

**LOGISTICS OUTSOURCING AND SUPPLY CHAIN
PERFORMANCE: A SURVEY OF UNIVERSITIES IN
NAIROBI COUNTY**

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for the Award of Master of Business Administration Degree, School of Business
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DECLARATION

This research project is my original work and has not been presented to any other institution for the award of any academic certificate.

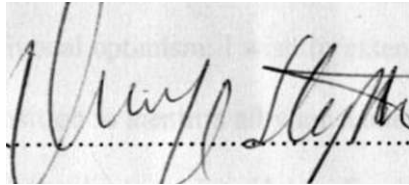


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Date

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



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The completion of this project was not easy. It was not created by the researcher alone, but relied on the cooperative assistance of many unforeseen hands. It has enabled me face new challenges of neyv situations with more confidence and broadened my analytical skills.

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I wish to offer my utmost thanks to God the Almighty for giving me the strength, health, sound mind and all that He provided during this period. Know it's in Him, by Him and through Him that I came to the completion of this programme in good time, thank you God.

DEDICATION

To my parents, Joseph and Miriam

Who taught me the value of education, for their inspiration and dedication and believing in me even when I did not know that I could do it.

My dear wife, Dotty

For your support and encouragement during the entire period of study

My son Jeff Junior

You are my main focus; you give me reasons to want to press on to higher levels. You make me laugh even when I am burnt out. God bless you.

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ABSTRACT

The study sought to determine logistics outsourcing practices among universities in Nairobi in County. The study surveyed the logistics outsourcing practices being used by the universities by collecting primary data through self administered questionnaire. In order to acquire such information a study was undertaken from among universities in Nairobi County. Data was analyzed using descriptive statistics and regression analysis. Although the study found house transport being the most common, it was evident that logistics outsourcing improves supply chain performance. All the universities that were surveyed outsourced some of their logistics functions though at varying degrees.

The study concludes that there exists a drive towards the use of logistics outsourcing as a strategy to reduce costs, to pursue core business activities, reduce risks and gain competitive advantage. The advantages of logistics outsourcing cannot be gainsaid and its effects on the supply chain is tremendous. The survey also established some of the challenges faced by universities as they moved to outsource their business activities; these included loss of control of the activities, students non cooperation, industrial unrests, switching costs, loss of information to competitors and resistance to change by the stakeholders.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Research

The global nature of business has forced most companies to recognize the critical role of back end operations of a logistics supply chain. As firms focus on production, marketing, Human Resource Management and finance, greater attention is required to achieve customer satisfaction through efficient logistics (Sink, 1997). Management of logistics functions in modern organizations involves decision making for the complete distribution of goods and services in the marketing function (Watson and Pitt, 1989) with a view to maximize value and minimize cost and more so to enjoy and achieve efficient supply chains.

The growing awareness that competitive advantage comes from the delivery process as much as from the product (Chanzu, 2002) has been instrumental in upgrading logistics from its traditional back-room function to a strategic boardroom function (Luck & Rubbin, 2006). Among the reasons that have been proposed to explain this trend is: there is a growing need to be more responsive to customer service and market demand (Kirui, 2001). As an integrative concept that cuts across the traditional functions of the business (Christopher, 1999), logistics can deliver better customer service, that logistics activities involve a large commitment of capital and that the logistics function can be the key facilitator in the cross-functional effort towards supply chain integration (Njagi, 2011). Hence it is not surprising that concepts such as supply-chain management have now assumed strategic importance. In order to handle its logistics activities effectively and efficiently, a company may consider a number of options: it can provide the

function in-house by making the service in-house; it can own logistics subsidiaries through setting up or buying a logistics firm (Stock & Lambert, 2009) or it can outsource the function and buy the service.

1.1.1 Logistics **Outsourcing**

Logistics can be defined as the management of the movement of raw materials, work in progress, finished goods, resources, parts, funds and information across the supply chain in order to satisfy customer needs. It integrates functional activities like transportation, inventory management, warehousing, material management and packaging of goods. On the other hand, outsourcing can be defined as the means through which an organization contracts out activities which were previously performed in-house or activities that the organization deems necessary to be performed by another independent organization that has more expertise and more importantly can provide the same service at a relatively lower cost (Lysons & Farrington, 2006).

Outsourcing, third-party logistics and contract logistics generally mean the same thing, Africk *et al* (1996), define them as multiple logistics services provided by a single vendor on a contractual basis. According to (Lieb *et al.*, 1993) outsourcing may be narrow in scope and limited to one type of service (e.g. warehouse) only. There is no difference between outsourcing logistical functions and any other procurement process. Like a reliable supplier of materials and parts, contract logisticians should also provide a high level of customer satisfaction so that their clients can become a tougher competitor. Traditionally handled by the firms internally as support functions, logistics activities such as transportation, distribution, warehousing, inventory management,

- order processing, and material handling have been given low priority compared with
- the other business functions (Bradley, 1994).

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However, the need for developing sustainable competitive advantage, the growing emphasis on providing good customer service effectively and efficiently, the strategic value of focusing on core businesses and re-engineering has resulted in the evolution of contract logistics which is very different from traditional logistics (Sheffi, 2000). Outsourcing allows a company to concentrate on its core competencies, save money, increase flexibility and manage effective growth. Once the non-core activities are given to the experts to manage, the company is left with the task of managing its core activities. If successfully managed, outsourcing will also help reduce the cost of doing business and benefit from the use of knowledge and technical resources of another organization to achieve an organizations' goals. However, companies need to carefully consider whether the benefits of outsourcing a function outweigh the cost. The process of outsourcing will therefore needs to be properly managed and monitored if it's to achieve its desired objectives (Stock & Lambert, 2009).

Globalization of businesses is viewed as the most prominent driver of outsourcing (Sheti, 2000) this can be attested by the growth of global markets and outsourcing practices. The practice has since led to increased demands on logistics operations (Elmuti, 2000). Other drivers of outsourcing are; improved productivity, mergers and acquisitions that require keeping assets away from the books, since the assets used are those of the service providers (Stock & Lambert, 2009).

Outsourcing practitioners recommend outsourcing of non-core business roles to 3rd party service providers who have expertise, the letting of the functions to experts will free the business to focus on its strengths and future strategies, improve efficiency and customer service and gain competitive advantage. According to Sople (2011) the term logistics originated from the Greek words "logistikos" and word "logisticus", translated to mean the science of computing and calculating. On the other hand, Kotler (2009) defines logistics as the planning, controlling and implementing of physical flows of materials and finished goods from the point of origin to the point of use. Logistics gained importance and popularity during the Second World War in the army operations as a terminology of moving, people, supplies and equipment over the border. Today however, though not a core function for most organizations, logistics is considered as a major integrating operational tool for every business undertaking (Stock & Lambert, 2009).

1.1.2 Supply Chain Performance

The word performance is an evasive concept and may be interpreted differently by different people; performance can be defined as the ability to perform or capacity to achieve desired results (Serem, 2002). Supply chain performance seeks to establish the productivity of the supply chain through measuring of the whole supply chain instead of focusing on the functional units.

There is an emergent requirement to focus on the performance of the supply chain. According to Sharma (1995) the commonly used measures of supply chain performance are the balance score card and SCOR model. The supply chain

performance is measured at multiple levels and assigned **five** categories of metrics to level one of this model; reliability, responsiveness, flexibility.

