

**EFFECT OF RISK ASSESSMENT PRACTICES ON SUPPLY CHAIN
PERFORMANCE IN PUBLIC CORPORATIONS:
CASE OF KENYA POWER COMPANY**

BY

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DECLARATION AND RECOMMENDATION

This Research Project is my original work and has not been presented for degree in any other university or higher learning Institution.

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RECOMMENDATION

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

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DEDICATION

This research project is dedicated to my parents Mr and Mrs Kirui, My sisters caren ,Maureen ,joan and Diana Kirui. I therefore call upon blessings from heaven just for you through Jesus Christ. It is also dedicated to Dr. JohnMark Obura, Dr. B. Ombok and Reagan thankyou for your unending support.

ABSTRACT

Risk assessment practices enable organizations to prioritize risks to establish most to least critical importance in ranking. Risks are events caused by uncertainties, which can have positive or negative effect on the project objective. Supply chains have expanded rapidly over the decades, with the aim to increase productivity, lower costs and fulfill demands in emerging markets. However, there are risks within the organization which could greatly affect all units of the organization when the disruptions are not properly controlled, therefore risk assessment should be built into the management of projects. Some firms concentrate on the customer satisfaction and give little concentration to customer service trends that will drive customer satisfaction in the future thus there is a knowledge gap which this study sought to address. Organizations have not clearly shown the firm risk levels and how they should be strongly monitored to ensure cost reduction and improve profitability. The study assessed the effect of risk assessment practices on supply chain performance in Kenya Power Company in Kisumu. Specifically, the study: assessed the effect of risk identification practice on supply chain performance, determined the effect of risk analysis practice on supply chain performance and established the effect of risk evaluation practice on supply chain performance. The study was based on agency and shareholders theories and guided by a conceptual framework where the dependent variable was supply chain performance and independent variable was risk assessment practices. The study adopted correlational research design, the population comprised of 45 heads selected from different departments in Kenya Power Company. The study employed random sampling design. Data was collected from both primary and secondary sources. Validity was tested through judgement of expert's opinion while Reliability was ascertained through Cronbach's alpha where $\alpha > 0.7$ was considered reliable. Data was analyzed using descriptive and inferential statistics. Findings revealed that risk identification practice was a positive insignificant predictor of supply chain performance ($\beta = .035$ ($p = .05$), risk analysis was a positive significant predictor of supply chain performance ($\beta = .326$ ($p = .000$) and risk evaluation was a positive significant predictor of supply chain performance ($\beta = .314$ ($p = .05$). When $p > 0.05$, the Null values become insignificant, meaning that a unit change in practice of risk identification, risk analysis and risk evaluation leads to an increase in supply chain performance. The study concludes that embracing risk identification, risk analysis and risk evaluation leads to increased supply chain performance. The study recommends that KPLC Kisumu branch should intensify the practice of risk identification, risk analysis and risk evaluation as this was found to improve supply chain performance of the utility. The results of the study may be used by policy makers on risk assessment practices and supply chain performance by researchers as a source of literature.

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ABBREVIATIONS AND ACRONYMS

SCM	Supply Chain Management
SCRM	Supply Chain Risk Management
NSW	New South Wales Government
ERM	Enterprise Risk Management
KPLC	Kenya Power and Lighting Company

OPERATIONAL DEFINITION OF TERMS

Risk Assessment - It is the overall process of hazard identification, risk analysis, and risk evaluation.

Supply chain supply Management – It is the management of the flow of goods and services, involves the movement and storage of raw materials, of work-in-process inventory, and of finished goods from point of origin to point of consumption.

Risk management -Risk management is the identification, evaluation, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability or impact of unfortunate events or to maximize the realization of opportunities.

Supply chain Risks - Is the damage assessed by its probability of occurrence that is caused by an event within a company, within its supply chain or its environment affecting the business processes of more than one company in the supply chain negatively

Risk register - It is a list of identified risks with their importance rating

Supply chain Risk Management – It is the Management of Supply Chain risks through coordination or collaboration among the supply chain partners so as to ensure profitability and continuity

Customer Satisfaction - Refers to the quality of the products, services, price performance ratios as well as when a company meets and exceeds the requirements of the customer.

Enterprise risk management - is the process of planning, organizing, leading, and controlling the activities of an organization in order to minimize the effects of risk on an organization's capital and earnings. Enterprise risk management includes financial, strategic and operational risks, in addition to risks associated with accidental losses

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CHAPTER ONE

INTRODUCTION

This chapter presents the background of the study and explores the concept of Risk assessment practices. It also presents the research problem, research objectives, research hypothesis, justification of the study, scope of the study and conceptual frame work.

1.1 Background of the Study

According to Economic Survey (2002), performance of Public Corporations throughout the world have been recognized over the past ten years, to eco the performance indicators implying inconsistency of the risk outcomes. The trends posted reflects missing gaps therefore there is need to examine how risk assessment practices in supply chain affects performance. Supply chain performance can be looked at as the extent by which supply chain's activities effectively and efficiently ensure realization of organization goals and objectives. Supply chains have expanded rapidly , with the aim to increase productivity, lower costs and fulfill demands in emerging markets and clearly risk identification,risk analysis and risk evaluation should be considered so that performance indicators can be consistent and hence improving the growth of the organization.

