THE EXPERIENCE OF KENYA POWER AND LIGHTING IN OUTSOURCING LINE CONSTRUCTION IN COAST REGION

BY

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DECLARATION

This research project is my original work and has not been submitted in other university for examination.

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

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DEDICATION

My special dedication to my family for allowing me time to concentrate on my studies and denying them Fatherly love. May this be an encouragement to you as you strive to achieve higher levels of education.

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ABSTRACT

The purpose of this study was twofold: to establish whether KPLC has achieved improvement in performance by outsourcing line construction and; determine the challenges experienced by the firm in outsourcing this particular activity. The study was informed by the fact that outsourcing line construction was a new phenomenon in the energy sector and it was important to study whether there are improvements and challenges associated with outsourcing of this activity in the electrical energy subsector. Noteworthy, energy consumption and economic growth are interrelated (Stern, 2003).

In order to study whether KPLC had achieved improvement in performance two null Hypotheses were tested: Null hypothesis H_0: There is no difference in completion time between KPLC staff and the service providers and alternative Hypothesis H_1: Service providers work faster than KPLC. The second null hypothesis H_0: There is no difference in cost when line construction is done in house or by service provider while the alternative hypothesis H_2: Service providers are cheaper for line construction. The hypotheses were tested using a one tailed t-test at 0.05 level of significance, for the categories of jobs selected. On the second objective, nine informants were interviewed to determine challenges experienced by KPLC on outsourcing of line construction.

The findings revealed that not all the categories of jobs had registered significant change by outsourcing line construction; especially on completion time, there was no significant change between internal staff and service providers except for jobs involving 3 poles and within 0-20km. On cost comparison significant results were noted in four categories of outsourced jobs while two categories did not register significant change. On overall, the

test showed that there is no difference in average completion time between KPLC staff and service providers in line construction. Also on costs, there is no cost difference between work done in house and when it is outsourced. Thus, the t-test failed to reject null hypotheses.

The study further established that many challenges and risks exist in outsourcing line construction. Hence, KPLC management has to make bold decision on service providers to provide quality service in line construction. In order to attain required short completion time and optimum cost of doing the work, the study recommends that the management should put more effort in supervision of outsourced service providers involved in line construction.

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ABBREVIATIONS AND ACRONYMS

ATM - Automatic Teller Machine

BBH - Branch Business Head

DCS - Design and Construction System

d.f- Degree of freedom

DEA – Data Envelopment Analysis

ERC - Electricity Regulatory Commission

GDC - Geothermal Development Cooperation

IBM - International Business Machines

ICS - Integrated Customer Service

IPPs - Independent Power Producers

IT - Information Technology

KenGen - Kenya Electricity Generating Company

KETAWU - Kenya Electrical and Allied Workers Union

KETRACO - Kenya Energy Transmission Company

KNH - Kenyatta National Hospital

KP - Kenya Power

KPLC - Kenya Power and Lighting Company Limited

L and T - Line Construction Contractors

MOE - Ministry of Energy

NEP – National Energy Policy

REA - Rural Electrification Authority

RBV – Resource Based View

ODI – Outsourcing Determinant Index

SAP–System application Protocol

s.f – Significant level

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In today's business environment, the survival and sustainability of any firm as well as its ability to continue being competitive lies on its game plan of increasing income, cost reduction and having aggressive organizational strategy. The strategy is normally adopted after thorough evaluation of alternatives by the firm's management and best choice is made suitable for the business objectives; to focus on markets, customers and the available scarce resources (Thompson and Strickland, 1993). Whichever the strategy a firm opts to pursue, it must re-orient it to its operations, goals and objectives especially if its mission is critical to attain innovation, growth and lead advantage in fast changing business environment.

One of the strategies often adopted by firms globally is outsourcing of some of the internal activities to outside providers. This strategy allows a firm to leverage on third party service provider and its expertise in the field to perform what the outsourcer considers noncore. Complications arise when an activity which top management of the firm considers noncore is viewed by employees as core. Outsourcing such activity is likely to be viewed negatively by employees and may lead to dissatisfaction.

1.1 Outsourcing

Outsourcing is one of the key operation strategies that started in England in early 18th century but has evolved in many industries in 1980s and 1990s, especially with emergent service industries (Cocks, 2002).

Chase, Jacobs, Aquilano and Agarwal (2007) define outsourcing as moving some of the firm's internal activities and decision responsibilities to an outside provider. Additionally, Greaver (1999) defines outsourcing as the act of transferring some of the organization's recurring internal activities and decisions rights to an outside provider as set in the contract. While people normally think of outsourcing as the common buying and contracting, it goes beyond that because sometimes the activities and resources that make them occur are transferred to the service provider. These resources may include people, equipments, technology and other associated equipments. In supply chain management, outsourcing can be defined as a management strategy by which major non-core functions are transferred to specialists, efficient, external providers (Lysons, Kenneth & Farrington, 2006).

In international business practice, it is common to have a manufacturer outsourcing to other companies to manufacture parts of the machine in different parts of the world. An example is the consumer electronics market, where companies such as Dell, Motorola and Phillips are buying complete design of some digital devices from Asian developers, modifying them to their own specifications and just adding their brand name before selling them (Pearce & Robinson, 2009). Outsourcing, hence, enables business companies to focus on activities that represent its core competences, allowing companies to create a competitive advantage while reducing cost (Chase et al, 2007). Some of the reasons given for outsourcing according to Pearce and Robinson (2009) are; cost reduction, high quality of work from the service provider and increased business opportunity for the service providers. It is the outsourcer's desire that the objectives are met.

Corbertt (1999) avers that an industry can be able to meet her market demand at reasonable price by outsourcing. Thus outsourcing was introduced to help firms practice economy of scale, but on the contrary it has effected economy's growth of nations with increased unemployment which is a challenge to this practice. Outsourcing can be undertaken to varying degrees, ranging from total outsourcing to selective (partial) outsourcing. Total outsourcing may involve dismantling entire departments or divisions and transferring the employees, facilities, equipment, and complete responsibility for a product or function to an outside vendor. In contrast, selective outsourcing may target a single, time-consuming task within a department, such as preparing the payroll or manufacturing a minor component, which can be handled more efficiently by an outside specialist (Bowen, 2005).

The decision to outsource or not, may be arrived at by analyzing the activities to be outsourced using three distinct criteria: whether they are strategic; critical to the operations of the organization or; can be performed less expensively by a third party. Before carrying out outsourcing, firms normally carry out risk benefit analysis on the activity (Sang, 2010). Treadway (2002) asserts that utilities can reduce cost by contracting with low cost service providers; paying attention to what utilities does best by focusing on utility's core competencies. He further identifies reasons for outsourcing as reduction of capital investment and enlarging capacity by having large number of service providers who can be called in at a short notice. In essence, utility managers are under pressure to re-examine how best to do business as demand for greater return on investment grows on already thin profit margin hence forcing them to outsource some of their activities to meet these objectives (Bowen, 2005).

1.1.2 Electrical Energy Subsector in Kenya

Energy is an essential factor of production and its total consumption is an indicator of economic growth in a given economy (Stern, 2003). In Kenya, the sector can be divided into three categories namely Petroleum (oil and gas), Renewable energy (solar, bio fuels, wind) and Electrical energy, with the latter dealing mainly with generation, transmission and distribution of electrical energy. Electricity is a secondary source of energy generated from consumption of primary energy sources (Ministry of Energy, 2011). The electrical energy is very versatile in its application and therefore very crucial to economic growth of a society. According to the Ministry of Energy's (2012) national energy policy, access to electricity is associated with rising or high quality of life and its growth is highly monitored. In terms of overall Kenya's energy mix, renewable energy accounts for 69%, petroleum stands at 22% while electricity is 9% (Ministry of Energy, 2011).

The Kenya Vision 2030 identified energy as one of the infrastructure enablers of its social economic pillar. Sustainable, affordable and reliable energy for all citizens is a key factor in realization of the Vision. According to vision 2030, the generation of electrical energy is expected to be approximately 15,026MW in 2030 against a capacity of 1,194MW available in 2011, a growth of 1,258%. Similarly, 70% of the Kenyan's households are expected to be connected to electricity during the same period (Ministry of Energy, 2011).

