficients revealed that at 95% confidence level, logistics outsourcing practices has a combined positive effect on the firms' operational performance among horticultural firms in Nairobi. Positive effect was reported for all the independent variables (Human Resource Management Practices, Packaging Practices, Information Technology Services, Warehousing Practices, Transportation Practices and Inventory Management Practices).

Table 4.9.1 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		(p-value)
		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.112	.127		4.254	0.000
	HRM Practices	0.322	.166	0.211	2.254	0.028
	Packaging Practices	0.541	.131	0.472	3.263	0.002
	Information Technology Services	0.664	.176	0.528	3.978	0.000
	Warehousing Practices	0.745	.163	0.626	3.678	0.001
	Transportation Practices	0.703	.155	0.621	4.021	0.000
	Inventory Management Practices	0.711	.178	0.613	3.564	0.001

a. Dependent Variable: Operational Performance

T-critical value: 1.674

Source: Research Data (2015)

The regression equation was expressed as follows:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4\ \beta_5 X_5 + \beta_6 X_6 + \varepsilon}$$

$$Y = 0.112 + 0.322X_1 + 0.541X_2 + 0.664X_3 + 0.745X_4 + 0.703X_5 + 0.711X_6$$

Y= Operational Performance

$\boldsymbol{\beta_0}$= Constant of the Model

β1 – $\boldsymbol{\beta_6}$= Regression Coefficients

$\mathbf{X_1}$= HRM Practices

$\mathbf{X_2}$= Packaging Practices

$\mathbf{X_3}$=Information Technology Services

$\mathbf{X_4}$=Warehousing Practices

$\mathbf{X_5}$=Transportation Practices

$\mathbf{X_6}$=Inventory Management Practices

ε= Stochastic Error Estimate

Human Resource Management Practices (t= 0.322, p= 0.028), Packaging Practices (t= 0.541, p= 0.002), Information Technology Services (t= 0.664, p= 0.000), Warehousing Practices (t= 0.745, p= 0.001), Transportation Practices (t= 0.703, p= 0.000) and Inventory Management Practices (t= 0.711, p= 0.001) produced statistically significant values for this study with (t-values> t-critical value (1.674), $p \leq 0.05$).

The constant value (0.123) shows that if Human Resource Management Practices, Packaging Practices, Information Technology Services, Warehousing Practices, Transportation Practices and Inventory Management Practices were rated zero, operational performance of the firms would be 0.112. In order to come up with the regression equation, stochastic error term estimate was assumed to be zero. According to Ballou (2003), logistics practices in business contributes to achieving maximum customer service level at a minimum possible cost, ensures high product quality and flexibility in the constant market changes all this boost performance.

4.9.2Model Summary

Table 4.9.2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.721[a]	0.520	0.466	0.63556286

a. Predictors: (Constant), Human Resource Management Practices, Packaging Practices, Information Technology Services, Warehousing Practices, Transportation Practices, Inventory Management Practices

b. Dependent Variable: Operational Performance

Source: Research Data (2015)

The study sought to determine the relationship between logistics outsourcing and operational performance of the horticultural firms in Nairobi. Human Resource Management Practices, Packaging Practices, Information Technology Services, Warehousing Practices, Transportation Practices and Inventory Management Practices were used as aspects of logistics outsourcing. The research findings indicated that there was a strong relationship (R= 0.721) between logistics outsourcing and operational performance of the horticultural firms. The result of the study also indicated that the value of adjusted R-squared is 0.466. This means that changes in logistics outsourcing accounts for 46.6% of the total variance in operational performance of the horticultural firms in Nairobi.

4.9.3 Analysis of Variance

Analysis of Variance (ANOVA) was done to verify the goodness of fit of the regression model.

Table 4.9.3 Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.316	6	3.053	3.760	.003[a]
	Residual	43.013	53	.812		
	Total	61.329	59			
a. Predictors: (Constant), Human Resource Management Practices, Packaging Practices, Information Technology Services, Warehousing Practices, Transportation Practices, Inventory Management Practices						
b. Dependent Variable: Operational Performance						

Source: Research Data (2015)

F-Critical Value = 2.275

The study findings revealed that the regression model had a significance level (p-value) of 0.3%. This indicates that the model is statistically significant for making predictions on the future impact of logistics outsourcing on the operational performance of horticultural firms in Nairobi.