Supply chain performance measurement include multiple dimensions including financial and non-financial metrics describing costs, capacity, lead times and service levels. Marien (2000) identified four key enablers that must be fully leveraged if Supply Chain Management is to be successful. These included: organizational infrastructure, technology, strategic alliances and human resource management .The increasing complexity in supply chain hinders visibility and consequently reduces one's control over the process. Over the years, the nature of competition has changed to the extent that companies no longer compete against other companies on the bases of quality as traditionally practiced in the 80s (Fawcett et al. 2007). However, the new source of business competition lies outside the walls of an organization, and is determined by how effectively companies link their operations with their supply chain partners; suppliers, distributors, wholesalers, retailers and end customers being able to create business relationships with customers, suppliers and other strategic partners anchored on trust and ensuring customer satisfaction (Petrovic-Lazarevic et al. 2007).

According to Chopra and Sondhi (2004) in supply Chain the concept of risk is associated with the production, procurement process, the transportation of goods, and the demand markets. In today's volatile era with businesses and, more specifically, supply chains becoming increasingly global, the industrial environment is heavily affected by uncertainty, which can potentially turn into unexpected disruptions and can affect the organizational profitability. Jorion (2001) stated that organizations can succeed if they acknowledge risks and manage them properly. For effective management of risks the organization's support is paramount and therefore organizations will therefore be advantaged to establish risk assessment practices to mitigate various risks facing the organization.

According to Kersnar (2009) the formal process of assessing risks includes risk identification, analysis evaluation and control. Risk Management in the supply chain has been a key area of concern to organizations. The current global economic crisis reveals there is need for ensuring proper risk assessment practices within the organization. Felea and Albastroin (2013) argue that risk is present in entirely all the depth of the organization Current business trends are leading to complex, dynamic supply networks. One consequence is that risk is increasing, and shifting around supply networks. Managers need to identify and manage risks from a more diverse range of sources and contexts. Researchers suggest that an approach to managing risks needs to follow a formal and structured approach to identifying, quantifying, and reducing risk; Khan and Burnes, 2007.

A similar argument is proposed by Manuj and Mentzer (2008) who suggest that identifying risks is the first step in developing a risk assessment process. Risks affect supply chain performance hence supply chain risk assessment needs more attention. Risk assessment is used to analyze the degree of risk associated with each hazard.(Quebec 2009) describes that cost reduction is implemented by identifying financial risks involved and examining daily financial operations, especially cash flow he further states that risks should be prioritized and provisions for the risks happening should be made.

Ngii (2015) further states that risks are directly reflected in the firm's financial performance, therefore it is important for firms to implement the risk assessment practices which will positively impact the financial performance of an organization. Risk assessment is a high-level skill which the management needs to understand how they are key to improving the profitability and reputation of their companies by successfully managing these risks.

1.2 Statement of the Problem

Risk assessment practices have enabled organizations to prioritize risks to establish a most to least critical importance in ranking. All organizations activities involve risks, Risks are events caused by uncertainties, which can have a positive or negative effect on the project objective. Supply chains have expanded rapidly over the decades, with the aim to increase productivity, lower costs and fulfill demands in emerging markets however there are risks within the organization which can greatly affect all units of the organization when the disruption is not properly controlled therefore risk assessment should be built into the management of projects. Most organization has been faced with a lot of challenges in attaining operational excellence both for customer satisfaction and organizational profitability. This has affected the overall performance of such firms. However, some firms have concentrated on the customer satisfaction and given little concentration to customer service trends that will drive customer satisfaction in the future thus there is a knowledge gap which this study seek to address. Organizations have not clearly shown the firm risk levels and how they should be strongly monitored to ensure cost reduction, firm's improvement and how risk assessment affects the profitability

1.3 General Objective

The main objective of the study was to assess the effect of risk assessment practices on supply chain performance in Kenya Power & Lighting Company in Kisumu City Branch, Kenya.

1.3.1 Specific Objectives

Specifically, the study sought to:

- i. Establish effect of risk identification practice on supply chain performance in Kenya power Company.

- ii. Determine the effect of risk analysis practice on supply chain performance in Kenya Power Company.
- iii. Establish the effect of risk evaluation practice on supply chain performance in Kenya Power Company.

1.4 Research Hypotheses

The study was guided by the following hypothesis:

H₀₁: Risk identification practice has no significant effect on supply chain performance in Kenya Power Company.

H₀₂: Risk analysis practice has no significant effect on supply chain performance in Kenya Power Company.

H₀₃: There is no significant effect on Risk Assessment on supply chain performance in Kenya Power Company.

1.5 Justification of the Study

The Study may be useful in providing a background information to other researchers who may want to carry out further research on the effects of Risk assessment practices and to come up with comprehensive conclusion and reasoning in regard to assessment of risk practices on supply chain performance. The findings may assist the management to obtain knowledge of the Kenya Power company dynamics and the effects of risk assessment practices and therefore obtain guidance from this study in designing appropriate policies that will regulate the company and be more endowed with knowledge and prepared to fit in the prevailing uncertain business environment. The findings of the study will enable the management of Kenya Power Company to adopt appropriate supply chain risk assessment practices to improve their performance it will also help them to design strategies of mitigating risks in the organization.

1.6 Scope of the Study

The study was carried out in Kenya Power Company Kisumu city. It was mainly to determine the effects of risk assessment practices on supply chain performance, the study focused on the staff of Kenya power which formed part of the target population from which a representative sample was obtained.