Most of the companies in electrical energy subsector are either semi-government owned or fully owned by government apart from generation. According to Ministry of Energy (2008), 26% of the installed energy generation capacity is supplied by private firms (also

referred to as Independent Power Producers'- IPPs). Kenya Electricity Generating Company (KenGen) provides 74% of the installed capacity.

The Ministry of Energy (2011) outlines Parastatals in the energy sector dealing with electricity as Kenya Power and Lighting (KPLC), Kenya Electricity Generating Company (KenGen), Kenya Energy Transmission Company (KETRACO), Energy Regulatory Commission (ERC), Rural Electrification Authority (REA) and Geothermal Development Cooperation (GDC). It is important to note that only KPLC and KenGen have public share holdings of 49.1% and 30% respectively while the rest KETRACO, ERC, REA and GDC are wholly owned by the government of Kenya. This requires that outsourcing in this sector be subjected to Public Procurement Act as required by the Government of Kenya. These companies have different operation mandates, with KPLC specifically given the responsibility of transmission, distribution and retailing of electrical energy in the whole country.

1.1.3 Kenya Power and Lighting Company

KPLC is one of the Parastatals under the Ministry of Energy. The company has been in existence for over seventy years. It was first incorporated as East Africa Power and Lighting Company before the collapse of the then East Africa Community in 1978. Thereafter, it changed to Kenya Power and Lighting Company until July 2011 when it was rebranded to 'Kenya Power'. KPLC has approximately 8500 permanent employees in the country with 2240 members who are management staff while the rest are in union (KPLC annual report, 2010-2011).

KPLC 2002 - 2003 annual report reveals that the number of households connected to electricity stood at 770,000 in 2003 representing less than 1% of the Kenyan population. It is with this in mind that the government introduced a policy requiring the company to connect approximately 200,000 households per year within a period of five years. This policy will be reviewed in line with the vision 2030 (performance contract between KPLC Board of directors and Government of Kenya 2009 - 2011). It is important to note that the energy sector is identified as one of the key drivers of the vision 2030 and developments in this area is keenly watched by all the stakeholders.

In order for the company to stay afloat and be ready for competition it had to adopt different strategies. One of the operation strategies adopted by KPLC was the outsourcing of line construction. Outsourcing of line construction can be used as a way of expanding capacity and improved services to customers.

The Kenya Power and Lighting Company has all a long been carrying engineering design, construction, network maintenance and operations using her own internal resources. This has been causing delays, slow implementation and serious customer complaints. The company's core activity is service provision of electricity through the distribution of electrical networks. Given that construction of lines is a core activity in distribution of electrical energy and it is possible for both management and union in KPLC to be reluctant in outsourcing such an activity.

Nonetheless, Kenya National Bureau of Statistics (2008) projects that the energy demand will grow at a rate of 8% and above per annum for the next five years. In order to meet the government policy of connecting 200,000 households per annum and the increased

energy demand without increasing fixed cost, the company had to outsource some of its main activities like survey, design and construction of electricity lines. The construction of lines was done under service level outsourcing agreement: where KPLC (the outsourcer), provides the materials required for line construction while the service provider (contractor) supplies the Line construction to the construction site as one unit. The service provider is therefore paid for transportation of materials to the site and labour for line construction. The service providers who cater for line construction are normally referred to as L and T contractors within the KPLC circles. The work of KPLC staff under this arrangement is to identify the contractor, issue the work, prepare bills of quantities, inspect the job and ensure it is done to the required standards.

Outsourcing of line construction in KPLC mirrors chase strategy where the service provider is engaged only when there is demand (Chase et al, 2007). There are several outsourced services in KPLC as a company (Appendix 2). Hence, this study proposed to focus on outsourcing of line construction in KPLC which was unique as the contractor provided both labour (workforce) and transport as a unit. Besides, the company operates as monopoly in transmission, distribution and retailing of electrical energy.

1.2 Research Problem

Outsourcing, as an operation strategy, has become very popular with companies as firm's redirect valuable internal skills and capabilities to high value adding activities (Venkatraman, 1997). It allows firms to leverage on third party service provider and its expertise in the field to perform non core activities and concentrate on core activities. Treadway (2002) argues that utilities have no option but to outsource some of their

activities as profit margin gets thinner in a challenging business environment. Outsourcing does not come without challenges (Welborn & Kasten, 2006). McCray and Clark (1999) argue that lack of definition and understanding is a significant root cause of problems in outsourcing. Willey (1993) further supports the argument that as firms outsource their activities the number of partners in the cycle increases and the task of choosing the service provider becomes complex as each firm has different expectations and capabilities. Hence, as firms outsource they should expect the difference between what needs to get done and what actually does get done (Welborn & Kasten, 2006).

The Kenya Government Vision 2030 envisaged the country to become middle income economy by 2030 and energy subsector is one of the key enablers of this vision (Ministry of Energy, 2012). Noteworthy, Energy and economic growth are interrelated (Stern, 2003). KPLC is directly involved in realization of this vision as it is currently mandated to distribute and retail electrical energy in Kenya. In order for KPLC to survive as a company in competitive market and meet the vision 2030, it had to outsource some of her functions. One of the functions it has outsourced is that of line construction. KPLC took this decision in order to increase capacity and improve work quality. These intentions may not be achieved if both parties in the contract are not prepared to work together.

According to the 2008 - 2009 internal audit report, only 20% of the jobs done by contractors were to the required standard as demanded by the company against expected 100% delivery. This begs the question whether outsourcing of line construction has achieved desired results for the company. Sometimes the problem occurs when the new process and decision rights have not been well designed or socialized between the

company employees and the service providers (McCray & Clark, 1999). The workers union KETAWU has always opposed outsourcing of line construction arguing that outsiders were taking their jobs. Furthermore, the union argues that the service providers did not have the necessary expertise.

Outsourcing as a practice has existed for a long time although research in line construction has been limited. Previous research in the area of outsourcing was done by Kamuri (2010) focusing on outsourcing strategy at KNH, and the study found out that security was the most preferred activity to be outsourced at KNH. Kamau (2010) studied employee perception of the outsourcing strategy at KPLC; the study found out that the KPLC employees did not trust work done by service providers. Maina (2009) researched on Outsourcing of Services in Mobile Phones and Kathuni (2009) studied Call Centre Outsourcing and found out that cost reduction was the aim of outsourcing. Muiruri (2008) study was mainly on supply chain management while Barako and Gatere (2008) focused on outsourcing of automatic Teller Machines (ATM) by banks in Kenya. None of these studies focused on outsourcing of line construction in the electrical subsector with objective of finding the challenges. This study sought to fill the gap by evaluating achievement and challenges of outsourcing line construction, with primary focus on the electrical energy subsector which is crucial to a developing economy.

The study aimed to answer two questions; Has KPLC achieved improvement in performance as a result of outsourcing line construction? What challenges does KPLC face as result of outsourcing of line construction?

1.3 Objectives of the Study

The objectives of the study were

i. To establish whether KPLC has achieved improvement in performance as a result of outsourcing line construction.

ii. To determine challenges experienced by KPLC in outsourcing line construction.

1.4 Value of the Study

The study has made practical contribution by assisting KPLC to understand and appreciate gains in performance improvement as a result of outsourcing line construction. The study provides an insight to KPLC management on areas of improvement on the outsourcing of line construction. The study can also be used by other organizations in the electrical energy sub sector in analysing the performance of outsourcing line construction.

Theoretically the findings contribute to the body of knowledge on outsourcing as operation strategy especially on outsourcing line construction. The research has also created an opportunity for further developments and research in the field of electrical energy sector outsourcing.

The findings can be used by the energy sector regulators for policy formulation and standards; given that outsourcing in this sector is a recent concept in Kenya. The study can be used to establish long term effect of outsourcing of line construction on the economy in terms of job creation in the energy sector.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of outsourcing as an operation strategy. The chapter explains outsourcing theories, models and reasons for outsourcing. In addition, challenges and related studies associated with outsourcing are also discussed.