This is because the significance value (p-value) is less than 5% and the F value (3.760) is greater than the F-Critical Value (2.275).

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the summary of findings, the conclusions drawn by the study, recommendations for policy change and suggestions for future research. The study then presents the major limitations of the study.

5.2 Summary of Findings

The study sought to establish to establish the key logistics practices being outsourced among the horticultural firms in Nairobi County; the relationship between logistics outsourcing and firm operational performance; the enablers of logistics outsourcing and the challenges faced by the horticultural firms when outsourcing logistics services. The study established that the key logistics practices outsourced are human resource management practices, packaging practices, information technology services, warehousing practices, transportation practices and inventory management practices. All of them are outsourced to a large extent except human resource management practices which are outsourced to a moderate extent. On the enablers of logistics outsourcing, the study established that the key factors that enable logistics practices outsourcing are improved productivity, focus on core competencies, streamlined operations, innovation and improved service to customers. The study also revealed that challenges are faced to a moderate extent when outsourcing logistics practices.

The research findings further indicated that there is a strong and positive relationship (R= 0.721) between logistics outsourcing and operational performance of the horticultural firms. The result

of the study also indicated that the value of adjusted R-squared is 0.466. This means that changes in logistics outsourcing accounts for 46.6% of the total variance in operational performance of the horticultural firms in Nairobi.

5.3 Conclusion

On the key logistics practices outsourced by horticultural firms in Nairobi, the study concludes that they are human resource management practices, packaging practices, information technology services, warehousing practices, transportation practices and inventory management practices. All of them are outsourced to a large extent except human resource management practices which are outsourced to a moderate extent.

In regard to the relationship, the study concludes that there is a strong and positive relationship between logistics outsourcing and operational performance of the horticultural firms with changes in logistics outsourcing accounting for 46.6% of the total variance in operational performance of the horticultural firms in Nairobi.

On the enablers of logistics outsourcing, the study concludes that the key factors that enable logistics practices outsourcing are improved productivity, focus on core competencies, streamlined operations, innovation and improved service to customers.

In regard to the challenges faced by the horticultural firms when outsourcing logistics services, the study concludes that the challenges are faced to a moderate extent with the key challenges faced being Outsourcing critical components which may open up opportunities for competitors,

compromised product and service quality and loss of control through interferences with a firms data privacy.

5.4 Recommendations for Policy Change

In order to improve their operational performance, horticultural firms in Nairobi should take caution when outsourcing critical components as this may open up opportunities for competitors. Further, the study established that one of the key challenges faced by the horticultural firms in Nairobi is the possible the loss of control through interferences with a firms data privacy. The researcher recommends that the firms should sign binding contracts with third parties to prevent interferences with a firm's data privacy.

5.5 Limitations of the Study

The vast majority of the respondents were hesitant in filling the questionnaires expecting that the information looked for would be utilized to as influence against their organizations. The researcher guaranteed the respondents that the data looked for would be treated with most extreme secrecy and would just be utilized for scholarly purposes.

Further, the study was mainly dependent on the data provided by the respondents. The researcher handled the challenge by making calls for clarifications.

The respondents in the horticultural firms had busy working schedules and also taken into consideration the holiday season which could have derailed the data collection process. The researcher handled the limitations by emphasizing to them on the urgency of the data in order to meet the academic deadlines.

5.6 Areas for Further Research

The following directions should be followed by future researchers in regard to outsourcing of logistics activities. In future, a similar study should be conducted considering non-horticultural firms. This will serve the purpose of comparing how different industries outsource logistics practices.

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APPENDIX I: RESEARCH QUESTIONNAIRE

This questionnaire seeks to collect data on the logistics outsourcing among horticultural firms in Nairobi County. Any information given will be treated with utmost confidentiality and shall be used for academic purposes only. Kindly fill in the questionnaire.