1.7 Conceptual Framework

The diagram explains how the risk assessment practices influence supply chain performance

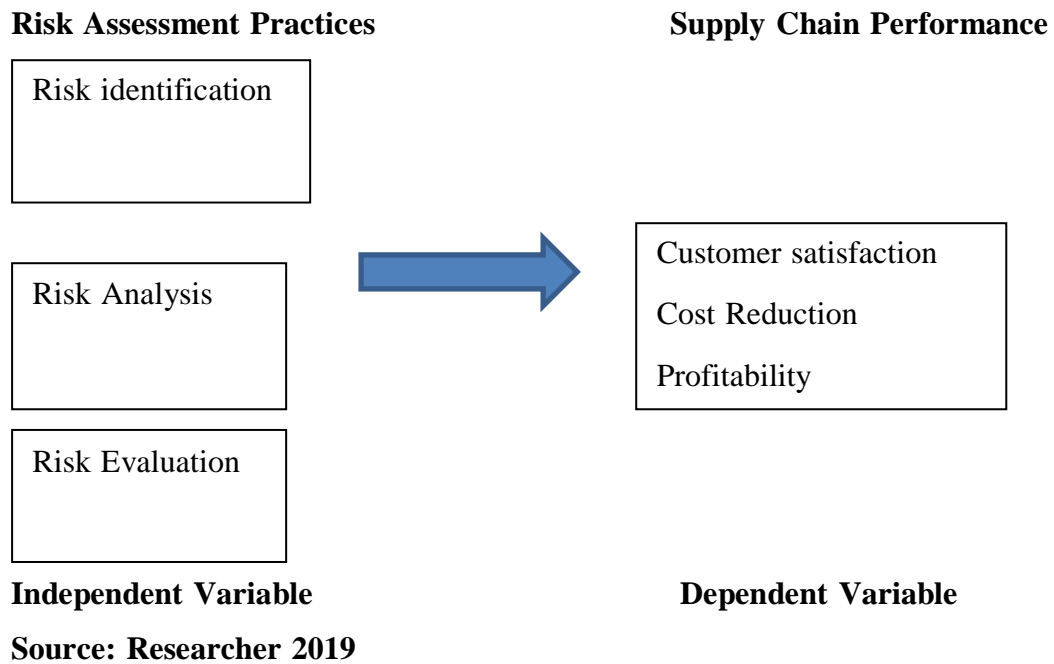


Fig 1.1: The Relationship between Risk Assessment Practices and Supply Chain Performance

Figure 1.1, gives a framework illustrating how variables in the study are conceptualized and related. The dependent variables are Risk identification, Risk analysis and Risk evaluation while the independent variables are customer satisfaction, cost reduction and profitability.

CHAPTER TWO

LITERATURE REVIEW

This chapter focuses on the theoretical foundation on which the study is built and also explores comparative empirical literature which helps to explain the gap which the study sought to address after discussing concepts of risk assessment practices on supply chain performance.

2.1 Theoretical Review

2.1.1 Agency Theory

According to Ross (1973) who is the main proponent of agency theory agency relationship arises between two or more parties when one is designated as “the agent” and acts for on behalf of another party who is designated as the “principal”. In the field of corporate risk management agency issues have been shown to influence managerial attitudes toward risk taking and hedging (Smith and Stulz 1985). Agency theory implies that defined hedging policies can have important influence on firm value (Fite and Pflleiderer, 2005). Agency theory provides strong support for hedging as a response to mismatch between managerial incentives and shareholder interests. Agency theory attempts to explain relationships and self-interest in business organizations. It describes the relationship between principals/agents and delegation of control. It explains how best to organize relationships in which one party (principal) determines the work and which another party (agent) performs or makes decisions on behalf of the principal (Jensen and Mackling).

The theory spreads the organizational management to include ownership and control by shareholders and control by management. Under corporate risk management it is believed that agency issues have influence on managerial attitudes toward managing risks (smith and stulz 1985). Agency theory is therefore relevant to this study because of the risks that arise between the management of Kenya Power Company and the customers who are the users of the electricity.

2.1.2 Stakeholder’s Theory

According to Edward Freeman (1984), it describes the relationship between the managers and other stakeholders and the outcome that it arises out of the adherence to stakeholders management principle .Stakeholders provide critical support to the business firms such as shareholders ,employees ,suppliers customers ,local

community and therefore they get benefits and risks regarding their involvement with the company. Bebbington. J. et al (2008) states that the reputation of the organization is at risk in everyday interaction between the organization and their stakeholders having many sources such as strategic, financial hence must be managed in order to improve organizational performance. This theory does not put too much focus on profits and the ultimate objective of stakeholder theory is the concern of continued existence of an organization and it must be achieved by balancing the interest of all stakeholders.

Stakeholder's theory is therefore relevant to this study because the actions of the top management of Kenya Power Company and the management their relationship with various stakeholders inform the strategies of managing the risks that arise within the organization.

2.1.3 Risk Assessment Practices

According to Palaniappan (2014) The degree of risk associated with each hazards is analyzed using Risk assessment. He further indicates that the aim of risk assessment is to point out the activities and the areas in the value chain which are influenced by the risks. Jorion (2001) stated that the organizations should fully support the management of risks and can therefore establish and put in place the various practices of assessing risk so as to mitigate the various risks facing the organization he further says that if the organization accepts and manages the risks effectively their performance will greatly improve. According to Kersnar (2009) identification of risks, analyzing, evaluating and controlling the risks is the formal process of assessing risks.

2.1.4 Risk Identification

Munyoko (2015) stated that the most important aspect in management process is the identification of the risk in an organization; Some risks are not managed because they are not identified in the first stage and later are not treated .According to Simmons (2000) the organization should first define its business objectives as it plays an important step towards mitigation of risks because if any organization does not have a clear vision they may fail to identify what risks may arise. Kersnar (2009) further noted that the risk identification process should be clearly expressed and should avoid any unreasonable issues as much as possible.

According to Garvin and Levesque (2006) Risks can be pointed out by identifying critical risks in planning future events. Economic researchers have also indicated that risks can be narrowed down from the occurrences and a list of possible outcomes can be clearly brought out along with their corresponding probability . According to NWS (2006) Risk identification strategies should be developed with a clear objective of enabling an organization consider all the risks in an organization and create a list of what each involves.