2.2 An Overview of Outsourcing

Since the Industrial Revolution, companies have grappled with how they can exploit their competitive advantage to increase their markets and their profits (Makhino, 2006). The model for most of the 20th century was a large integrated company that can own, manage, and directly control its assets. In the 1950s and 1960s, the rallying cry was diversification to broaden corporate bases and take advantage of economies of scale. By diversifying, companies expected to protect profits, even though expansion required multiple layers of management. Subsequently, organizations attempting to compete globally in the 1970s and 1980s were handicapped by lack of agility that resulted from bloated management structures. To increase their flexibility and creativity, many large companies developed a new strategy of focusing on their core business, which required identifying critical processes and deciding which could be outsourced.

Outsourcing was not formally identified as a business strategy until 1989 (Muiruri, 2008). However, most organizations were not totally self-sufficient; they outsourced those functions for which they had no competency internally. Publishers, for example, have often purchased composition, printing, and fulfillment services. The use of external

suppliers for these essential but ancillary services might be termed the baseline stage in the evolution of outsourcing. Outsourcing support services was the next stage, in the 1990s, as organizations began to focus more on cost-saving measures; they started to outsource those functions necessary to run a company but not related specifically to the core business. Managers contracted with emerging service companies to deliver accounting, human resources, data processing, internal mail distribution, security, plant maintenance, and the like as a matter of "good housekeeping". Outsourcing components to affect cost savings in key functions is yet another stage as managers seek to improve their finances.

The current stage in the evolution of outsourcing is the development of strategic partnerships (Makhino, 2006). Until recently, it had been axiomatic that no organization would outsource core competencies, those functions that give the company a strategic advantage or make it unique. Often a core competency is also defined as any function that gets close to customers. In the 1990s, outsourcing some core functions may be good strategy, not anathema. For example, some organizations outsource customer service, precisely because it is so important. Eastman Kodak's decision to outsource the information technology systems that undergird its business was considered revolutionary in 1989, but it was actually the result of rethinking what their business was about (Pearce and Robinson, 2009). They were quickly followed by dozens of major corporations whose managers had determined it was not necessary to own the technology to get access to information they needed. The focus today is less on ownership and more on developing strategic partnerships to bring about enhanced results. Consequently,

organizations are likely to select outsourcing more on the basis of who can deliver more effective results for a specific function than on whether the function is core or noncore. In a Company whose core activity is transmission and distribution of electricity, outsourcing of line construction for construction works looked like letting out its core activity.

2.2.1 Outsourcing Theories

The concept of outsourcing emanates from a number of theories; resource dependence theory, decision theory, transaction Cost economics, agency theory, and core competency, among others (Gottschalk and Solli-Saether, 2005). One of such theory applied in outsourcing is decision theory, which compares the risks associated with and the benefits expected of a decision that is made, in order to achieve an optimal result (Sang, 2010). The concept of Decision theory has been discussed by Jurison (1995). When the concept is applied to outsourcing, it means that the manager or decision maker has to assess all the potential risks and benefits that may arise from outsourcing process (Sang, 2010).

Resource Based View (RBV) of the firm theory posits that both the outsourcer and the service provider must guard against wandering from their core competencies in direction that distract them from ability to create value (Koong and Wang, 2007). The provider must strive to provide only those services that are within their core competencies and promote a competitive advantage. Moreover, Koong and Wang (2007) argue that if provider cannot give the user the level and type of service they need, it is of no benefit to outsource.

Another theory applied in outsourcing is transaction cost theory. This theory assumes that transactions are determined by production economics. Organizations are economic actors using the most efficient mechanism for transactions (Williamson, 1981). The transaction cost approach offers an analytical framework in comparing outsourcing services and in-house services (Lacity and Hirschheim, 1993). Wang (2002) confirms that transaction cost theory assist in predicting outsourcing success in terms of economic benefits. Cheon, Grover and Teng, (1995) further argue that asset specificity, infrequency of contracting, and environmental and relationship uncertainty are the determinants of the magnitude of transaction cost, which, in turn, provides a basis for the evaluation of outsourcing. The transaction cost theory is applicable to outsourcing of line construction as it provides basis for outsourcing decision making.

Resource dependence theory assumes that all organizations interact with external environment because it is the environment that provide resources such as labor, capital, information or market (Aldrich, 1976).Using resource dependence theory it can be argued that the dimensions of task environments determine organization resources which in turn determine organization's outsourcing decisions Cheon et al (1995) and (Koong and Wang, 2007). It can be argued that outsourcing of line construction is an outcome of dependence on the available critical resource that can be acquired from the external environment like labour and capital.

Core competence approach relies on the strategic management concepts and centers around collective learning of the organization, how to coordinate diverse production skills and integrate multiple skills of technology (Prahalad and Hamel, 1990). The firm is

viewed as a social institution, the main characteristic of which is to know how to do certain things well. Furthermore, Prohamada and Hamel (1990) aver that some competencies are strategic and constitute the main sources competitiveness of a firm. Core competencies are firm specific skills and cognitive traits directed towards the attainment of the highest possible levels of customer satisfaction in relation to competitors.

Another theory is Agency theory. The theory argues that, in a principal-agent relationship, the agent cannot perfectly implement the goals set up by the principal (Jensen and Mechling, 1976). Eisenhardt (1988) on dichotomy of behavior- versus outcome-oriented principal-agent relationship, posited that the adoption of insourcing (behavior-oriented contract) versus outsourcing (outcome-oriented contract) can be determined by the magnitude of agency costs, which are the sum of monitoring costs by the principal (outsourcer), the bonding costs by the agent(service provider), and the residual loss of the principal. Cheon et al. (1995) also confirms that agency theory can be used to determine magnitude of agency costs. The agency theory is applicable to outsourcing of line construction as the outsourcer delegates work to agent (service provider), who performs the work (Logan, 2000). The agency theory support this study of analyzing cost related of in-sourcing versus outsourcing.

2.2.2 Outsourcing Process Models

There are various outsourcing models available for outsourcing decision; one which is commonly used is Bendor-Samuel outsourcing model. This type of model enables small to medium size firms to enjoy strategic outsourcing solutions that large firms enjoy on

one to one (Delloite & Touche, 2000). Bendor-Samuel model outlays a five stage approach to ensure fairness in outsourcing deal, throughout the life cycle of the process. The stages are; investigation, tendering, negotiation, implementation and relationship stage (Muiruri, 2008).

Other models used for outsourcing analysis are: Data Envelopment Analysis (DEA) and Monte Carlo simulations which are useful for risk analysis in supply chain management Olson and Wu (2011). DEA method assists buyers in classifying suppliers into two categories: efficient suppliers and inefficient suppliers (Weber and Desai, 1996). Additionally, the method is used to establish a best practice group amongst a set of observed units to identify the units that are inefficient when compared to the best practice group. DEA also helps to indicate the magnitude of inefficiencies and improvements possible for the units that are inefficient.

2.3 Reasons of Outsourcing by Companies

Outsourcing is the latest buzzword in the global economy (Kathuni, 2009). It also makes a good business sense to outsource. Saving on labour cost is perhaps the major reason why firms should opt for outsourcing some of their activities (Naylor, 2002). Quinn and Hilmer (1994) noted that saving labour cost was the highest ranking reason for outsourcing followed by focus on core competencies. The cost of labour in some countries is extremely high and creates huge expense for employers. If the same job was to be done at lower price by equally skilled but outsourced personnel, then it is definitely advantage. Outsourcing turns fixed costs into variable costs. Outsourcing if done properly has a lot of advantages. Pearce and Robinson (2009) argue that outsourcing reduces the

amount of capital a firm must invest in production or service capacity. Barako and Gatere (2008) also reveal that cost reduction was the leading motivating factor for outsourcing by banks while freeing resources was the least perceived for outsourcing.

Secondly, outsourcing allows a firm (outsourcer) to meet its customers' demand by engaging the service providers only when there is work. The engagement is demand driven. Muiruri (2008) argues that outsourcing make sense in areas where firms incur high costs or lack competency or technology to perform certain key functions effectively and efficiently, hence justifying the need to give the job to an external expert. Greaver (1999) supports the same argument that product or service improvement is the motivating factor for outsourcing where technology is not available in the firm.