SECTION A: GENERAL INFORMATION

1. Name of the firm? (Optional)…….

2. Nature of the firm

Cut Flowers Company [ ] Vegetables and Fruits Company [ ]

3. Gender

Male [ ] Female [ ]

4. Age Bracket in years

20-25 [ ] 26-30 [ ]

31-35 [ ] 36-40 [ ]

41 -50 [ ] 51 and Above [ ]

5. Highest level of education

Primary Level [ ] Secondary level [ ]

College Level [ ] University Level [ ]

Any other (Specify) ……..

6. What position do you hold in this organization?

a) Supply Chain Manager [ ]
b) Assistant Supply Chain Manager [ ]
c) Procurement Officer [ ]
d) Operations Manager [ ]
e) Others (please specify).....

7. How long have you been in this position?

Less than 1 year [ ]

1 - 5 years [ ]

6 – 10 years [ ]

Above 10 years [ ]

8. Size of the firm

5-10 Employees [ ]

11-20 Employees [ ]

21-50 Employees [ ]

51-100 Employees [ ]

Above 100 Employees [ ]

9.Number of years the firm has been in operation

Below 1Years [ ]

1 - 5 Years [ ]

5 – 10 Years [ ]

Above 10 years [ ]

SECTION B: LOGISTICS OUTSOURCING PRACTICES

10. To what extent has your firm adopted the following Logistics Outsourcing Practices? Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Great Extent; 5=Very Great Extent.

	LOGISTICS OUTSOURCING PRACTICES	**Respondents Ratings**				
	Human Resource Management Practices					
1.	The firm outsources work place health services	**1**	**2**	**3**	**4**	**5**
2.	The firm outsources work place safety services					
3.	The firm outsources employee recruitment services					
4.	The firm outsources employee performance management					
5.	The firm outsources payroll services					
6.	The firm outsources training and development					
	Packaging Practices					
1	The firm outsources Packaging of finished goods	**1**	**2**	**3**	**4**	**5**

2	The firm outsources design of packaging materials					
3	The firm outsources packaging compliance services					
	Information Technology Services	**1**	**2**	**3**	**4**	**5**
1	The firm outsources order processing system					
2	The firm outsources inventory control system					
3	The firm outsources IT maintenance services					
4	The firm outsources its payment management system					
5	The firm outsources ERP system					
	Warehousing Practices	**1**	**2**	**3**	**4**	**5**
1.	The firm outsources the storage of its flowers materials.					
2.	The firm outsources the storage of its unfinished products					
3.	The firm outsources the storage of its finished products					
4.	Dispatching of orders is done in outsourced warehouses					
5.	Processing of orders is done in outsourced warehouses					
	Transportation Practices	**1**	**2**	**3**	**4**	**5**
1	The firm outsources transportation of its finished goods to warehouses					
2	The firm outsources transportation of its raw materials					
3	The firms outsources electronic system to track transportation vehicles					
4	The firms outsources customer order delivery services					
	Inventory Management Practices	**1**	**2**	**3**	**4**	**5**
1.	The firm outsources inventory forecasting					
2.	The firm outsources inventory demand management					
3.	The firm outsources inventory planning and replenishment					
4.	The firm outsources inventory auditing services					
5.	The firm outsources inventory tracking services					
6.	The firm outsources lead-time analysis					
7.	The firm outsources reduction services					

SECTION C: FIRM PERFORMANCE

11. How do you rate the performance of your firm? Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Great Extent; 5=Very Great Extent.

Outsourcing Human Resource Management Practices has led to:

Performance Parameters	**Respondents Ratings**				
	1	**2**	**3**	**4**	**5**
Increased efficiency					
Increased Customer Satisfaction					
Improved product quality					
Reduction in operational cost					
Reduction in lead time					
Timely Delivery of orders					

Outsourcing Packaging Practices has led to:

Performance Parameters	**Respondents Ratings**				
	1	**2**	**3**	**4**	**5**
Increased efficiency					
Increased Customer Satisfaction					
Improved product quality					
Reduction in operational cost					
Reduction in lead time					
Timely Delivery of orders					

Outsourcing Information Technology Services has led to:

Performance Parameters	**Respondents Ratings**				
	1	**2**	**3**	**4**	**5**
Increased efficiency					

Increased Customer Satisfaction					
Improved product quality					
Reduction in operational cost					
Reduction in lead time					
Timely Delivery of orders					