2.1.5 Risk Analysis

(Berinato 2006) An organization should first identify the risks then analyses it. This involves analyzing the institutional strength, weaknesses, opportunities and threats, this is to enable the organization come out with strategic and effective analysis for the risks and to properly evaluate the effect of risks on asset values, economic performance analysis and need for risk transfer and financing arrangements will have to be determined. According to (Gates 2006) the organization should then take the next step of using a risk mapping technique which will enable them have a thorough understanding of the risks they are undergoing and use this to prioritize mitigation strategies. Jorion (2001) stated that after risk identification the organization should have the control measures to mitigate the risks and the controls that would be needed.

2.1.6 Risk Evaluation and control

According to Gupta (2009) Identifying ,monitoring and managing potential risks in order to minimize negative impact that the risks can have on an organization and ensuring strategic control elements are implemented this will ensure the organizational achievement of future goals and will monitor performance and ensure that the intended strategic goals remain on track. Supply chain risk management is aimed at implementing strategies to manage risks and uncertainties. (Sheffi, 2005). States that the occurrence of risks and the kind of damage it may cause is the determining factor for a firm to carry out its Risk evaluation. Pallaniapan (2014) describes the importance of carrying out risk evaluation it will enable the management to get the knowledge on risks in the firm and will be able to know where the greatest risks lie which will guide them on how to plan the resouces which will be used to mitigate the risks.

2.1.7 Supply Chain Performance

According to Ermoshin (2018) supply chain is the process required to satisfy customer requests it includes all the activities needed to convert the basic materials into finished product and transport the goods to the customer. supply Chain Management (SCM) concentrates on the right quality, quantities of the product and a proper liase between customers ,retailers and producers so that appropriate services can be offered with minimum costs. According to (Bourne et al,2002 kennerley & Neely,2003) Most literatures on supply chain management concentrated on supply chain practices however there has been very little focus on crucial issues from the wider literature on effects of implementation of risk management strategies on supply chain performance measurement (Chopra et al. (2010) indicates that the influence of practical experience of the business world and the knowledge is represented by supply chain management.The level at which the activities of supply chain can bring out the actuality of the organizational goals and objectives effectively and efficiently is termed as supply chain performance,he further noted that there are internal and external factors which influence the performance of supply chain. Simchi-Levi, Simchi-Levi & Kaminsky (2003) defines supply chain performance good business operations in a firm which will result to fulfilling or satisfying customer's needs. According to (Presutti, 2003) Supply chain Performance entails assessing the flow of goods and services and also quantifiable and non-quantifiable factors of the business.

2.1.8 Supply Chain Measures

Supply chain performance measurement is the process of ensuring there is quality in effectiveness and efficiency the all process of the flow of goods. (wong & wong 2008).According to (Bigliardi & Bottani, 2014)There are ways used to measure Supply chain performance measurement this are multiple dimensions which includes financial and non-financial metrics and these two aspects give a detail account on ,capacity ,lead times ,cost and the levels of services. Chopra et.al (2007) states that supply chain performance could be assessed at various operational or management levels. The top management decisions are greatly influenced by strategic level measures and this is evident on the policies made and the extent of commitment to the goals of the organization. There are targets set by the strategic level which should be attained and therefore the tactical level are to ensure to achieve and produce results they are also tasked with resource allocation and at the operational level the standard of

measurement of the progress and operation of the firm is based on the quality of the goods, the cost, how deliveries are done and the flexibility;. Other studies on supply Chain Management indicates that the business priorities can be classified into two, Responsiveness and efficiency which refers to using least amount of inputs ,cost or resources to achieve the desired result and this shows good levels of performance. The term responsiveness refers to the ability of a supply chain to quickly and positively respond to economic growth of the market. In coming up with creative strategies that will enable on quick deliveries of products to the customers. (Chopra et al., 2007). According to (Naggy ,veter 2010) Supply chain performance is about customer value. The order placed by the customer, if the customer was satisfied, and if the customer filed any complaint,he also points out the concept of customer service level i.e the quality and delivery frequencies. According to (Chopra et al., 2007). Depending on the top considerations the firm operates on, they adopted three standards: cost, quality, delivery and customer service levels as proposed by researchers (Wong & Wong, 2008; Sherperd& Gunter, 2006; Bigliardi&Bottani, 2014).According to (Gelei 2006) The overall supply chain performance of a firm can also be determined by the business partners based on the standards put in place by the partners.

2.1.9 Factors affecting Supply Chain Performance

Chan (2003) Studied performance of supply chain performance in different business operating industries and came up with different outcomes .logistics service industry emphasized on flexibility and service perfection while the industry dealing with electronics concentrated more on quality ,cost and on-time delivery. According to Marien (2000) The infrastructure ,human resource management of the organization and technology are the factors that determines the success of supply chain management in an organization, on the other hand he pointed out factors like poor quality, longer lead times and inconsistent deliveries as the challenges facing organizations and that they can have a negative effect on supply chain,

2.1.10 Supply Chain Risk Management

Supply risk is the unreliability that is associated with supplier activities and the failure of delivering goods and services. i.e the transpiration of significant and/or disappointing failures with inbound goods and services, Zsidisin et al., (2000). Supply chain of a firm consists of processes and activities through which goods , services and information smoothly flows to the end customer. Peck (2005) Supply chain is delicate

as it is exposed to serious arising internal and external risks which distract and bring threats to the move of normal activities and the real product life time.