Organizations outsource to enhance effectiveness by focusing on what it does best, increase product or service value, customer's satisfaction and shareholders' value (Greaver, 1999). Outsourcing of non-core activities frees up internal resources to concentrate on more important activities (Barnes, 2008). Mintzberg and Quinn (1979) state that as companies outsource, they normally discover secondary benefits: internal cost and time delays drop as long standing bureaucracy disappear and employees now start to focus on core activities. Outsourcing enables key managers and personnel to concentrate on core activities and decisions. Managers become users rather than generator of information. Another benefit of outsourcing is that it allows the firm to control and enhance the source of its core competitive advantage (Pearce and Robinson, 2009).

Chase et al (2007) cite reasons for outsourcing as increasing quality and productivity since you have access to superior providers. Outsourcing allows technological transfer learning from the best firms. Employees attached to the service provider obtain expertise, skills and technologies that are not otherwise available in house. Another advantage is that labour is engaged only when required, and it's converted from a fixed to variable cost. Additionally firms can expand both sales and production capacity by using outsourced service providers.

2.4 Challenges of Outsourcing

Chase et al (2007) argue that one of the greatest challenges of outsourcing is layoffs, whereby this includes even cases where former employees are hired back, and often engaged at lower wages with fewer benefits. Thus union employees perceive outsourcing as way to circumvent union contract.

Firms want a flexible outsourcing partner who will introduce innovation into their processes, who can help them manage both costs and service, use relevant and emerging technologies. They also want someone who understands their specific requirements and their business. Unfortunately, outsourcing service providers tend to fall short in flexible infrastructure, understanding the client's business and innovation and adjusting (Welborn & Kasten, 2006).

By definition, outsourcing places control and coordination of that function or activity to outsiders (Pearce and Robinson, 2009). This loss of control can result into many future problems such as delays in delivery, quality, customer complaints and loss to competitor

sensitive information. Bozarth and Handfield (2008) state that, coordination of services from many different service providers can be a major challenge to firms. It should remain clear that outsourcing involves delegation of tasks and activities to outsiders but the ultimate responsibility remains with the firm (Muiruri, 2008). Thus as KPLC outsources line construction to other firms the ultimate responsibility remains with KPLC as company. Proponents of keeping activities in house argue that quality standards can be maintained only by in sourcing.

The outsourced service provider can create future competition. One of the examples is that of IBM, which outsourced its IT systems to Indian Companies but is now experiencing competition from some of these former suppliers of programming provided (Pearce & Robison, 2009). As vendors gain experience and exposure on core activities they start to compete and even compromise the operational efficiency of the outsourcer.

Outsourcing per se is not cost free; there are hidden costs associated with management and administration of this process and also managerial skills required to manage the external service providers (Barnes, 2008). Welborn and Kasten (2006) also aver that the smaller, short-term contracts have their own problems for the client company and dealing with more service providers stretches a company's valuable scarce management time.

Outsourcing can also lead to under utilization of internal resources that were previously used to make the outsourced service or item Barnes (2008). Additionally quality of service has been questioned by critiques of outsourcing Maina (2009). In poorly designed contract, there is no measure of quality or defined service level agreement.

Outsourcing relationship sometimes fails due to a number of reasons such unrealistic expectation from the vendor, lack of formal bid process, unclear contract that assume the vendor will act as strategic partner and hostility from employees of the firm.

2.5 Related studies on Outsourcing in Kenya

Studies have been done on the subject of outsourcing in general. Kamuri (2011) analysed challenges facing the implementation of outsourcing strategy at KNH and his findings revealed that security was the most preferred activity to be outsourced at the hospital on priority while estate management, locum, records management was the least preferred, with security scoring 100% while the rest received 5% respectively. The study revealed that 70% of those interviewed expected service delivery to improve, reduction of cost, focus on core business, access to specialized skills, reduction of risk each scored 45%, 40%, 25%, 20% respectively. At the same time improved customer satisfaction and increased competitive advantage scored 10% each, while reduction of waste, reduction of corruption and improved corporate image all scored 5%.

Kamau (2010) looked at employees' perception on outsourcing in KPLC in general and found out that only 47% trusted the work done by service providers while 53% of staff interviewed did not. On the knowledge of services outsourced by KPLC, the results were: acconting12.5%, Logistics 18.8%, Information and technology 12.5%. Additionally, the study found out that professionalism, competence, experience and qualification were important criteria during selection process.

Kathuni (2009) studied call centre outsourcing practices by Zain (Kenya) limited and found out that outsourcing this activity, the organization laid off 79 members of staff who were employed in call centre. This confirms fears normally raised by employees during outsourcing. The study also confirmed that outsourcee was required to meet 99% of the set standards set by the outsourcer. The findings also revealed that reduction of overhead cost was primary factor in the outsourcing. The findings confirm challenges and reasons expressed by (Pearce and Robinson, 2009).

Maina (2009) studied outsourcing services in the Mobile Phone industry in Kenya and found out that major reasons for outsourcing were search for local expertise, market knowledge, language issues, cost effectives, focus on core business, market dynamics, effective coverage, special expertise, head count issues, market unique and acceptability. Other findings were that data base management and marketing were the least outsourced in Nokia Kenya because of their sensitivity.

Barako and Gatere (2008) studied contemporary evidence of outsourcing practices of Kenyan banking sector. The results indicated that Automated Teller Machine (ATM) services were the most outsourced services in the banking sector while accounts processing was the least outsourced function. Additional finding were that banks cite reputational risk, strategic risk, operational risk and contractual risk as the most likely risks in outsourcing, with scores of 79%, 53%, 58% and 53% respectively.

2.6 Summary

The literature review introduced the subject of outsourcing in companies as they try to survive in dynamic competitive environment. Outsourcing is an act of allowing service providers to perform activities traditionally handled by internal staff and resources. The need for outsourcing has been brought about by declining profit margin by firms and utilities have no option. As firms outsource it is important to evaluate whether they have registered improvement in performance on the outsourced activity. Equally, it is important to determine challenges experienced by outsourcers. A number of theories have been applied to studies of outsourcing decision: core competency, transaction cost economics resource based view and agency theory among others to analyse the perceived benefits. Other studies have developed models combining several theories together like Data Envelopment Analysis (DEA) simulation, which is suitable mainly for analysis outsourcing in different countries inshore and off shore outsourcing.

The study examined the experience of KPLC in outsourcing of line construction, and established whether service provider work faster than internal staff and are cost effective. Additionally, this study examined challenges experienced by outsourcing line construction.