Outsourcing Warehousing Practices has led to:

Performance Parameters	**Respondents Ratings**				
	1	**2**	**3**	**4**	**5**
Increased efficiency					
Increased Customer Satisfaction					
Improved product quality					
Reduction in operational cost					
Reduction in lead time					
Timely Delivery of orders					

Outsourcing Transportation Practices has led to:

Performance Parameters	**Respondents Ratings**				
	1	**2**	**3**	**4**	**5**
Increased efficiency					
Increased Customer Satisfaction					
Improved product quality					
Reduction in operational cost					
Reduction in lead time					
Timely Delivery of orders					

Outsourcing Inventory Management Practices has led to:

Performance Parameters	**Respondents Ratings**				
	1	**2**	**3**	**4**	**5**
Increased efficiency					
Increased Customer Satisfaction					

Improved product quality	**1**	**2**	**3**	**4**	**5**
Reduction in operational cost					
Reduction in lead time					
Timely Delivery of orders					

SECTION D: ENABLERS OF LOGISTICS OUTSOURCING

11. To what extent do the following enablers promote logistics outsourcing in your firm? Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Large Extent; 5=Very Large Extent.

Enablers of Logistics Outsourcing	**Respondents Ratings**				
	1	**2**	**3**	**4**	**5**
Information technology					
Focus on core competencies					
Globalization					
Financial incentives					
Improved productivity					
Streamlined operations					
Improved service to customers					
Innovation					

What other enablers promotes logistics outsourcing in your organization?

_____

_____

_____

SECTION E: CHALLENGES OF LOGISTICS OUTSOURCING

12. To what extent does your organization face the following challenges when doing Logistics Outsourcing? Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Large Extent; 5=Very Large Extent.

Challenges of Logistics Outsourcing	Respondents Ratings				
	1	2	3	4	5
Increased competition due to information leaks					
Compromised product and service quality					
Negative impact on employees through reduced morale					
The risk of discontinuity in the service delivery					
The risk of incompetent suppliers of the products as well as services					
Supplier complacency over time					
Loss of control e.g. interferences with a firms data privacy					
Outsourcing critical components to suppliers may open up opportunities for competitors					

What other challenges does your organization face when outsourcing procurement practices?

_____

_____

_____

THE END

Thank you for participating in this study.

APPENDIX II: LIST OF CUT FLOWER, VEGETABLE AND FRUIT COMPANIES IN NAIROBI

No.	Cut Flowers Companies
1	Alora Flowers Ltd.
2	Bawan Roses Ltd
3	Beverly Flowers Ltd.
4	Carzan Cultures Ltd.
5	Charm Flowers Ltd.
6	Erikasiti Flowers Ltd.
7	Logonot Horticulture farm
8	Magana Flowers
9	Mosi Ltd.
10	Terrasol Ltd.
11	Suera Flowers Ltd.
12	Sander (K) Ltd.
13	Subati Ltd.
14	Red Hill Flower Ltd.
15	Primarose Flower Ltd.
16	P. J. Dave Flower Ltd.
17	Ol-Njorowa Ltd.
Source: Kenya Flowers Council (2010).	
No.	**Vegetables and Fruit Companies**
18	Avenue Fresh Produce
19	Belt Cargo Services Ltd.
20	Bud of Paradise
21	East African Growers Ltd
22	Everest Enterprise Ltd
23	Fian Green Ltd
24	Frigoken Ltd
25	Green Lands Agro Producers Ltd
26	Hill farm Fresh Produce Ltd.
27	Indu Farm EPZ Ltd.

28	Jambo Horticultural Export Ltd
29	Horticultural Exporters(1997) Ltd.
30	Mankindu Growers and Packers Ltd.
31	MboguTuu Ltd
32	Myner Exporters Ltd.
33	Sacco Fresh Ltd
34	Sunripe (1976) Ltd
35	Wamu Investments Ltd.
36	Wilham (K) Ltd.
37	Woni- Veg-Fru Exporters
38	Tropical Horticultural Products Ltd.
39	Vitacress(K) Ltd.
Source: Fresh Produce Exporters Organization of Kenya (2011).	