1.1.3 Outsourcing in Universities in Kenya

Outsourcing today is in every sector of the economy. It is a common business practice in organizations that are public, private, profit and not for profit. It has widely been viewed to be an effective opportunity for organizations to reduce expenditures, free-up capital resources, improve service quality and focus on their primary activities. Sang (2010) notes that both public and private universities in Kenya have embarked on rapid expansion programmes and setting up of satellite campuses due to rising enrollments.

Mwiria (2010) notes that the Kenyan government has been allocating significant capital resources to develop higher education, promote socio economic and political development. This is evident by the increase in the number of state owned universities founded over the past ten years, the private sector has not been left behind, over the same period they have also set up institutions of higher learning with diverse sets of infrastructural facilities including educational and administration buildings, students and faculty housing, utilities and services networks, transport fleets, security, catering services etc.

Although not popular in Public Universities in Kenya, some of the local universities have made significant strides. The University of Nairobi, Kenyatta University, USIU-Nairobi, Daystar and Nazarene Universities have outsourced most of their non-core activities like logistics and transport services, cleaning, laundry, security, catering, health facilities, management of revenues, etc, this has allowed them to focus on their core functions which improved service delivery in return. More importantly, saved

them costs due to efficient management. However one area that most universities have refused to let go is transport and logistics as they still maintain large fleets of buses, and trucks. The main purpose of this research is to demonstrate how the universities in Kenya can improve their supply chain performance if they sought to outsource logistics.

1.2 Statement of the Problem

Outsourcing of the logistics function is today viewed as a major means of cost saving, a tool to competitive advantage, a risk medium, a strategic competitive tool as well as a means to creation of synergistic partnerships and strategic alliances among firms (Stock & Lambert, 2009). An increasing number of companies are outsourcing their functions, particularly in the non core business areas, universities have not been left behind, in a bid to save cost, achieve competitive advantage, reduce risk and as a strategic competitive tool they are outsourcing most of their non core activities such as catering, security, cleaning, maintenance of plant and machinery, transportation, logistics, health services, garbage disposal among others in order to concentrate on their core mandate of, teaching, learning and research.

In the wake of a large demand for logistics services given the increasing number of student enrollment each year, diminishing financial resources, the need to provide quality services to their clients and the need to be frugal in expenditure, universities have opted to outsource transport and logistics services to and from their campuses (Sang, 2010). Although the practice of outsourcing in Kenyan universities is still at its infancy stage, it has gained ground in other sectors like banking, manufacturing and the hospitality industries. Sang (2010) points out that universities in Kenya that have

outsourced their non core activities have achieved greatly in terms of, significant time and cost savings, improved security, improved cleanliness and garbage collection and less involvement in personnel matters. This has had a great impact on their supply chain performances and service delivery. However, these approach has not been without challenges viz loss of control on the logistics function, loss of command on service delivery, information leakages, loss of employee loyalty, over reliance on service providers, low quality works etc.

A number of studies have been done on outsourcing. For example Kirui, (2001), conducted a study on competitive advantage through outsourcing of noncore logistics activities within the supply chain of British American Tobacco (BAT) and found out that BAT has fully outsourced all logistics services in Kenya and that outsourcing their logistics functions has led to a significant reduction in costs and increased customer service. He further noted that strong or poor internal logistics capability influences the use of logistics outsourcing, which, in turn, influences firm performance.

Goldestein *et al* (1993) and Gleiner (1997) studied outsourcing in institutions of higher learning and established that colleges have traditionally limited the outsourcing practice to book stores and catering services. He further noted that a small but increasing number of universities and tertiary colleges are expanding the practice to cover ICT services, halls of student residences and institutional management services like payroll administration.

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Peterson (1995) did a study on contract services for higher education in the USA and revealed that more than 40% of logistics functions and more than 60% of catering

facilities are operated by outsourced firms. Further more than half of the colleges and universities surveyed, outsourced at least five services. The study further revealed that the most commonly outsourced services were catering, transport, laundry, logistics and customer care. Although some related studies have been conducted in Europe, Saudi Arabia and the United States on this subject, to the best knowledge of the researcher, to date, there is no study that has examined logistics outsourcing and supply chain performance in Kenyan universities. Particularly, the research sought answers to the following questions: what is the impact of logistics outsourcing on supply chain performance? What are the challenges to logistics outsourcing in our universities? What lessons can be drawn from the experiences of public universities that engage in outsourcing? These questions were answered through a survey of all universities in Nairobi.

1.3 Objectives of the Study

The general objective of this study was to establish the role of logistics outsourcing in the supply chain performance among universities in Nairobi County. However the specific objectives were:

- (i). To establish the impact of logistics outsourcing on supply chain performance.
- (ii). To establish the challenges facing universities those have outsourced their logistics operations.

1.4 Value of the Study

The findings of the study will be useful to scholars, academicians, managers and varsity heads. Scholars and academicians will find the study results useful as a source of

reference. The study is expected to contribute significantly to supply chain as a body of knowledge.

The findings of the study will provide insight for managers in Universities when confronted with the decision of whether or not to outsource services in their campuses. Managers and varsity heads may also find the study results useful as a tool for decision making. Third party logistics service providers may also find the material useful in assessing their competitive advantage and a chance to explore new business opportunities.



CHAPTER TWO: LITERATURE REVIEW

I

2.1 Introduction

This chapter introduces the review of conceptual and theoretical literature relating to logistics outsourcing and supply chain performance. It encompasses both theoretical and empirical literature.

2.2 Logistics Outsourcing

Outsourcing of logistics services is becoming more popular and relevant today more so in the wake of globalization and emergence of thirds party service providers who are highly specialized and who can offer the same service at a significantly lower cost. Organizations have also embarked on outsourcing in order to concentrate on their core business. In general the outsourcing trend has been on the rise in the 21st Century, for instance in a 1995 survey of the chemical industry in the United States of America, it was established that the average number of outsourcing partnerships per company grew from 1.5 in 2005 to 5.5 in 2008 (Elliot *et al.*, 1999).

The growth of the logistics outsourcing is also credited to the desire by organizations to obtain cost savings by outsourcing their non core activities and to gearing all their efforts and resources on their core competencies as advocated by Michael Porter. As indicated by Elliot *et al.* (1999) the major drivers of the outsourcing decision are the market and firm characteristics. In a number of organizations, the logistics outsourcing has been adopted as a corporate strategy and has become a major source of distinctive and competitive advantage especially in the service based industries. According to Rabinovich (1999) organizations that have outsourced their logistics functions have

gained between 30% and 40% savings from the logistics operation costs. It has further enabled them to streamline logistic services by enhancing service delivery and customer satisfaction.

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It is important to note that, not all of the logistics outsourcing arrangements are successful as some have failed miserably. These unsuccessful relationships have been attributed to unclear goals and unrealistic expectations, internal sabotage by managers and employees, and flaws in the contractual agreements linking the parties involved (Sople, 2011). The success of outsourcing arrangements depends heavily on the management skills of the firms engaging the services of third party logistics providers.

2.2.1 Objectives of Logistics Outsourcing

Logistics outsourcing aims to achieve a number of objectives, they include but not limited to: reduction in capital investment in facilities; the need to allow the using firm greater flexibility in adapting to changes in the market and access to leading edge technology and effective management of inventory as Firms only need to contract for the necessary level of service to meet current demand (Lieb, 2002). When demand increases beyond the capability of a firm to fulfill, a third party may be called in to help the firm (Wood, 2004).