2.7 Conceptual Framework Model

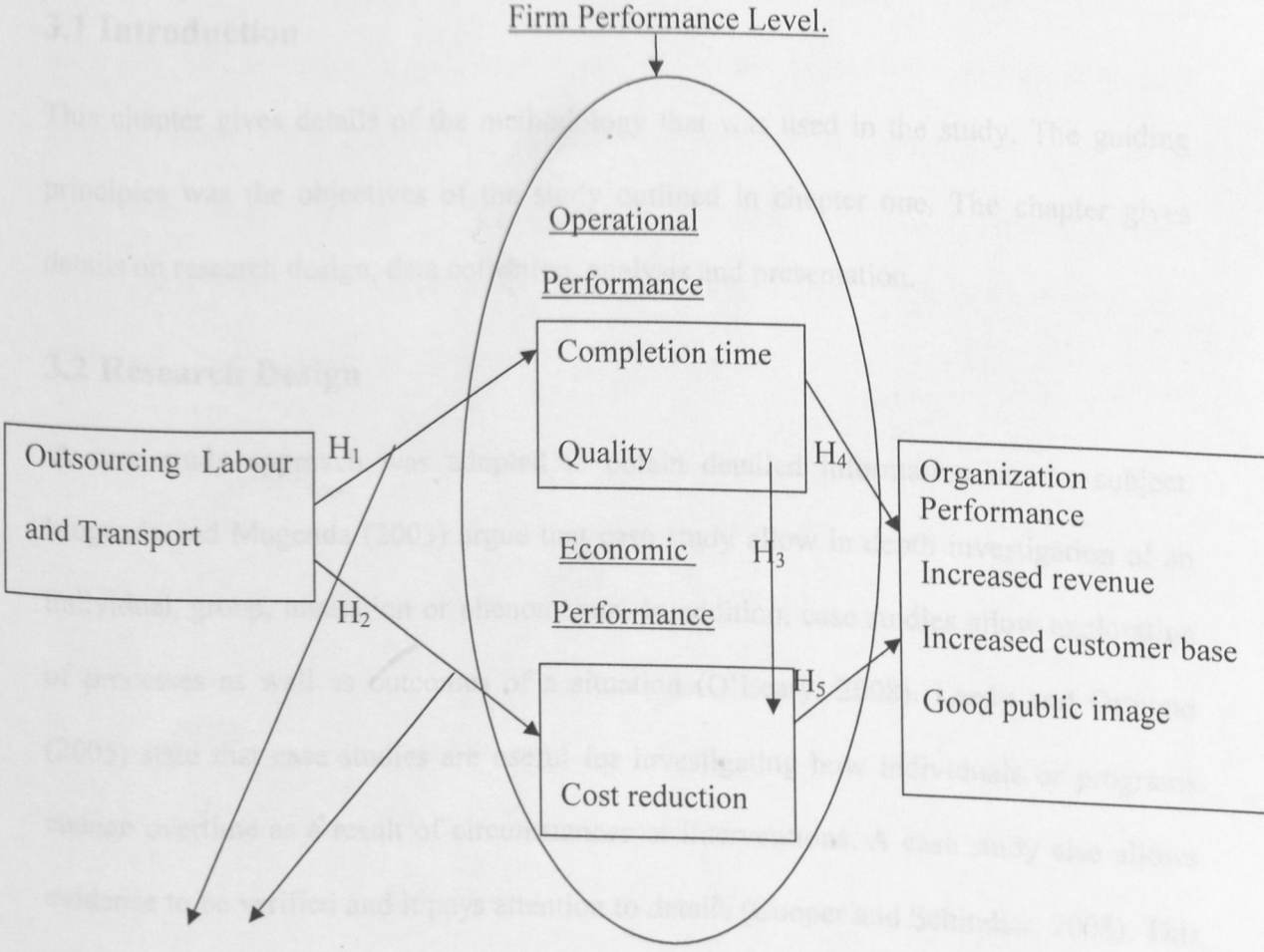
The conceptual frame work for this study is based on the concept that by outsourcing, firms are able to achieve improvement in their organizational performance besides other benefits. The firm's level of performance improvements eventually lead to overall

organizational performance achievement. For this study, firm's performance is further divided into two, operational and economic performances.

Operational performance in this case addresses the completion time, how long it takes to complete work in construction hence more revenue, service providers are expected to complete their assignments faster compared to internal staff. Another operational performance indicator expected to improve by outsourcing is the quality work from the service providers. Service providers are expected to provide quality workmanship and technology compared to internal staff.

When firms outsource they expect improved economic performance as a results of the cost saving. The cost saving or reduction in cost arise from what is paid out to outsourcee which is supposed to be low compared to the amount used when the activity carried in house as outlined on the literature review (Naylor, 2002). The study intended to determine these operational performances in terms of completion time, cost and establish the challenges outsourcing line construction.

Figure 1: Conceptual framework of the study



The study only concentrated on these 2 hypotheses

The study therefore aimed to test the following hypotheses

H_1: Service Providers work faster than KPLC staff.

H_2: Service Providers are cheaper than KPLC staff.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives details of the methodology that was used in the study. The guiding principles was the objectives of the study outlined in chapter one. The chapter gives details on research design, data collection, analysis and presentation.

3.2 Research Design

A case study approach was adopted to obtain detailed information on the subject. Mugenda and Mugenda (2003) argue that case study allow in depth investigation of an individual, group, institution or phenomenon. In addition, case studies allow exploration of processes as well as outcomes of a situation (O'Leary, 2008). Leedy and Ormond (2005) state that case studies are useful for investigating how individuals or programs change overtime as a result of circumstances or interventions. A case study also allows evidence to be verified and it pays attention to details (Cooper and Schindler, 2008). This method allows intensive investigation of a process like outsourcing. This research design was therefore appropriate for the study of line construction when it is outsourced and in sourced.

3.3 Data Collection

This study used both primary and secondary data. The secondary data was obtained from KPLC information systems database namely; Integrated Customer Service system (ICS), Design and Construction system module (DCS), Construction Data Base and System Application Protocol (SAP) system using a secondary data collection form (Appendix 3).

Additional information was obtained from manual records as necessary. For this study, three categories of jobs were selected for analysis. The categories comprised of Cable only; one pole and cable; and three poles and cable. The categories were further divided into two; between 0 to 20km and 20km to 60km from the store the job is being issued at. From each category, the study selected ten jobs done in house, thereby resulting in thirty jobs. These jobs were compared with other similar jobs outsourced. In essence 60 jobs were analyzed for the study.

The primary data was obtained on the challenges experienced by KPLC in outsourcing line construction. This was collected through an in-depth interview of line managers using a preset interview guide (Appendix 4). The target informants were nine senior staff namely; Regional Manager, Chief Engineer Operation and Maintenance, Chief Engineer Design and Construction, Safety Engineer, Branch Business Head (BBH)-Ukunda, Branch Business Head (BBH)-Malindi, Branch Business Head (BBH)-Voi, Assistant Engineer Projects and Construction Engineer. They were selected purposely since they are involved in day-to-today operations with service providers in their respective business units.

3.4 Data Analysis and Presentation

The secondary data was collected and presented in tables and analysed using t-square test for comparison in performance (Completion time and Cost of doing work when is in sourced and outsourced). Cooper and Schindler (2008) propose that for two independent variables with a sample number (n) less than thirty, t-test is appropriate for comparison of their mean. The following hypotheses were tested,

1) H_0: There is no difference in completion time between KPLC staff and the service providers

H_1: Service providers work faster than KPLC.

2) H_0: There is no difference in cost when line construction is one in house or by service provider.

H_1: Service providers are cheaper for line construction.

$$t = \frac{\bar{X}1 - \bar{X}2}{\sqrt{s^2[1/n1 + 1/n2]}}$$ (Cooper and Schindler, 2008)

Where;

S^2 is associated with pooled variance estimate.

Given by $S^2 = \frac{(n1-1)s1^2 + (n2-1)S2^2}{(n1+n2-2)}$

n_1 is the sample number of the jobs done in house (by KPLC staff).

n_2 is the sample number of the jobs done by service providers.

S_1 is the standard deviation sample n_1

S_2 is the standard deviation for sample n_2

$\bar{X}_1$ is mean for jobs done in house.

$\bar{X}_2$ is the mean for jobs done by service providers.

Significance level $\propto$= 0.05 (one tailed test) and the degree of freedom will be equal to $(n_1-1) + (n_2-1)$. The level of significance of 0.05 was chosen because most studies in business use this significance level and also to allow ease of calculation and use of readily available tables and SPSS software.

In order to draw conclusion on the above test, a further paired t-test was conducted on the obtained data on completion time and cost. Using formula

$$t = \frac{\bar{d}}{S_d/\sqrt{n}}$$

Where $\bar{d}$ is average of the differences between the times taken when work is done in-house and outsourced. The same was repeated for cost.

S_d is the standard deviation of the differences.

n is the number of pairs (differences).

The primary data obtained from the interview process was edited for accuracy and checked for consistency and completeness. The primary data was analysed using content analysis with thematic coding, which is better for single case and in-depth understanding (Cooper and Schindler, 2008).

Nachmias and Nachmias (2004) define content analysis as a technique of making inferences by systematically and objectively identifying specified characters of the messages. Content analysis enabled the study to determine challenges experienced by KPLC in outsourcing of line construction and draw analytical conclusions.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The chapter presents analysis of both secondary and primary data collected. The secondary data was gathered mainly to establish whether KPLC has experienced improvement in performance in completion time and cost through hypotheses testing while in depth interview was designed to determine challenges and risks experienced by KPLC in outsourcing of line construction. The analysis and findings are presented in the ensuing sections.

4.2 Comparison of Completion Time and Cost Analysis

A total of 60 jobs (30 nos. done by KPL staff and 30 nos. done by service providers) were analysed, under three categories: cables only, one pole with cable and three poles with cable. In each category, five jobs within same distance from store were checked for completion time and the cost of doing a similar job in house (by KPLC staff) and when outsourced. Appendix 5 gives the descriptive results obtained from secondary data. The mean of each category were compared using t-test.