According Wagner & Bode 2006; Coleman2006). The pace at which things are moving have increased uncertainties. There is high advance in technology, great speed in product cycle and transactions have become more complex all this make it so difficult for the organization to measure the risks they are facing and therefore supply chain risk management is so crucial and is being given priority in most organizations. Christopher and Peck (2004) argues that the meaning of risk and tools used to measure the extent and levels of risk depends on research field that has been identified. Carter and Rogers (2008) define SCRM Supply chain risk Management as when the management of the firm is in a position to have knowledge and understanding of the economic risks, social, and environmental risks and are able to find ways of managing the risks, . According to Kouvelis, Chambers and Wang (2006), SCRM is managing the uncertainty of demand, supply and costs Baird and Thomas (1990), common definitions of risk are based on the volatility of possible return, on the concept of uncertainty caused by information deficits and on the willingness to accept a potential loss if positive returns are expected thus, risk may indicate both positive and negative deviations from an expected outcome. (Roth, Tsay, Pullman & Gray, 2008).

SCRM goes beyond this by not only seeking to address such acts but also to promote business continuity and to mitigate any disruptions, that is, events that interrupt normal business, activities, operations, or processes many organizations still don't have a supply chain risk assessment program where they identify the potential risk within their supply chains and come up with contingency plans and mitigations for the supply chain risks that may affect the organization performance. There is need therefore for organization to clearly identify the risks involved in the supply. Supply chain managers should come up with robust mitigation strategies to increase supply chain efficiencies and effectiveness. With these risks, companies could become Vulnerable to disruptions. According to Khemani (2007) Risk management strategies include: Risk Avoidance, that is, proactive action that eliminates the possibility of an event occurring, Risk Transfer which are proactive actions (often financial or legal) that shifts risks to a third party, Mitigate Risks, this are proactive actions that reduces the financial impact if an event occurs, Minimize Risks, which are actions meant to reduce the probability of an event occurring.

According to CIPS (2010) the risk management strategies should include the following: Avoid risk, that is, do not undertake the activity, if the activity is essential the risk must be accepted and managed. The next strategy is to minimize risk through reducing either the impact or the probability (or both) The third strategy is to Spread the risk, that is, develop ‘insurance’, For example, source from more than one supplier, although lowest price point may not be achieved. To be effective multiple sourcing requires knowledge of any supplier interdependencies like second or third tier supply base. The last strategy is to Accept risks, this is the best overall strategy, particularly if low impact or probability risks and alternative strategies are not deemed effective or efficient. In the literature, supply chain risks are shown to influence Supply chain performance Cousins et al. (2004) identify the wider consequences of a failure to manage risks effectively. These include not just only financial losses but also reduction in product quality, damage to property and equipment, loss of reputation in the eyes of customers, suppliers and the wider public, and delivery delays. (Sheffi, 2006). Supply chain risk management, therefore, aims to identify the potential sources of risk, and to implement appropriate actions to avoid or contain supply chain vulnerability organization strategy Implementation has for a long time been recognized in the SCM literature but the management of risks as a result of interruptions has not received adequate attention (Cooper, 2003; Magnan& Christopher, 2005). Chopra and Sodhi(2004) identify the wider consequences of a failure to manage risks effectively. These include not just only financial losses but also reduction in product quality, damage to property and equipment, loss of reputation in the eyes of customers, suppliers and the wider public, and delivery delays

2.2 Empirical Literature Review

2.2.1 Risk identification and supply chain performance

Glotbadi, Feiz, Baharun (2016)studied the customer experience and how the customer interprets risk found out that managers need to improve on how they relate with their customers when marketing their products, the quality of their service and should also improve on the image of the brand in order to decrease customers perceived risks and increase customers satisfaction which will lead to improved firms profitability and performance.

Kemboi, lagat and koech (2016) studied supply chain Management practices and customer satisfaction and stated there is increased customer experience and customer loyalty when there is good flow of communication, when the supplier and the customer relate well and when supplier partnership is strategic.

Hague & Islam (2013) further indicated that when all the manufactureres,suppliers and customers within the supply chain management work together with one mindset to achieve goals ,the business performance will be greatly improved across board.

Eckert (2007) describes that loyal customers will freely buy products at all times and even encourage others to purchase products from the same organization.. Koech, Kemboi,Lagat (2016) also observed when customers are satisfied they share with others how well they were treated and the good services they received, and when the customer is not satisfied they are likely to tell others how they did not receive the treatment they wanted. .(Caciappo 2000) states that what will enhance the customers brand loyalty is when the organization will ensure that the customer is treated well and his requirments met before purchase and after purchasing the products. Wallin (2006) T he customer is more satisfied when the order he placed is delivered in good time ,they even prefer that the time taken to deliver the product is less than they placed an order for the product.hence flexibility should be enhanced so as to improve delivery services.

All the above studies concentrated on the customer satisfaction and so little has been studied on supply chain management performance that will drive customer satisfaction in the future thus there is a knowledge gap which this study intended to address.

2.2.2 Risk Analysis Practice and Supply Chain Performance

A study by Mburu, Ngugi and Ogollah (2015) studied cost reduction in supply chain management and found that Setting management targets,annual saving targets are some of the ways through which a company should ensure adequate cost reduction,there should be transparency in reporting the savings achieved , and delivering to customers' economic quantities.

Another study by Bialas (2016) studied on cost benefits Aspects in Risk Management and stated that there are three main components, Risk reduction Assessment, Cost Benefit Assessment and Qualitative Critical Assessment that should be implemented.

According to (Quebec 2009) he describes that cost reduction is implemented by identifying financial risks involved and examining daily financial operations, especially cash flow he further states that risks should be prioritized and provisions for the risks happening should be made. Michael (2016) Stanleigh observed that Risk assessment allows companies to tackle risks in a systematic way which enables them to come up with the results of the projects timely and with the right cost.