By coordinating production and logistics schedules, logistics outsourcing reduces inventory and improves inventory turnover rate (Lambert, 2009) resulting in faster transit times, less damage, and less paper work. Contract logistics also enables firms to respond quickly to marketing, manufacturing, and distribution changes and helps to improve on-time delivery (Lynch, 1994). Third-party logistics users generally agree that it costs less to use such firms than to carry out the same functions in-house (Lieb,

2002). Logistics being their core business, these firms can lower costs by being more efficient than a manufacturer. Since the use of an outside multiple service provider reduces the needed multiple service contacts for the firm to a single point of contact (Sheffi, 1990), coordination costs are also reduced.

2.2.2 Drivers of Logistics Outsourcing

The concept of logistics outsourcing is driven by a number of factors which include: Globalization of businesses, improved productivity, cost reduction, improved customer service, downsizing, mergers and acquisitions and availability of Third Party Logistics Providers (Stock & Lambert, 2001). Leading edge companies the world over are moving in to utilize the benefits accompanied by these drivers of outsourcing and hence thriving in the benefits of this phenomenon (Cooper, 1993). They include globalization of business, improved productivity, mergers and acquisitions, technology and innovation, availability of 3PL service providers among others.

Globalization of businesses is viewed as the most prominent driver of outsourcing (Sheffi, 2000). These effects can be attested by the growth of global markets and international outsourcing practices. Globalization of business activities has further led to increased pressure on the logistics practitioners as they seek to uphold the course of their business undertakings (Cooper, 1993). Productivity improvement results from the level of specialization and expertise by the 3PLs. Companies outsource their services in order to improve customer service, efficiency and greater service integration, economies of scale and cost savings and access to competencies (Ravi, 2001).

Mergers and acquisitions are among the major drivers of logistic outsourcing, they enable a firm to expand its market share, channels of distribution, product portfolio,

acquire or invest in strategic business units (SBU's) which will offer specialized service to the sister agencies as well as other industry players (Lambert, 2009). Availability of 3PL service providers is a clear driver of outsourcing in that, various outsourcing firms can be linked to a consortium of consumers of third party service providers hence; gain the benefits at a reduced cost of developing or owning similar techniques. Firms that join such a league will be in a position to gain economies of scale as well as expertise from among the experienced members. Small firms will also have a chance to consolidate resources thereby benefit from the resulting synergies such as consolidation and bulk breaking among other benefits (Bradley, 1995).

2.2.3 Challenges of Logistics Outsourcing in Universities

Outsourcing of the logistics function is not necessarily a solution to all logistics problems in the universities and therefore the process ought to be handled with due diligence so as to avoid further problems in the provision of logistics. The major challenges in outsourced logistics with third party logistics providers include but not limited to; switching cost, degree of control, human and electronic interface, tuning logistics services to the needs of channel members, degree of outsourcing and legal aspects of outsourcing (Sople, 2011).

Outsourcing of the logistic operations leads to the reorganization of the existing assets to adapt to a new operating structure as set out by the service provider. The reorganization will have an effect on; the management of the universities existing assets wholly or partly, deployment of the assets on lease to the service provider and or divesting the assets and fully switching to the usage of infrastructure offered by the service provider. Failure of the reorganization to pick up will result in a reverse of the

forward switching process and will be costly and time consuming for the universities given their resource constraints (Komen, 2005).

Switching cost involves high risk levels as much as outsourcing of logistics reduces the logistic costs substantially. Switching cost over to another service provider or to the original system in case of partnership breakup will cause bigger losses in terms of time in stabilizing the new system, fall in customer service during the transition period and erosion of customer base due to unreliability experienced in the service by clients (Bradley, 1995). Given that universities are operating in a highly competitive environment, this may result to loss of customers, inordinate delays- an expensive mistake.

There is usually a fear of the unknown by staff and management of the loss of control over suppliers (Fawcett, 2003). The level of control of the operations by the parties has to be defined beforehand as desired by the end user. Direct control over the service provider's employees is not guaranteed. However, the outsourcing firm has to ensure that services are provided in a timely manner and that information through designated channels of communication is well coordinated among the partners in the supply chain for it to flourish.

A problem may arise out of the mismatch of technologies being used by the outsourcing university and that of the service provider. For example, 3PL service providers may have expertise on such techniques as Electronic Data Interchange (EDI) but members of the outsourcing universities do not have the interface and knowledge of the same techniques. This will result in a failure to achieve the intended goals by the

partnering organizations. The same will amount into wastage, poor customer service, unsatisfied university clients and staff and delayed service delivery (Chanzu, 2002).

Contracting out an activity to a third party also leaves the universities' management vulnerable due to loss of control of the operations of the activities being performed by a third party provider as the latter assumes full control of the service (Bradley, 1995). Moreover, Sopple (2011) notes that the management loses command on service delivery as the involvement and control of management decreases when the outsourcing firm comes into the fray.

Bryne (2003) notes that engaging in outsourcing arrangements may cause leakage of confidential information to a competitor through the outsourcing firm who may be engaged in multiple contracts with competing universities, this may further lead to lack of trust and loss of business. Sang (2010), notes that contract staff may have less loyalty to the client organization than if they were employed directly by the organization. Therefore, they express disappointment with the resulting low quality of work. Sang further affirms that another challenge to outsourcing has to contend with is staff retrenchment and the resulting negative impact on institutional morale; this is likely to precipitate to low employee loyalty and disintegration of internal conflict.

A university that ventures into outsourced logistics operations in full or in part will be dictated by among others, the existing logistics infrastructure of the university, management policy for third party involvement and the anticipated benefits. This will have an effect on the existing university's facilities and the resources. The need to utilize or dispose off the existing resources may prove to be a daunting task to the

partnering firms. The decision to outsource all or some of the existing functions may require a gradual measure due to unforeseen implications to the organization members (Maghanga, 2011).

Many outsourcing firms lack the necessary technological infrastructure which is compatible with that of the clients. This may have a negative impact on the level of communication and information transfer between the partner organizations. In developing countries for example multinationals have had to re-design their internal logistics systems so as to fit in the environment. The benefits of a good technological investment may fail to add value due to lack a supportive external environment (Luck, 2004).

Lack of supportive environment perhaps provides the greatest challenging for universities especially state owned universities. According to Sang (2010), there is a lot of pressure from trade unions, lobby groups, surrounding community and the government at large to have public corporations maintain large noncore staff on the payroll as opposed to outsourcing them. This therefore makes it difficult to implement any outsourcing agenda.

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2.3 Supply Chain Performance

Performance refers to a degree of accomplishing a task that make up a specific job. It reflects the degree of fulfilling the requirement of a job and it is measured in terms of results (Rubin, 2002). The word performance is an evasive concept and may be interpreted differently by different people. Performance can be defined as ability to perform or capacity to achieve desired results (Luck, 2006). Performance then needs to be measured during a time period in line with an expectation, promise or target.

Competition is a major upheaval that is affecting every aspect of how supply chain networks are organized and operated. Moreover we are in the midst of fundamental revolution in the nature of business and thus if an individual enterprise wants to thrive in this new landscape, it has to understand how the supply chain networks work and how to make them work better. A key feature of present day business is the idea that it is the supply chain that competes, not the companies and the success or failure of the supply chain is largely determined in the market place by the customer (Stock, 2001).