4.2.1 Average Completion Time

Tables 4.1 shows results obtained from secondary data. Completion time was obtained by getting the difference between the date when job issued for construction and when feedback is received that work is completed and the average obtained for each category. The average completion time is in days.

Hypotheses Testing

H_0: $\mu_1 = \mu_2$, (There is no difference in average completion time between KPLC staff and the Service provider)

H_1: $\mu_1 > \mu_2$, (Service providers work faster than KPLC)

μ_1 is the average completion time for KPLC staff.

μ_2 is the average completion time for Service providers.

H_0 is rejected if $t > 1.860$ ignore the sign.

Using results on appendix 5 t-values were obtained as in Table 4.1 for each category.

Table 4.1; Comparison of completion time t-test results

Work description	KPLC average completion time (days)	Service provider average completion time(days)	df	Pooled variance s^2	Calculated t	Critical t value t_c at .05 s.f	Conclusion
Cable 0-20km	8.80	7.6000	8	18.89	0.4350	1.860	Fail to reject H_0
Cable 20-60km	7.2000	4.4000	8	8.75	1.496	1.860	Fail to reject H_0
One pole 0-20km	6.6000	4.6000	8	5.30	1.374	1.860	Fail to reject H_0
One pole 20-60km	5.80	6.20	8	7.20	0.139	1.860	Fail to reject H_0
Three pole 0-20km	3.60	8.60	8	11.30	2.352	1.860	Reject the H_0
Three pole 20-60km	8.80	6.00	8	8.10	1.556	1.860	Fail to reject H_0

Source Research data

From table 4.1, only work involving three poles and within 0-20km that showed significant change with calculated t being larger than critical t (t_c) at significance level $\propto$= 0.05 (one tailed test) t=2.352 > t_c (1.860). The rest of the categories did not register significant change.

Therefore, the null hypothesis H_0: There is no difference in completion time between KPLC and Service providers holds except for the category of three poles within 0-20km.

The overall conclusion on the completion time involved carrying paired t-test on mean difference between the average completion time by KPLC staff and service providers at 0.05 significance level 5 degrees of freedom.

H_o: $\mu_d = 0$ H_1 :$\mu_d \neq 0$

H_0 is rejected if t < -1.943 or t > 1.943

t= 0.978 we fail to reject the null hypothesis.

From the t value of 0.978 it can be concluded that there is no difference in completion time.

4.2.2 Cost Comparison Analysis

H_0: $\mu_1 = \mu_2$ (There is no difference in cost when line construction is done in house or by service providers)

H_1: $\mu_1 > \mu_2$ (Service providers are cheaper for line construction)

μ_1 is the average cost doing job by KPLC staff.

μ_2 is the average cost doing job by Service providers.

Table 4.2; Comparison of cost t-test results

Work description/ Category	KPLC average cost(Kshs.)	Service provider average cost(Kshs)	df	Pooled variance s^2	Calculated t	Critical tc value at 0.05 s.f	Conclusion
Cable 0-20km	2860.930	5723.980	5	0	0		Fail to Reject H_o
Cable 20-60km	13869.585	8501.180	5	615.,631.944	8.177	2.015	Reject H_0
One pole 0-20km	30129.280	17631.300	5	1624423.44	3.373	2.015	Reject H_0
One pole 20-60km	42248.254	26043.128	8	126,975,347.7	3.216	1.860	Reject H_0
Three pole 0-20km	34044.920	24706.600	6	5,951,778.84	5.837	1.943	Reject H_0
Three poles 20-60km	57380.053	41654.860	6	452,708,858.8	0.826	1.943	Fail to Reject H_0

Source Research data

From the table 4.2 it is evident that four categories sampled showed significant change in calculated t, with t calculated larger than t_c critical in cost between KPLC Staff and Service providers, while two categories; cable work between 0-20km and three poles 20-60km did not. Thus only two out of six categories did not show significant change, that there is no difference in cost when line construction is done in house or by service provider as the t values were less than the critical value.

In order to draw conclusion further a t-test hypothesis was conducted regarding the mean differences between the two observations.

Hypothesis H_o: $\mu_d = 0$ H_1 :$\mu_d \neq 0$ at n=6

Where μ_d is the mean difference of the two observations.

Ho is rejected calculated $t < -2.571$ or $t > 2.571$

$t = 1.02$

Then we fail to reject the null hypothesis and conclude that there is no significant difference in cost between KPLC staff and service providers.

4.3 KPLC Regional Management Role in Outsourcing of Line Construction

The study sought to find out whether the interviewees had participated in outsourcing decisions and their years of experience working in Coast region. It was evident from the study that the informants were aware of outsourcing of line construction since most of them had several years of experience working in Coast Region ranging from 5 to 15 years. The results also indicated that they had participated in outsourcing of line construction in one way or the other. On acceptance of outsourcing line construction, management staff welcomed the decision to outsource while the union opposed it. Additionally, the study revealed that by outsourcing the activity, two departments (Design & Construction and Operation & Maintenance) were affected. A new department called Projects Development was created to handle service providers of line construction with most staff sourced internally.

The study found out that line construction is considered a noncore activity in KPLC even though it assists in increasing the number of connected customers. The role of management staff in outsourcing line construction is identification and supervision of the service providers.

4.4 Benefits of Outsourcing line Construction

The study found out that the department of Design and Construction benefitted most by outsourcing of line construction followed by Operation and Maintenance department. Outsourcing of line construction has led to increased customer base from approximately 5000 customers connected yearly to 25,000 customers every year. According to the study, approximately 80% of new customers are connected using contractors. The informants also revealed that contractors are generally cheaper for a far distance job. One major advantage of outsourcing line construction is the availability of a pool of contractors to choose from anytime. The study also found out that by outsourcing the company can free up resources like transport to support other functions. The service providers assist in spreading the risks in KPLC as they use their own employees.

4.5 Challenges Experienced by Outsourcing Line Construction

The study set out to determine challenges experienced by KPLC in outsourcing of line construction. It was found out that while management embraced outsourcing of line construction activity there was a lot of resistance from the union staff. It determined that current employees engaged in line construction feared losing their jobs as a result of outsourcing. The management of large number of contractors and inspection of completed jobs were cited as some of challenges. The study further revealed that service providers can dent the image of KPLC, by impersonating as KPLC staff and ask for bribe. The interviewees were categorical that external customers may not differentiate between KPLC staff and service providers.

Vandalism and theft of electrical equipment was stated as having increased with advent of outsourcing line construction and this was attributed to contractors' workers who have known the KPLC operating system. The study also revealed that, cases double invoicing was sometimes experienced from contractors who want earn extra money even without working. Another challenge cited was substandard quality construction of line by service providers, with informants rating the services between 40 to 60% of the required standard. Safety in the public areas was being compromised by shoddy work by the service providers. The interviewees cited that most of the contractors were not engaging competent staff.

The challenge of selecting suitable service providers was also cited, as the number of applicants was in range of two thousands and lobbying was normally experienced during selection. Additionally, the contractors' usually state equipments they do not posses in order to be prequalified. Some individual sometime own several companies which are all prequalified to work in line construction and this cause's serious challenge to KPLC managemernt to differentiate on the firms' ownership. The study also found out that contractors are not flexible; you cannot use a contractor any time you want as they need time to mobilize their workers.

4.6 Risks of Outsourcing Line Construction

It was evident from the study that there were a number of risks associated with outsourcing of line construction and the KPLC management was aware of them. One of them is loss of control on work given to service providers especially how they relate to KPLCs' customers. The study also found out that it took KPLC customer's time to accept

that there were third party service providers engaged by the company. The interviewees also cited that in most incidents involving general public and KPLC service providers, the public prefer to sue KPLC instead of the service providers.

Maintenance of construction standard was pointed out as being at risk as the service providers staffs were seen as unqualified. Another risk cited by interviewees was that incase employees of the service providers down their tools, the KPLC cannot engage them in dialogue and operations suffer.