However the above studies did not clearly show the firm risk levels and how they should be strongly monitored to ensure cost reduction and firm's improvement, and therefore risk analysis enables an organization to clearly identify the various risk levels and ways to reduce them

2.2.3 Risk evaluation practice and Supply chain Performance

According to (Pagach and Wari, 2011) Risk evaluation should be regularly done so as to know the levels and extent of risks that should be mitigated .The levels of risk can also be identified by doing audit reports and consistent financial reports whereas (Kassim, 2012) states that The top management should have strong leadership and be able to support Risk evaluation process and mitigation. They should be involved in creating a risk management culture across financial institutions and ensure sustained continuous profitability.

A study by Kasiva (2012)on effects of auditing risks on financial performance,some of the respondents were finance officer, accountants and internal auditors they pointed out that risks should be detected early enough by enhancing risk based auditing through management of risks. Further findings indicated the internal auditors should put more emphasis on undertaking fraud risk assessment.

Miyare (2012) tried to find out the factors that profitability has in common with risk assessment practices and pointed out that if risk assessment practices would be put in place it would lead to greater profitability and the management should continuously improve on the risk assessment practices by ensuring that the practices remain relevant, he further stated that the company can save on financing costs.

Elijah 2013sought to find out how effective management of materials leads to profitability.he further noted that managing materials with special and particular attention on sourcing goods, receiving and storing goods leads to profitability. Officers

dealing with material management should have a clear goal which should be properly carried out since they will affect the profitability of the firm,

On the other hand Asemet (2014) studied on risk management of insurance companies on how they perform financially .Risk identification is the most important aspect which can easily affect financial performance, Organization should adopt risk assessment practices because they will positively affect the financial performance the management should also put into practice the Enterprise Risk Management,(E R M) However, there is little study on how the establishment of risk evaluation on supply chain performance .studies have been devoted to look at the credit risk and its influence on profitability and firm performance.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter presents the methodology that the researcher used to conduct the study, It outlines the research design, study area, target population, sample size, sampling technique, data type and source, data collection method, instrument validation and reliability test ,data analysis and presentation.

3.1 Research Design

Research Designs are plans and the procedures for research, which span the decisions from broad assumptions to detailed methods of data collection and analysis (Cooper & Schindler, 2008). The study adopted correlation research design. The design was used in looking at the effect of Risk assessment practices on supply chain performance in Kisumu.

3.2 Study Area

The study was carried out in Kenya Power Company found within Kisumu County. The county covers an area of 2,085.9Km² and a population of 968,909 and a density of 4.3 people per household according to Kenya National Bureau of Statistics national census of 2009 (GoK, 2009).

3.3 Target Population

According to Kothari (2004), target population defines those units for which the findings of the study are meant to be generalized from. For the purpose of this study, the study targeted 45 participants drawn from different departments (Marketing, Finance, Human resource, procurement) in Kenya Power Company in Kisumu.

3.4 Research Instruments

Data was collected using questionnaires administered by the researcher both primary and secondary data was collected. Primary data was collected using questionnaires but secondary quantitative data was collected using desk top research within the organization. Also a follow up using emails and phone calls as well as personal visits was applicable. Secondary data from research reports and previous studies relating to supply chain performance was used to provide wider information.

3.5 Data Collection Method

3.5.1 Data Types and Sources

The study collected primary data which was collected from the respondents through census survey method which was conducted using questionnaires. The primary data focused on the assessment practices in Kenya power company Kisumu.

3.5.2 Data Collection Procedure

The study will follow data collection procedure for any academic work upon first upon successful defense of this proposal, the researcher will obtain a transmittal letter from the school of postgraduate to proceed to data collection .Upon approval the study will proceed to issuance of questionnaires to respondents using data collection method, secondary data will also be collected at the same time.

3.5.3 Data Collection Instruments

The study adopted questionnaire for collecting primary data, the questionnaire gathered descriptive data the study established the effects of risk assessment practices on supply chain performance in Kisumu city.

3.5.4 Instruments Reliability Test

There was a pilot study to test for the reliability and validity of the questionnaire. Test for reliability of the questionnaire was done using Cronbach's Alpha Reliability Test. The Cronbach's Alpha Reliability Test provided an indicator of the internal reliability or consistency of items in a multiple item scale. According to (Kumar, 2011) Cronbach's Alpha Reliability test define the proportion of the variability in the responses of the survey. This variability is the result of differences in the responses of the respondents and indicates whether an item or scale is free from measurement error and identify inconsistent items. The alpha value ranges between 0 and 1 with reliability increasing with the increase in value. Therefore, the Alpha coefficient values above 0.7 was used as a rule of thumb to reject or accept the instrument (Kumar, 2011).

3.5.5 Reliability Test Results

The results of the reliability test were as presented in table below.

Table 3.1 Reliability Test

Indicator	Cronbach's Alpha	No. of Items
Risk identification	0.812	4
Risk Analysis	0.778	4
Risk Evaluation	0.712	4
Supply Chain Performance	0.704	4

From table 3.1, the Cronbach's alpha of; 0.812, 0.778, 0.712 and 0.704 for risk identification, analysis, evaluation and supply chain performance were above the threshold value of 0.7. It was therefore concluded that the research instruments were reliable and hence could be used in the study.

3.5.6 Instruments Validity Test

The study performed Content Validity Analysis, which measures the degree to which data collected using a particular instrument represents a specific domain or content of a particular concept (Creswel, 2002). Content Validity Index (CVI) formula ($CVI = \text{No. of Judges declaring item valid} / \text{total No. of items}$) and accept only items with CVI of 0.78 and above as recommended by Amin (2005). In addition, the researcher sought opinions of experts in the field of study especially the supervisor to enhance validity as proposed by (Cooper & Schindler, 2008)

3.6 Data Analysis, Presentation and Model Specification

The data collected was analyzed using simple linear regression methods. Data was first coded and organized into concepts from which generalization was made from the responses. Data was then tabulated and frequencies calculated on each variable under study and interpretations were made from the research findings.