2.3.1 Logistics outsourcing and Supply Chain Performance

Measuring supply chain performance can facilitate greater understanding of the supply chain and improve its overall performance (Ravi, 2001). There is an emergent requirement to focus on the performance of the supply chain. According to Sharma (1995) a number of factors affect the supply chain performance, they include but not limited to logistics outsourcing, external environment, use of requisite technology, top management support etc.

According to Sang (2010) the decision to contract a third party provider to provide a logistics and shuttle services on behalf of the organization rather than offering them in house reduces costs and improves the logistics operations. He adds that for any supply chain to remain competitive and to improve service delivery in the face of declining resources it has to outsource non core functions like logistics and transportation. Bendor-Samwel (1998) assert that outsourcing of the logistics function enables a supply chain to be competitive through economies of scale due to mass production by the third party provider, process expertise as a result of the third party provider having

more experience in the service provision, and access to advanced and updated technology, etc.

A supportive external environment, according to Sang (2010), provides an enabling environment for the implementation of any outsourcing policy. He points out that the external environment like pressure groups from trade unions, governments, lobby groups, surrounding communities who prefer to have employees on the organizations' payroll result in piecemeal implementation of an outsourcing policy, logistics or otherwise. This will hinder the organization from cost reduction, improved efficiency and boosting performance of the supply chain. According to Sople (2011), a supply chain efficiency and effectiveness are a direct result of cost reduction and a supportive external environment in the implementation of the outsourcing policy.

Supply chain technology (SCT) as a tool does not only improve the effectiveness and efficiencies of the supply chain but also act as a competitive weapon to the organizations' strategy e.g. logistics outsourcing (Ravendran, 2002). It coordinates and integrates information flows electronically throughout the supply chain network. SCT provides partners and customers in both directions with an opportunity for effective and efficient business transactions, quick access to information, better customer service, reduce paperwork, better communication, increased productivity and saves time. Some of the supply chain technologies that can boost supply chain performance include, enterprise resource planning (ERP), supply chain planning systems (SCP), manufacturing execution systems (MES), warehouse management systems (WMS), transportation management systems (TMS), extranets, radio frequency identification systems (RFID), geo-coded tracking systems (GCTS), supply chain event management

(SCEM) and demand forecasting management systems (DFMS) (Helo and Szekely, 2005). One of the visible effects associated with supply chain technology on supply chain performance is the integration of services such as transportation and warehousing with information based services like booking, freight rate computation, routing and scheduling.

According to Premkumar *et al.* (2007) top management support ensures effective implementation of organizational policies. It ensures involvement, cooperation and commitment of all members in the successful implementation of the logistics outsourcing policy. These members may have complex economic and business relationships between themselves and the organization that result in a number of social, political, and economic factors influencing the performance of the supply chain. An all inclusive approach in logistics outsourcing leads to elimination of narrow focus of managers and the adverse relationship between logistics providers, suppliers, and customers at the exclusion of other players in the supply chain hence improved supply chain performance (Williams, 2009).

2.4 Impact of Logistics Outsourcing on Supply Chain Performance

Although there is little research and evidence on the impact of logistics outsourcing in universities, there is enough literature from other sectors that show that there is more to gain than lose from logistics outsourcing. Logistics outsourcing can contribute to organizations profitability by ensuring that a firm is able to achieve the five rights (5R) of purchasing, i.e. right time, right place, right quality, right price and right quantity this in turn results to a strong and more efficient supply chain which enables users to gain competitive advantage, adding measurable value to products, enhancing customer

service, assisting in opening new markets, and providing dedicated resources (Agure, 2006). Therefore the outsourcing of logistics can improve organizations' operations through reduced lead times and enhanced value creation for organizations leading them to become more competitive and profitable through speedy and superior customer service and thus improving the supply chain performance.

Value creation involves the understanding of the dynamic interaction within the customer's supply chain. One of the most important reasons for employing third-party logistics providers is their ability to provide their clients with expertise and experience that otherwise would be difficult to acquire, or costly to have in-house (Byrne, 2003). Their expertise gained from working with other clients allows users to benchmark against other companies and may lead to opportunities to lower costs and improve customer service hence an opportunity for innovations. It is believed that a contract logistics company with national and regional expertise can even provide a customer a local image even though that company may have no local presence in assets and employees (Bradley, 2006) as such the impact of logistics outsourcing on a supply chain cannot be gainsaid since it has a direct bearing on its performance.

According to Luck (2004), the use of contract logistics frees management time hence firms spend more time pursuing strategic issues, and focus on their core business, rather than on logistics which is a non core activity. Luck further asserts that logistics reduces overhead costs associated with maintaining in-house inventories and warehousing. Other impacts logistics outsourcing and supply chain performance include, increased supply chain visibility and risk reduction.

2.5 Summary of literature Review-

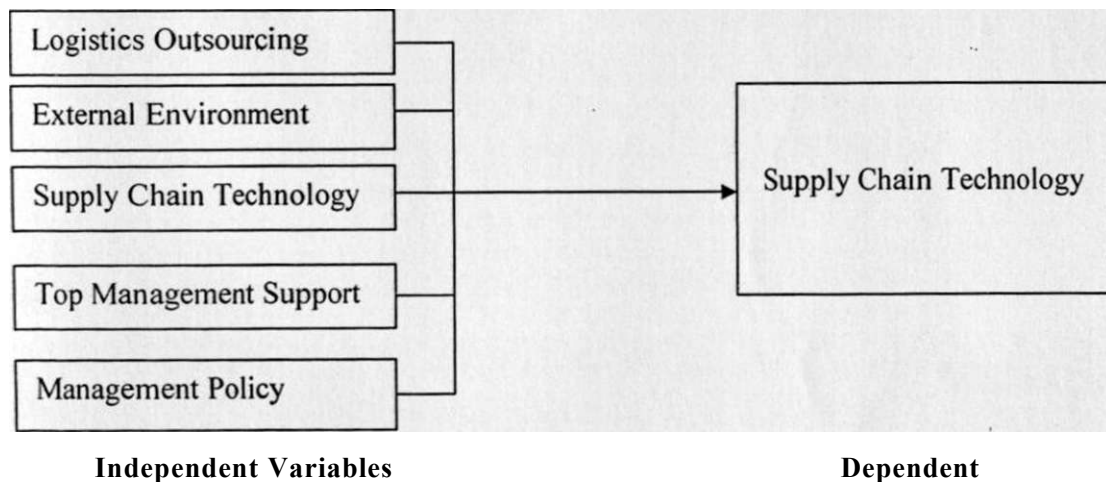
Sang (2010) carried out a study on the challenges and opportunities of outsourcing in universities in Kenya and found out that although the practice of outsourcing in Kenyan universities is still at its infancy stage and that universities in Kenya that have undertaken to outsource their non core activities have achieved greatly in terms of, significant cost and time savings, improved security, improved cleanliness and garbage collection and less involvement in personnel matters. Kirui (2001), conducted a study on competitive advantage through outsourcing of noncore Logistics Activities within the supply chain of British American Tobacco (BAT). Goldestein *et al.* (1993) and Gleiner (1997) studied outsourcing in institutions of higher learning in the USA and found out that a small but increasing number of universities and tertiary colleges are expanding the practice to cover ICT services, halls of student residences and institutional management services like payroll administration. Peterson (1995) studied contract services for higher education in the USA. The literature has shown quite a number of studies have been done in the both locally and internationally on logistics outsourcing. Assaf *et al.* (2010) did a survey of Saudi universities established that Saudi universities generally acknowledge the importance of transport and logistics outsourcing and that Saudi Arabia universities have "increased the speed of implementation and service delivery, improved quality and " shared risks with 3PL's. However among the studies reviewed none has sought to investigate logistics outsourcing and supply chain performance. Most studies have only focused on outsourcing as a concept hence narrow in scope. This study is therefore unique to that

extent and will seek to bridge this gap and provide knowledge to various users for decision making.