4.7 How to control Challenges and Risks of Outsourcing of Line Construction

The study established that strict supervision and training of service providers can help improve quality of their work. The interviewees stated that service providers do provide insurance bonds against company materials in case of theft. Additionally, a strict and timely monitoring delivery on jobs outsourced is followed. The company also blacklists contractors found to contravene laid down procedure. Risks can be reduced by having long term partnership with contractors.

The interviewees also suggested proper vetting of service providers be done to stop conmen and fraudsters getting into KPLC system through outsourcing line construction.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter presents a summary, draws conclusion and presents the recommendations on the findings of the study. The chapter also highlights the limitation of the study and suggestions for further study.

5.2 Summary

The study sought to establish whether KPLC has achieved improvement in performance as a result of outsourcing line construction and to determine the challenges experienced by the firm in outsourcing this operation. On completion time, the study found out from the selected jobs that the completion time between KPLC staff and service providers is not significant except the following categories; jobs involving 3-poles and within 0-20km registered significant change of 2.352 at 0.05 significant levels (s.f) and 8 degree of freedom (d.f). On cost comparison, four categories of jobs registered significant change they are: Cable between 20-60km, one pole within 20 - 60km, one pole 20-60km and three poles 0- 20km.

The overall t-paired tests failed to reject null hypotheses that there is no difference in completion time between KPLC and Service providers and that there is no difference in cost between KPLC staff and service providers.

The study revealed that there were challenges experienced by KPLC as results of outsourcing line construction due to the fact that the company operated as monopoly in

power line construction and that the activity was partially outsourced. One of the challenges cited is fear of layoff among the employees. Other challenges were low quality work, loss of control, increased vandalism and loss of confidentiality between KPLC and her customers. Increased demand of management time by the service providers also featured as challenge. Interviewees were in agreement that despite these challenges, outsourcing of the line construction was the way to go in this competitive utility market.

5.3 Conclusion

The findings indicate that significant change occurred in five areas of line construction. Service providers performed better in terms of cost in four job categories while KPLC staffs were performing better in completion time for jobs involving three poles within 0-20km range. The other categories did not show significant change at 0.05 significant levels. According to the study, there is no difference in completion time and cost of doing the work for in house and outsourced at 0.05 significance level. These findings contradicts Quinn and Hilmer (1994), Naylor (2002), Kathuni (2009) and (Barako & Gatere,2008), who argued that saving on labour cost was one of the major reasons of outsourcing. It can be argued that while outsourcing may lead to cost reduction, the reduction may not be significant.

Chase et al (2007) aver that by outsourcing firms are able to reach market faster compared to a condition when a job is in sourced, the results from the study are inconsistent with this argument, as the completion time between in house staff and service providers are not different.

The benefits of outsourcing line construction according to the study were mainly; increased number of customers, reduced waiting period to be connected after payment and reduction of costs. These benefits support argument by Greaver (1999) that benefits and improvements are motivating factors for outsourcing.

The study affirmed that KPLC has experienced challenges and risks on outsourcing line construction; key among them was the fear of layoff among employees and low quality work by the service providers. Loss of control and over exposure to third party was another great challenge. The findings agree with Barako and Gatere (2008) and Kathuni (2009) who found out in their study that fear of lay off among the bank employees and mobile phone organizations was a challenge to outsourcing. On quality of work, it can be concluded that service providers are not competent and in such case it makes no sense to outsource according to (Koong & Wang, 2007). The finding that service providers are not flexible also supports (Welborn & Kasten, 2006) who argued that service providers tend to fall short in infrastructure, understanding client's business, innovation and adjusting.

5.4 Recommendations

On performance the study recommends thorough supervision of contractors to improve the completion time with a view of registering significant change. Proper documentation on jobs done internally need to improve. At the same time the management of KPLC should decide to go for total outsourcing of line construction to avoid internal squabbles where employees see service providers as enemies. During the process of engagement of service providers, thorough vetting needs to be done and only competent companies are

engaged. Given the large number of contractors being handle, there is need to maintain optimal number for ease of management.

The company and industry players should set minimum technical qualification requirement at least for employees of service providers in order to improve quality of work and responsibility. The company should in future go for total outsourcing of line construction where the service provider, provides complete service in order to minimize conflict between employees and service providers.

5.5 Limitation of the Study

The collection of secondary data was challenge on jobs that have already been capitalized in KPLC system especially when job are done in house, this is due to the fact that labour costs are removed from the system. On in depth interview some of the interviewee had difficulties in providing comprehensive response to some of the questions raised during the interview. Time during the in-depth interview was limited due to the busy schedule of the interviewees.

5.6 Suggestion for Further Study

The study focused on outsourcing line construction at KPLC, it would be important if the study is extended to other players in electrical energy subsector. The study further recommends a research on the challenges experienced by the service providers of line construction and KPLC customers' perception on outsourcing of line construction. Further, arising from the conceptual framework, the overall organizational performance

as a result of outsourcing can also be researched to establish the achievements in terms of increased revenue, increased customer base and good public image.

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APPENDICES

Appendix 1: Letter of Introduction

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TO WHOM IT MAY CONCERN

The bearer of this letter, Kowuor Evans Okinyi of Registration number D61/70936/2008 is a Master of Business Administration (MBA) student of the University of Nairobi, Mombasa Campus.

He is required to submit as part of his coursework assessment a research project report. We would like the student to do his project on *The Experience of Kenya Power and Lighting in Outsourcing Line Construction in Coast Region.* We would, therefore, appreciate if you assist him by allowing him to collect data within your organization for the research.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organization on request.

Thank you.

Zephaniah Ogero Nyagwoka
Administrative Assistant, School of Business-Mombasa Campus

Appendix 2: Summary of outsourced activities in KPLC

	Division	Outsourced service
1	MDs and CEO	Security
2	Human Resource & Admin.	Building Maintenance, Cleaning services, Staff training, Consultancy, senior level recruitment.
3	Distribution	Partially Line construction for construction and maintenance, survey works, design & tree cutting
4	Transmission	Design works, supply of equipment & construction
5	Customer Service	Communication service, marketing, debt collection
6	Company Secretary	Legal services, insurance & rent collection
7	Finance	
8	Information Technology & Telecommunication	Developed IT systems, maintenances and software
9	Stores, Transport & Supply	Transport, clearing and forwarding, vehicle maintenance and material, printing and printing materials

Appendix 3 : Secondary Data collection form

1. a) Cost saving performance comparison analysis

i) Cables only done KPLC

	Nature of work	Actual cost by KPLC employees	Date started	Date completed
	Construction of 40m length cable only within 20km from stores			
Sample 5nos(Reference number for the job)				
1	E22122011040542		21/06/2011	21/06/2011
2	E22122011040264		18/07/2011	22/07/2011
3	E22122006120041	2860.93	22/06/2011	07/07/2011
4	E22122010090119		01/07/2011	11/07/2011
5	E22122011040584	2860.93	07/07/2011	11/07/2011
	Average			
	Construction of 40m length cable only within 60km from stores but>20 km			
Sample 5 nos(Reference number for the job)				
1	E22122011060051		26/06/2011	01/07/2011
2	E22122010120022	14878.24	28/06/2011	07/07/2011
3	E22122011050063		01/07/2011	08/07/2011
4	E22722010110035		28/06/2011	10/07/2011
5	E22122011040598	12860.93	02/07/2011	11/07/2011
	Average cost			

ii) Construction of one pole + Cables only

	Nature of work	Actual cost by KPLC employees	Date started	Date completed
	Construction of one pole +cable only within 20km from stores			
Sample 5nos(Reference number for the job)				
1	E22122011010413		06/07/2011	13/07/2011
2	E22122011050327		19/07/2011	24/07/2011
3	E22122011030230	28247.96	17/07/2011	24/07/2011
4	E22122011080237	32010.6	24/08/2011	01/09/2011
5	E22122011040450		07/07/2011	13/07/2011
	Average cost			
	Construction of one pole +cable only within 60 km from stores but>20 km			
Sample 5 nos(Reference number for the job)				
1	E22122011030516	29649.9	18/07/2011	24/07/211
2	E22122012030600	43701.2	30/05/2012	09/05/2012
3	E22122011110319	22898.64	05/04/2012	11/04/2012
4	E22122010120218	57373.57	21/07/2011	24/07/2011
5	E22122011090417	57617.96	03/02/2012	18/03/202
	Average			

iii) Construction of three poles +cable only

	Nature of work(Reference number for the job)	Actual cost by KPLC employees	Date started	Date completed
	Construction of three poles +cable only within 20km from stores			
Sample 5nos(Reference number for the job)				
1	E22122011050242	30408.16	14/07/2011	20/07/2011
2	E221220110120038	35470.2	21/07/2011	21/07/2011
3	E22122011090529	36256.4	01/11/2011	10/11/2011
4	E2122012030083		28/05/2011	28/05/2011
5				
	Average cost			
	Construction of three pole +cable only within 60 km from stores >20km			
Sample 5nos(Reference number for the job)				
1	E22122011040188	62663.56	17/07/2011	24/07/2011
2	E22122011100589	89991.6	06/01/2012	20/03/2012
3	E22122011110506	19485	30/01/2012	07/02/2012
4	E22112010090191		08/07/2011	15/07/2011
5	E22122012020065		29/06/2012	07/07/2012
	Average			

b) Service Providers

i) Cables done by service providers.