3.7 Model Specification

The model to be used in this study will take the following format

$$Y_0 = B_0 + B_1 (X_{1i}) + B_2 (X_{2i}) + B_3 (X_{3i}) + e$$

Where:

Y_0 = Supply Chain Performance

X_1 = Risk identification

X_2 = Risk analysis

X_3 = Risk evaluation

ε = Standard error

β_1 = Measures of effects of Customer satisfaction on supply chain performance

β_2 = measures of effect of cost reduction on supply chain performance

β_3 = measures of effects of profitability on Supply chain performance

ε = Standard Error.

However, factor scores for each measurement construct will be generated and used as independent variables in the regression analysis. Where the sign of the estimated coefficients gives the direction of the influence of independent variable on the dependent variable while the size of the coefficient gives the magnitude of the effect (Greene, 2012).

3.8 Ethical Consideration

Relevant approvals, permissions and clearances were sought. All materials used in the conduct of research were appreciated by means of references.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

This chapter presents results and discussions of the study findings. The first section gives a demographic view of the respondent in question, and the second section discusses the findings as per research objectives.

4.1 Response Return Rate

The researcher administered the questionnaires in person to the respondents. Out of the 45 questionnaires administered to the respondents, all of them were returned constituting a response rate of 90.0 % of the administered questionnaires.

4.2 Demographic Characteristics of the Sample

The study sought to establish the background of the respondents in the study in terms of gender, age bracket, highest education level attained, working experience and departmental affiliation. The results were as shown in the following sections.

Table 4.1 Respondents Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	30	71.4	71.4	71.4
Female	15	28.6	28.6	100.0
Total	45	100.0	100.0	

Source: Survey data, 2019

Table 4.1 indicates that majority (71.4%) of respondents in the sample were males indicating that majority of Kenya Power Company employees in Kisumu are males.

Table 4.2: Respondents Age Bracket

Age	Frequency	Percent	Valid Percent	Cumulative Percent
18-30 years	12	28.6	28.6	28.6
31-40 years	16	38.1	38.1	66.7
41-50 years	10	23.8	23.8	90.5
Above 51 years	4	9.5	9.5	100.0
Total	45	100.0	100.0	

Source: Survey data, 2019

As shown in Table 4.2, the majority (38.1%) of respondents were aged between 31-40 years while only (9.1%) were above 51 years. This indicates that majority of Kenya Power employees are mature people with wealth of experience.

Table 4.3: Highest Education level

Education Level	Frequency	Percent	Valid Percent	Cumulative Percent
Secondary Level	2	4.8	4.8	4.8
College Level	18	42.9	42.9	47.6
University Level (Bachelor's Degree)	19	45.2	45.2	92.9
Masters Level	5	7.1	7.1	100.0
Total	45	100.0	100.0	

Source: Survey data, 2019

Table 4.3 indicate that 19 (45.2 %) of the respondents are bachelor's degree holders, 18 (42.9 %) had reached college level while only 2(4.8%) had attained secondary education level. This implies that data for the study was obtained from knowledgeable respondents hence the reliability of the data.

Table 4.4: Working Experience

	Frequency	Percent	Valid Percent	Cumulative Percent
Below 1 year	6	14.3	14.3	14.3
1-5 years	17	40.5	40.5	54.8
6-10 years	13	26.2	26.2	81.0
11-20 years	8	19.0	19.0	100.0
Total	45	100.0	100.0	

Source: Survey data, 2019

Table 4.4 shows the respondents working experience in the current job. The results indicate that majority (40.5 %) of respondents had worked in their respective sections for the period between 1-5 years which is an indication of low labor turnover, 26.2% had worked for a period of more than 6 years while 14.3 % had worked for a period less than 1 year. This implies that the data was obtained from respondents who had gained experience in risk assessment and supply chain performance.

4.3: Extent of Practice of Risk Identification by KPLC Kisumu Branch

The extent of risk identification in the case study was measured using four items. Respondents were asked to rate the extent of risk identification elements practiced by KPLC. Responses were elicited on a 5-point scale (1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent). These responses were then analyzed using frequencies, means and standard deviations.

Table 4.5: Rating of Extent of Practice of Risk identification

Constructs	5	4	3	2	1	Mean	Std. Dev
Overall Mean = 4.00							
a. Our risk identification reflects our supply chain management objectives	11(24.4%)	33(73.3%)	1(2.2%)	0(0.0%)	0(0.0%)	4.22	0.4714
b. Our risk identification is SMART	20(44.4%)	25(55.6%)	0(0.0%)	0(0.0%)	0(0.0%)	4.44	0.5025
c. Our risk identification process is easily understood	3(6.7%)	42(93.3%)	0(0.0%)	0(0.0%)	0(0.0%)	4.00	0.2523
d. Our risk identification is focused on satisfying customers	25(55.6%)	20(44.4%)	0(0.0%)	0(0.0%)	0(0.0%)	5.00	0.5025

Key: 1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent

Source: Survey data,2019

Results presented in Table 4.5 indicate that the practice of risk identification is to great extent. The overall mean response score for all the elements was 4.000, coded as great extent meaning that risk identification is practiced by KPLC branch to great extent. The very greatly practiced element of the risk identification was on customer satisfaction focus (Mean = 5.000, Std. Dev =0.5025), This result is in tandem with the theoretical postulations of Jorion (2001) who argue that a risk identification should be market-focused to provide stability and consistency of company's direction.