2.6 Conceptual Framework

Supply chain performance is influenced directly by outsourcing activities. This can be found in the literature (Stock & Lambert, 2009). These extend the traditional examination of the supply chain function activities stressing on factors such as objectives of outsourcing, the drivers of outsourcing, the impact of outsourcing and the challenges facing logistics outsourcing (Luck and Rubin, 2006).

Figure 2.1 Conceptual Model



variable

Source: Researcher, (2012).

For instance Lieb and Randall (2006) found that third-party logistics companies perceived growing customer interest in outsourcing as the top industry dynamics. This awareness of contract logistics' role has been instrumental in compelling the logisticians to learn to adapt to this new intrusion into their territory (Hussein, 2006). Since firms can often replicate or improve on a competitor's offering with relatively

little difficulty, gaining sustainable advantage through product differentiation is rare. Also, it is harder to compete on manufacturing excellence alone. Outsourcing can contribute to profits by enabling users to gain competitive advantage, adding measurable value to products, enhancing customer service, assisting in opening new markets, and providing dedicated resources (Komen, 2005).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the overall methodology that was used to carry out this research. It embodies; the research design, the research population, sampling design, data collection methods, research procedures and the methodology that the researcher employed in the study.

3.2 Research Design

The study adopted a survey design method in determining the outsourced logistics practices among universities in Nairobi. This method was considered to be the most suitable research method for the study since the objective of the study was to seek answers from specific questions from a large number of respondents. A number of researches have revealed that the survey method is the most appropriate in such a study (Gay, 2010).

3.3 Population

The population of the study consisted all the 24 universities in Kenya and their campuses in Nairobi county- both public and private universities. This is because Nairobi is the socio economic and political center of Kenya and a majority of these universities have opened campuses in Nairobi County. The facts studied did not vary substantially by regions across the country thus allowed for generalization of the results (Lipe *et al*, 2002) (See appendix III).

3.3 Data Collection

The main tool for data collection was a structured questionnaire, which consisted of both open and close ended questions. Target respondents were heads of the operations,

procurement and supply chain, logistics/transport managers, and their or campus head/coordinators in case of satellite campuses. Five (5) questionnaires were dropped and picked later from each of the respective universities and campuses.

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The questionnaires was divided into four sections; section A will sought to collect information about the profiles of respondents and the organizations they represent while, section B and C will sought to address aspects related to logistics outsourcings, practices and challenges. A letter of introduction was issued to each respondent prior to the research. (See Appendix 1 for the introduction letter and appendix II for the Questionnaire respectively).

3.4 Data Analysis

Upon the completion of the data collection process, the completed questionnaires were inspected for completeness, edited for errors and omissions before being coded and the data captured on instances where corrections will not be plausible, the questionnaires were discarded.-The data was then organized and summarized using a combination of descriptive statistics. Categorical analysis was done on all key data to yield ordinal data. All the data in section A of the Questionnaire was measured on a nominal scale quantified using dummy variables for purposes of doing higher levels of analysis. Daniels (1995) described a dummy variable as a variable that assumes only a finite number of values such as 0 or 1 for the purpose of identifying the different categories of a qualitative variable. This implies that the variables did not have quantitative values.

To establish the impact of logistics outsourcing in supply chain performance in universities regression analysis with the equation ($Y = p_0 + P_1X_1 + P_2X_2 + P_3X_3 + P_4X_4 + \epsilon_j$) was used. Where; Y is the dependent variable (supply chain performance), $X_{i..n}$

are independent variables i.e. X_1 is Logistics outsourcing, X_2 Management policy, X_3 Adequate technology, X_4 is the supportive external environment etc e_i is a random variable, error term that accounts for the variability p_0 is a constant, $P_{i,p}$ are the regression coefficient. Measures of central tendencies like frequency distribution, means and standard deviation were also used, utilizing data captured in section B of the questionnaire.

To establish the challenges facing universities that have outsourced logistics, data captured in section C of the questionnaire was analyzed using means and standard deviations. Content analysis was used to analyze qualitative information collected in the study. This was used to support the results of quantitative analysis in drawing conclusions and recommendations. The results and findings of the analysis are presented using tables and charts. Finally, an analysis of the results obtained from the survey was done to make comparison between the existing the literature about the problem and the actual fact on ground and then sought to know why universities are still shying away from the outsourcing and finally recommended on possible solutions that can be employed in this respect.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents analysis, interpretations and findings of the study as set out in the research methodology. The analysis is both quantitative and qualitative. The chapter is structured according to the questions in the questionnaire and provides discussion of the findings together with their implications. The results are presented on role of logistics outsourcing and supply chain performance in universities in Nairobi, Kenya. The data was gathered exclusively from questionnaire as the research instrument. The questionnaire was designed in line with the objectives of the study. Moreover the additional data and observations, gained from the survey have been incorporated into the discussion.

The study sampled 124 respondents in 24 universities from the target population. Out of the targeted 124 target respondents in 24 universities, 65 responded by completing the questionnaire, thus achieving a response rate of 52.43 %. According to Nassiuma (2002) only a response rate above 35% is robust enough for statistical sensible analysis. This response rate was considered statistically sufficient for further analysis.

To ensure accurate data collection, the respondents were first notified of the study and the questionnaire was administered on a drop and pick basis. Follow ups were done by means of telephone calls to expedite the process.

4.2 Demographic Data

The study sought to find out the distribution of the respondents' university on the type of university. Private universities accounted for the highest response rate at 77% while Public universities accounted for only 23% of the responses. The poor response from public universities was attributed to the industrial unrest by universities' that was going on during the data collection process.

The study further sought to establish the number of years their respective universities have been operating in Nairobi County. Analysis revealed that, most of the respondents' universities have been in Nairobi County for less than 5 years. 5 have been around for 0-2 years, 6 have been around for 2 to 5 year. Those that have been in the county for 5-10 were 4 and for over 10 years were only 3. This represents 28 percent, 33 percent 22 percent and 17 percent respectively of the total number of universities in Nairobi County.

4.3 Reasons for Logistics Outsourcing

The study sought to establish the main reasons for logistics outsourcing among universities in Kenya. In these regard respondents were asked to indicate the reasons that informed their decision to outsource the functions in order of importance on a five point Likert scale where 5 represents very great extent and 1 very small extent. The results are as depicted in Table 4.1.