	Nature of work	Actual cost by Contractor	Date started	Date completed
	Construction of 40m length cable only within 20km from stores			
Sample 5 nos (Reference number for the job)				
1	E22122011050036	5723.98	07/072011	15/07/2011
2	E22122011050374	5723.98	07/072011	15/07/2011
3	E22122011060168	5723.98	07/072011	15/07/2011
4	E22122011040626	5723.98	07/072011	14/07/2011
5	E22122011040041	5723.98	07/072011	14/07/2012
	Average			
	Construction of 40m length cable only within 60km from stores but >20 km	Actual cost by Contractor	date started	date completed
Sample 5 nos(Reference number for the job)				
1	E22122011040063	8343.98	04/07/2011	11/07/2012
2	E22122011040580	8343.98	04/07/2012	08/07/2011
3	E22122011040362	7819.98	01/07/2011	08/07/2011
4	E22122010120243	8867.98	04/07/2011	04/07/2011
5	E2212209100398	9129.98	01/07/2011	05/07/2011
	Average cost			

ii) Construction of one pole + Cables only

	Nature of work	Actual cost by contractor	date started	date completed
	Construction of one pole +cable only within 20km from stores			
Sample 5nos(Reference number for the job)				
1	E22122011110418	17026.96	04/01/2012	13/01/2012
2	E22122011030266	14749.98	17/12/2011	23/12/2011
3	E22122010120243	15298.98	04/07/2011	05/07/2011
4	E22122011040255	14749.98	07/07/2011	10/07/2011
5	E22122011050454	26330.6	07/07/2011	11/07/2011
	Average			
	Construction of one pole +cable only within 60 km from stores but >20km	Actual cost by Contractor	date started	date completed
Sample 5 nos(Reference number for the job)				
1	E22122011020186	24813.9	01/07/2011	10/07/2012
2	E22122011010231	24813.98	01/07/2011	04/07/2011
3	E22122011090173	24221.98	16/11/2011	21/11/2011
4	E22122011050115	27999.8	25/10/2011	04/11/2011
5	E22122011050066	28365.98	13/10/2011	18/10/2011
	Average			

iii) Construction of three poles +cable only

	Nature of work	Actual cost by Contractor	date started	date completed
	Construction of three poles +cable only within 20km from stores			
Sample 5nos				
1	E22122008110163	24050.7	25/07/2011	05/08/2011
2	E22122011070340	26241.7	07/09/2011	12/09/2011
3	E22122011060544	26169.3	02/09/2011	12/09/2011
4	E2212201100100	22835.7	15/11/2011	21/11/2011
5	E22122011090321	24235.6	09/11/2011	21/11/2011
	Average			
	Construction of three pole +cable only within 60 km from stores but >20km	Actual cost by Contractor	Date started	Date completed
Sample 5 nos				
1	E22122011040558	46487	01/08/2011	080/08/201
2	E22122011090049	44421	11/11/2011	21/11/2011
3	E22122011060013	48729.8	26/09/2011	29/09/2011
4	E22122011050157	34114.7	26/09/2011	29/09/2011
5	E22122011070107	34521.8	15/11/2011	21/09/2011
	Average			

Appendix 4: Primary Data Interview guide

1.0 What is your designation in the company? ----------

2.0 How long have you worked with KPLC?----------

3.0 How long have you worked in Coast region?----------

4.0 When did the company start outsourcing line construction in KPLC?

5.0 Have you participated in the process of initiating Outsourcing of line construction in the company?

6.0 Which department(s) was/were affected by this action?

7.0 How did the employees both management and union react to this action?

8.0 Do you think line construction is core activity in Kenya Power and why?

9.0 What is the monitoring mechanism in place to ensure successful outsourcing of line construction?

10.0 How would you describe the quality of work done by contractors?

11.0 How would you describe the expertise of your service providers?

12.0 Which areas of operation in the company have registered improvement in performance as result of outsourcing line construction?

13.0 What are the challenges and risk that KPLC face by outsourcing this activity with internal staff?

14.0 What are the challenges/risks KPLC faces with contractors?

15.0 What measures have been put in place to mitigate the risks and challenges of outsourcing line construction?

16.0 In your opinion are there are governance issue related to outsourcing labour and transport in the company?

17.0 In your opinion, how do you see the future of outsourcing line construction in KPLC?

18.0 Do you think contractors can become major competitors in future to KPLC?

19.0 What are some of the major obstacles to outsourcing of line construction?

20.0 Any other information you can give concerning outsourcing line construction?

Appendix 5: Results of Descriptive Statistics

KPLC VS SERVICE PROVIDERS COMPLETION TIME

		N	Minimum days	Maximum days	Mean	Std. Deviation
KPLC TEAMS COMPLETION TIME	CABLE 0-20KM	5	1.00	15.00	8.8000	6.14003
	CABLE 20-60KM	5	3.00	12.00	7.2000	3.49285
	ONE POLE 0-20KM	5	5.00	8.00	6.6000	1.14018
	ONE POLE 20-60KM	5	3.00	10.00	5.8000	2.68328
	THREE POLE 0-20KM	5	1.00	9.00	3.6000	3.71484
	THREE POLE 20-60KM	5	7.00	14.00	8.8000	2.94958
SERVICE PROVIDERS COMPLETION RATE	CABLE 0-20KM	5	7.00	8.00	7.6000	.54772
	CABLE 20-60KM	5	1.00	7.00	4.4000	2.30217
	ONE POLE 0-20KM	5	1.00	9.00	4.6000	3.04959
	ONE POLE 20-60KM	5	3.00	9.00	6.2000	2.68328
	THREE POLE 0-20KM	5	5.00	12.00	8.6000	2.96648
	THREE POLE 20-60KM	5	3.00	10.00	6.0000	2.73861
	Valid N (listwise)	0				

KPLC AND SERVICE PROVIDERS COST MEAN COMPARISON						
		N	Minimum Kshs	Maximum Kshs	Mean	Std. Deviation
KPLC TEAMS COST	CABLE 0-20KM	2	2860.93	2860.93	2860.9300	.00000
	CABLE 20-60KM	2	12860.93	14878.24	13869.5850	1426.45358
	ONE POLE 0-20KM	2	28247.96	32010.60	30129.2800	2660.58826
	ONE POLE 20-60KM	5	22898.64	57617.96	42248.2540	15813.28701
	THREE POLE 0-20KM	3	30408.16	36256.40	34044.9200	3173.96362
	THREE POLE 20-60KM	3	19485.00	89991.60	57380.0533	35549.00481
SERVICE PROVIDERS COST	CABLE 0-20KM	5	5723.98	5723.98	5723.9800	.00000
	CABLE 20-60KM	5	7819.98	9129.98	8501.1800	510.73202
	ONE POLE 0-20KM	5	14749.98	26330.60	17631.3000	4951.93835
	ONE POLE 20-60KM	5	24221.98	28365.98	26043.1280	1972.47263
	THREE POLE 0-20KM	5	22835.70	26241.70	24706.6000	1470.40266
	THREE POLE 20-60KM	5	34114.70	48729.80	41654.8600	6870.05170
	Valid N (listwise)	0				

Source Research Data