Table 4.1 Reasons for logistics outsource

Reasons for Logistics Outsourcing	Mean	Standard Deviation
The need to free management efforts to concentrate on core activities of the university	4.4667	0.51640
The desire to gain a competitive advantage	4.3333	0.61721
The need to reduce operating costs	4.3333	0.61721
Availability of third party logistics providers	4.2667	0.88372
Increase of mergers and Acquisitions	4.2667	0.79881
The need to improve productivity in the institution	4.1333	0.74322
Globalization of business	4.0667	0.70373
Availability of Technology and innovation in the Market	4.0507	0.03280
The need to improve customer service	3.8667	0.45733

Source: Survey Data, 2012

Table 4.1 shows that most of the respondents indicated that the need to free management efforts to concentrate on core activities of the university, the desire to gain a competitive advantage and the need to reduce operating costs were the major reasons why universities in Kenya opted to outsource their logistics functions rather than maintain their own fleets with means of 4.4667, 4.3333 and 4.3333 and standard deviations of 0.51640, 0.61721 and 0.61721 respectively. This supports the findings of (Stock & Lambert, 2001) who asserted that concept of logistics outsourcing in organization today is driven by the desire by organizations and businesses to improved productivity reduce costs and the need to gain sustainable competitive advantage. Availability of technology and innovation in the market and improving customer

service were the least influential reasons to outsource in Kenyan universities with means of 4.0667 and 3.8667 respectively.

4.4 Impact of Logistics Outsourcing

The study sought to establish the impact of logistics outsourcing in supply chain performance. Respondents were required to state the extent to which they thought logistic outsourcing has impacted on the supply chain performance in their respective universities. Respondents evaluated a list of statements on a five point scale and the outcome was captured in Table 4.2.

Table 4.2 Impact of Logistics Outsourcing

Impact of Logistics Outsourcing	Mean	Standard Deviation
Logistic outsourcing has reduced overhead costs	4.4667	0.63994
Outsourcing has improved the university operations	4.4010	0.73679
Improved customer service through shorter delivery time	4.4000	0.63246
Improved focus on core competency	4.2667	0.59362
Logistic outsourcing has reduced lead times	4.2667	0.59362
Outsourcing of logistic services in our university has freed management time wasted in managing non-core services.	4.1333	0.74322
Improved focus on core competency	3.7333	1.09978
Increased supply chain visibility	3.5333	1.30201
Leverage the delivery of core services	3.2000	1.32017
Helps maximize their resources, minimized risks and focus on issues that are critical to survival and growth	3.1667	0.63994
Reduce the need for warehouse storage and labour	3.1500	0.53679
Logistic outsourcing has improved productivity	3.1350	0.53246
Reduced inventory costs through better management	3.1267	0.52362
Enabled university gain competitive advantage	3.0667	0.49362
Logistic outsourcing has improved innovation in the university	2.9333	0.44322
Risk reduction and unused supply chain security	2.7333	0.42978

Source: Survey Data, 2012

From Table 4.2, the major impact of logistics outsourcing amongst universities in Nairobi county were financial and time savings, improved customer service and lead times, improved focus on core competency and freeing of management time wasted

in managing non-core services as ranked highest among the impacts of logistics of outsourcing with means of 4.4667; 4.4010; 4.4000 and 4.2667 respectively. This implies that most universities supply chains have benefited from outsourcing by achieving cost reduction, improved operations and reduced service delivery time. All respondents agreed "that outsourcing resulted in financial savings to their institutions hence logistics outsourcing improves supply chain performance of the universities.

4.5 Logistics Outsourcing and Supply Chain Performance

In addition, the study conducted a multiple regression analysis so as to determine the relationship between the supply chain performance and four variables (Logistics outsourcing, external environment, supply chain technology and management policy & top management support) To be able to quantify the reliability of the estimates the research made assumption of linearity, the assumption of independence (Durbin Watson test indicated a result of 2.123 meaning that there was no auto-correlation between the residual values), the assumption of constant variance (there was no outliers in the independent variables as the results were less than 0.50) and the assumption of normality (sample size was more than 30; hence met the central limit theorem). These assumptions were met to a significant extent as the results obtained were consistent to the assumptions made and hence positive and the results were depicted in Table 4.3.

Table 4.3 Coefficients of Logistics Outsourcing and Supply Chain Performance

Mode	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
(SCP)	2.869	1.279		2.243	.040
L.Outsourcing	.541	.577	.255	.938	.363
External Env.	.148	.621	.489	1.848	.084
SCT	.122	.520	.061	.235	.817
Top Mgt support & Mgt. policy	.292	.235	.337	1.245	.232

The equation ($Y = p_0 + p_1X_1 + p_2X_2 + p_3X_3 + p_4X_4 + e$) becomes:

$$Y = 2.869 + 0.541X_1 + 0.148X_2 + 0.122X_3 + 0.292X_4$$

Where Y; is the dependent variable (Supply Chain Performance), X_1 is Logistics Outsourcing X_2 is external environment independent variable, X_3 is supply chain technology independent variable while X_4 is a combination of top management support and Management Policy.

According to the regression equation established, taking all factors (logistics outsourcing, external environment, supply chain technology, management policy and top management support) will be 2.869. The data findings analyzed also show that taking all other independent variables at zero, a unit increase in logistics outsourcing will lead to a 0.541 improvement in supply chain performance of the universities' supply chains.

A unit increase in external environment influence in favor of logistics outsourcing will lead to a 0.148 increase in supply chain performance; a unit increase in supply chain technology will lead to a 0.122 improvement in supply chain performance; while a unit

increase in top management support and favorable management policies will lead to a 0.169 improvement in the supply chain performance. This infers that logistics outsourcing has more impact on supply chain performance universities in Nairobi. This findings concur with earlier studies by Bendor-Samwel (1998) who found out that outsourcing of the logistics function enables a supply chain to be competitive through economies of scale due to mass production by the third party provider, process expertise as a result of the third party provider having more experience in the service provision hence improving supply chain performance.

The study further conducted inferential analysis which involved a correlation analysis and a multiple regression analysis. The inferential analysis was intended to establish the relationship between the independent variables and the dependent variable of the study. In this study, the aspects that affect supply chain performance of the universities' include logistics outsourcing, external environment, supply chain technology and top management policies and support the results of the analysis were presented in section 4.6.

4.6 Correlation between Logistics Outsourcing and SupplyChain Perfomance

To quantify the strength of the relationship between the variables, the study used Karl Pearson's coefficient of correlation (r) to study the correlation between the study variables and the findings were as in the table 4.4.

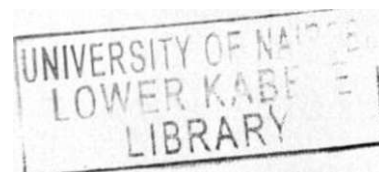
From the findings, it was clear that there was a positive correlation between supply chain performance and SCT shown by a correlation figure of 0.242, it was also clear that there was a positive correlation between supply chain performance and external

environment influence with a correlation figure of 0.103, it was further evident that there was a positive correlation between top management support and favorable management policies and supply chain performance with a correlation value of 0.143 and a positive correlation between logistics outsourcing and supply chain performance with a value of 0.119. This shows that there was positive correlation between supply chain performance and logistics outsourcing, external environment's influence, supply chain technology and top management policies and support.

Table 4.4 Coefficient of Correlation (R)

	Supply Chain. Performance	Logistics Outsourcing	External Environment	Supply Chain Technology	Top Mgt Support and Mgt. Policy
Supply Chain Performance	1	.119	.103	.242	.143
Sig. (p-Values)		.365	.435	.063	.274
Logistics Outsourcing	.119	1	.097	.362	.134
Sig. (p-Values)	.365		.461	.004	.309
External Environment	.103	.097	1	.213	.335
Sig. (p-Values)	.435	.461		.102	.009
Supply Chain Technology	.242	.362	.213	1	.260
Sig- (p-Values)	.063	.004	.102		.045
Top Mgt Support & Mgt. policy	.143	.134	.335	.260	1
Sig. (p-Values)	.274	.309	.009	.045	

Source: Survey Data, 2012



4.7 Activities and Services Outsourced by Universities

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With regard to this the respondents were required to indicate the functions outsourced by their universities. The responses showed that although logistics outsourcing is a relatively new concept in Kenyan universities, a number of private universities have outsourced the functions of shuttle services, operations, maintenance of their fleets and distribution. The findings further revealed that most outsourcing initiatives revolve around three common areas: security, cleaning and catering. The University functions that are currently outsourced in public universities are referred to as "non-controversial areas" (Lund, 1997). In these areas, universities seem to have reported success with benefits accruing in cost reduction, time saving, and maintenance of security within. In particular, public universities seem to lag behind as all of those studied maintain over 80% of their fleets.

4.8 Challenges facing Logistics Outsourcing in Universities

There are a number of challenges facing logistics outsourcing in universities. In a Likert scale of 1-5, the respondents were asked to rate the extent to which the listed factors hampered effective logistics outsourcing. The respondents were also asked to add other challenges that they perceive are affecting logistics outsourcing. However no significant additions were made by the respondents in this regard. The findings were captured in Table 4.7.

Table 4.5 Challenges of Logistic Outsourcing

Challenges of Logistics outsourcing	Mean	Std. Deviation₁
Loss of control on logistics functions	4.48	0.48795
There is loss of command on service delivery	3.50	0.0018
Information leakage occurs from service providers	3.90	0.08233
Over reliance on service providers	4.32	0.51640
Loss of employee loyalty	3.80	0.0734
Disintegration of internal conflict	3.92	0.99043
Low quality of work	4.22	0.56061
Over reliance on external parties	4.18	0.55795
Switching cost	4.10	0.5018
Fear of the unknown by staff and management	4.02	0.04233
Lack of supportive external environment	3.82	1.51640
Mismatch technologies being used by the university and logistic service provider	3.45	1.0734
The prohibitive costs of recognizing the existing processes to adopt to the new operating structure by the service provider	3.92	0.99043

Source: research data

The fear of loss of control of the logistics function, overreliance on third party logistics service providers and low quality work were rated by respondents as the most challenging issues to effective logistics outsourcing amongst universities in Nairobi, with means of 4.48; 4.32 and 4.22 respectively. On the other hand respondents indicated that the mismatch technologies being used by the university and logistic

service provider and loss of employee loyalty as the least challenging issues in logistics outsourcing with means of 3.45 and 3.80 in that order.

Additional challenges added by respondents include the sensitive nature of some services especially in areas considered to be sensitive to students who are the main clients of universities eg. In outsourcing logistics services, private companies which offer such service increase the cost in pursuit of profits. This is in contradiction of universities intentions of reducing the operating costs through the use of subsidies.

The negative attitudes by staff as some staff (correctly) view outsourcing as a threat to their jobs since some universities either redeploy affected staff to other areas or retrench those considered surplus or redundant. Lastly respondents noted that poor monitoring and evaluation characterized by lack of sufficient human resources to monitor and evaluate contractors also hamper the universities' initiative to outsource the logistics function.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings from chapter four, and it also gives the discussions, conclusions and recommendations of the study based on the objectives of the study. The objectives of this study were to establish the impact of Logistics outsourcing on supply chain performance and to establish the challenges facing universities that have outsourced their logistics operations in Nairobi County.

5.2 Summary of the Findings

This study adopted a survey design method in determining the outsourced logistics practices among universities in Nairobi. It sought answer to three main questions: what is the impact of logistics outsourcing on supply chain performance? What are the challenges to logistics outsourcing in our universities? What lessons can be drawn from the experiences of public universities that engage in outsourcing?

After evaluating several universities, it was determined that although the culture of logistics outsourcing is gaining root in higher institutions of learning, the rate of uptake in public universities is rather low as compared to private universities-of the public universities surveyed only one has outsourced the logistics functions. This was attributed to the negative attitudes by staff as some employees view logistics outsourcing as a threat to their jobs. Students' non cooperation was cited as one of the reasons for the failure to outsource the logistics function because students being the main clients of the logistics and shuttle services.

Community interference especially was also cited as a major impediment towards this course Universities with campuses in upcountry such as Egerton and Moi universities reported that they faced challenges in disengaging casual employee engaged in the transport and logistics function, mostly locals who feel that they should benefit from the university because it is based in their areas. Indeed respondents explicitly stated that universities must recognize the social benefit of the community as an important contribution to the integration of the university into the local fabric. This is counterproductive to logistics outsourcing efforts since the universities are tied down by community concerns.

The findings also revealed that the University functions that are commonly outsourced in universities in Nairobi County are only the non-controversial functions. In these areas, universities have reported success with benefits accruing in reduction in overhead costs, improved university operations and customer service, focus on improved focus on universities' core competency and mandate, time saving, and maintenance of security within campus precincts.

5.2.1 Impact of Logistics outsourcing on Supply Chain Performance

The study sought to establish the impact of logistics outsourcing on the universities' supply chains' performance. This was conducted using inferential analysis with the intention to establish the relationship between the independent variables and the dependent variable of the study. In this respect, the aspects that affect supply chain performance of the universities include logistics outsourcing, supply chain technology, external environment and top management support and management policies.

The correlation test shows that there exist a strong positive correlation between supply chain performance and logistics outsourcing, supply chain technology, external environment influence, top management support and supportive logistics outsourcing on the supply chain performance of the universities in Nairobi Country.

As Sople, (2011) noted outsourcing of the logistics function is not necessarily a solution to all logistics problems in the universities. According to the findings of the study the factors cited among the universities as being challenging to their outsourcing initiatives were: the fear of loss of control to the third party logistics providers, overreliance on logistics providers and low quality work.

Students' non cooperation was also cited as a major impediment as students being the main clients of university services require the universities to maintain their own fleets, branded in their colours for "purposes of retention of identity and positioning". Negative attitudes by the university staff some staff that view outsourcing as a threat to their jobs when the function is outsourced emerged as a major challenge to logistics outsourcing. This is coupled by external community interference mostly from locals
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who feel that they should benefit from the universities because they are based in their areas.

5.3 Conclusions

Outsourced logistics practices are evident among the universities in Nairobi. Universities that were surveyed presented clearly that they have adopted some modern logistics outsourcing practices though at a small scale. The study findings indicated that the most prevalent practices amongst them were both in-house and outsourced services.

Most of the universities surveyed reported that their main drive to logistics outsourcing was the urge to reduce cost and the desire to concentrate on core activities.

The survey established that universities are faced by various challenges as they adopt outsourced logistics though the same was viewed as a means towards successful business and use of cutting edge best business practices. The major issues in outsourced logistics; external environment interference, loss of control, students' non cooperation, overreliance on third party logistics service providers and reduced quality of work.

The study also established that logistics outsourcing improves supply chain performance and that although the strategy is gaining momentum in institutions of higher learning, the uptake in state owned varsities is rather low, this is attributed to community interference to the implementation of the outsourcing agenda, students non cooperation and the low quality of work associated with third party service providers as they seek to cut on cost. The study also found that although the universities had experienced success in logistics outsourcing (especially private universities) that they had outsourced, some functional areas were considered impossible to be outsourced under any circumstances by the universities or because they formed their core mandate. These were functions include teaching and research, administrative functions, finance and accounting and internal audit.

5.4 Recommendations

As much as the survey provided information on logistics outsourcing among universities in Nairobi, the management of the universities needs to invest more on skill and knowledge acquisition on the management of the logistics function. They may in addition seek to invest more on research and development of stronger and long term

ties with the logistics service providers. When an organization or individuals partner in any mutual understanding, they double their efforts with other accompanying benefits like improved supply chain performance.

Objectively the challenges that the universities experienced in logistics outsourcing are a means towards continuous improvement. Universities need to be cognisant of the challenges that came along as a package of successful adoption to new ways of doing business and work on ways of tackling these challenges and hence improve their supply chain performance. The unfolding events can be referred to as indicators to the successful implementation of an outsourced logistics practice. If progressively monitored and used as corrective benchmarks, implementation these logistics outsourcing practices and challenges will enable the universities to fully adopt outsourced logistics practices thereby achieve their key objective of cost reduction.

5.5 Limitation of the Study

The major problem encountered during the study was the unwillingness of some respondents to give clear-cut information on the cost element in the projects they are undertaking on the basis that this research may be used for other basis. This was compounded with the fact that all public universities were on industrial strike hence poor response from them. The study was also limited in scope as it only covered projects in Nairobi County. Ideally in a study of this kind, one would wish to conduct a survey of all universities in Kenya but such a procedure was not possible owing to time and financial constrains

5.6 Suggestions for Further Study

This study has a number of issues that can be addressed in future research first, the data used in this study limits generalization to tertiary colleges, secondary schools and other universities outside Nairobi. A confirmatory analysis and cross-sector validation using **I** a large sample gathered from other regions and sectors is required for greater generalization of the role of logistics outsourcing on supply chain performance among universities in Kenya.

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APPENDICIES

APPENDIX I: Letter of introduction

Dear Sir/ Madam,

RE: MBA RESEARCH

I 'am a student at The University of Nairobi (UON), pursuing a Master of Business and Administration (MBA). I' am undertaking a research project in partial fulfillment of the academic requirements My study is on "The role of logistics outsourcing in supply chain performance among universities in Nairobi County".

Your university has been selected to form part of the study. I will be very grateful if you would spare sometime from your busy schedule, to respond to the questions listed on the attached questionnaire.

Your response will be treated with uttermost confidentiality. The findings of this research may be availed to you upon completion of the research if you so request.

I

Your assistance and co-operation will be highly appreciated.

Yours faithfully,

S. G1TH1NJI

UON MBA STUDENT

APPENDIX II: QUESTIONNAIRE

GENERAL INFORMATION (Please answer the following questions) by placing the [V] in the appropriate box or by giving the necessary details in the provided spaces.

SECTION A:

PART 1: RESPONDENTS PROFILE

- 1. Name of your University
- 2. Title or position of the respondent in the University
- 3. How long have you been with this University.

i

PART II: ORGANIZATION DATA

- 4. How would "you classify University in terms of ownership?

- Public University []
- Private University []
- Private and Public patnership []
- Other (Specify)..... []

- 5. For how long has your University been operating in Nairobi County?

- 0-2years []
- 2-5 years []
- 5-1 Oyears []
- Over 10 years []

- 6. What is the range of the number of students in your University?

0-100

- 101-500
- 501-1000
- 1001-3000
- 3001-5000
- Above 5000

7. Does your company have a logistics department?

Yes []

No []

8. If the answer is No how do you manage your logistics activities?

SECTION B: DRIVERS AND IMPACT OF LOGISTICS OUTSOURCING

9. In the statements provided below, state the extent to which the following drivers have influenced the uptake of outsourcing of logistics services in your university where (1) **Very Small Extent**, (2) **Small Extent** (3) **Some Extent**, (4) **Great extent** (5) **Very great Extent** (V) as appropriate.

Drivers of Logistics Outsourcing	Very Small Extent	Small Extent	Some Extent	Great extent	Very great Extent
The desire to gain competitive advantage					
The need to free management efforts to concentrate on core activities of the university					
Avaiabiity of Technology and innovation in the Market					
Availability of third party logistics providers					
Increase of mergers and Acquisitions					
The need to improve productivity in the institution					
Globalization of business					
The need to reduce operating costs					
The need to improve customer service					
It's a downsizing strategy by the university					
The desire by the University management to reduce lead times and wastage					
Management Policy					

In the statements provided below, state the extent to which you think logistic outsourcing has impacted on the supply chain performance of your university (1) Very Small Extent. (2) Small Extent (3) Some Extent, (4) Great extent (5) Very great Extent (V) as appropriate.

Impact of Logistics Outsourcing	Very Small Extent	Small Extent	Some Extent	Great extent	Very great Extent
Logistic outsourcing has reduced overhead costs					
Outsourcing has improved the university operations					
Logistic outsourcing has improved productivity					
Logistic outsourcing has improved innovation in the university				i	
Logistic outsourcing has reduced time wasted in waiting and lead times.					
Outsourcing of logistic services in our university has freed management time wasted in managing noncore services.					
Improved focus on core competency					
Increased supply chain visibility					
Leverage the delivery of core services					
Helps maximize their resources, minimized risks and focus on issues that are critical to survival and growth				i	
Reduce the need for warehouse storage and labour					
Improved customer service through shorter delivery times					
Reduced inventory costs through better management					
Enabled university gain competitive advantage					
Improved variety of technology and services					
Risk reduction and unused supply chain security					

11. Please indicate by ticking (V) if your company has outsourced any of the services listed below in last five years?

Distribution []
 Operations []
 Transport/Shuttle services []

Any other _____

SECTION C: CHALLENGES OF LOGISTICS OUTSOURCING

12. Which of the factors listed below according to you are some of the challenges of outsourcing your logistics function; please indicate the extent to which you agree with the statements: the scale ranges from (1) **Very Small Extent**, (2) **Small Extent** (3) **Some Extent**, (4) **Great extent** (5) **Very great Extent** (V) as appropriate.

Challenges of Logistics outsourcing	Very Small Extent	Small Extent	Some Extent	Great extent	Very great Extent
Loss of control on logistics functions					
There is loss of command on service delivery					
Information leakage occurs from service providers					
Over reliance on service providers					
Loss of employee loyalty					
Disintegration of internal conflict					
Low quality of work					
Over reliance on external parties			t		
Switching cost					
Fear of the unknown by staff and management					
Mismatch technologies being used by the university and logistic service provider					
Lack of supportive external environment					
The prohibitive costs of recognizing the existing processes to adopt to the new operating structure by the service provider					

Thank you very much for your time

APPENDIX III: LIST OF UNIVERSITIES IN NAIROBI

1.	University of Nairobi
2.	Africa International University
3.	Africa Nazarene University
3	Catholic University of Eastern Africa
4	Daystar University
5	Egerton University
6	Gretsa University
7	Inoorero University
8	Jomo Kenyatta University of Agriculture and University
9	Kabarak University
10	KCA university
11	Kenya Methodist University
12	Kenyatta University
13	Masinsinde Muliro University of Science and Technology
14	Moi University
15	St. Pauls University
16	Strathmore University
17	Presibiterian University of East Africa
18	United states International University-Africa
19	University of eastern Africa-Baraton
20	Kirir women University
21	Maseno University
22	Mt. Kenya University
23	Pan African Christian University
24	Adventist University of East Africa