4.4: Extent of Practice of Risk Analysis by KPLC Kisumu Branch

The risk analysis extent of practice in the case study were measured using four items. Respondents were asked to rate the extent of risk analysis elements practiced by KPLC. Responses were elicited on a 5-point scale (1-No extent, 2-little extent, 3-

moderate extent, 4-Great extent, and 5-very great extent). These responses were then analyzed using frequencies, means and standard deviations.

Table 4.6: Rating of Extent of Practice of Risk Analysis

Constructs	5	4	3	2	1	Mean	Std. Dev
Overall Mean = 4.00							
a. Our risk analysis objectives are SMART	2(4.4%)	43(95.6%)	0(0.0%)	0(0.0%)	0(0.0%)	4.04	0.2084
b. The purpose of risk analysis objectives are easily understood	6(13.3%)	37(82.2%)	2(4.4%)	0(0.0%)	0(0.0%)	4.10	0.4168
c. Risk analysis objectives are focused on satisfying customers	38(84.4%)	7(15.6%)	0(0.0%)	0(0.0%)	0(0.0%)	5.00	0.3665
d. There is a relationship between risk assessment achievements and risk analysis objectives	4(8.9%)	40(88.9%)	1(2.2%)	0(0.0%)	0(0.0%)	4.00	0.330

Key: 1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent

Source: Survey data, 2019

Table 4.6 indicate that the practice of risk analysis is applied to great extent. The overall mean response score for all the elements was 4.000, coded as great extent meaning that focus on risk analysis is practiced by KPLC branch to a great extent. The highly practiced element of the risk analysis was on customer satisfaction focus (Mean = 5.000, Std. Dev =0.3665).

4.5: Extent of Risk evaluation practice by KPLC Kisumu Branch

The extent of risk evaluation in the study was measured using four items. Respondents were asked to rate the extent of risk evaluation elements practiced by KPLC. Responses were elicited on a 5-point scale (1-No extent, 2-little extent, 3-moderate

extent, 4-Great extent, and 5-very great extent). These responses were then analyzed using frequencies, means and standard deviations.

Table 4.7: Rating of Extent of Risk Evaluation Practice

Constructs	5	4	3	2	1	Mean	Std. Dev
Overall Mean = 4.00							
a. Risk evaluation procedures are well formulated	5(11.1%)	39(86.7%)	1(2.2%)	0(0.0%)	0(0.0%)	4.10	0.3582
b. Risk evaluation Policies are effective	5(11.1%)	37(82.2%)	3(6.7%)	0(0.0%)	0(0.0%)	4.04	0.4240
c. Employees hardly deviate from set risk evaluation policies	4(8.9%)	38(84.4%)	3(6.7%)	0(0.0%)	0(0.0%)	4.022	0.3982
d. Risk evaluation policies are set to ensure customer satisfaction	35(77.8%)	10(22.2%)	0(0.0%)	0(0.0%)	0(0.0%)	5.00	0.4204

Key: 1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent

Source: Survey data, 2019

The results displayed on Table 4.7 indicate that the risk evaluation is applied to great extent. The overall mean response score for all the elements was 4.000, coded as great extent meaning that implementation of risk evaluation is practiced by KPLC branch to a great extent. The highly practiced element of the risk evaluation was on customer satisfaction focus (Mean = 5.000, Std. Dev =0.4204).

4.6: Extent of Customer Satisfaction in KPLC Kisumu Branch

The extent of customer satisfaction was measured using three items. Respondents were asked to rate the extent of element as pertains to KPLC. Responses were elicited on a 5-point scale (1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent). These responses were then analyzed using frequencies, means and standard deviations.

Table 4.8: Rating of Extent of Customer Satisfaction

Constructs	5	4	3	2	1	Mean	Std. Dev
Overall Mean =						4.00	
a. Services offered are convenient to customers	6(13.3%)	38(84.4%)	1(2.2%)	0(0.0%)	0(0.0%)	4.11	0.3827
b. KPLC staff do a follow up after services	6(13.3%)	39(86.7%)	0(0.0%)	0(0.0%)	0(0.0%)	4.13	0.3438
c. Old clients bring others for services	13(28.9%)	29(64.4%)	3(6.7%)	0(0.0%)	0(0.0%)	4.222	0.5596

Key: 1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent

Source: Survey data, 2019

Table 4.8 indicates that the customer satisfaction is applied to great extent. The overall mean response score for all the elements is 4.000, coded as great extent meaning that customer satisfaction is pursued by KPLC branch to a great extent.

4.7: Extent of Cost Reduction in KPLC Kisumu Branch

This variable was measured using three items. Respondents were asked to rate the extent of element as pertains to KPLC. Responses were elicited on a 5-point scale (1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent). These responses were then analyzed using frequencies, means and standard deviations.

Table 4.9: Rating of Extent of Cost Reduction

Constructs	5	4	3	2	1	Mean	Std. Dev
Overall Mean = 4.00							
a. Number of KPLC services has greatly increased	7(15.6%)	38(84.4%)	0(0.0%)	0(0.0%)	0(0.0%)	4.16	0.3665
b. New KPLC services are regularly introduced	9(20.0%)	36(80.0%)	0(0.0%)	0(0.0%)	0(0.0%)	4.20	0.4045
c. Different forms of payments are used	11(24.4%)	34(75.6%)	3(6.7%)	0(0.0%)	0(0.0%)	4.244	0.4346

Key: 1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent

Source: Survey data, 2019

Table 4.9 indicates that the cost reduction is applied to great extent. The overall mean response score for all the constructs is 4.000, coded as great extent meaning that cost reduction is practiced by KPLC branch to a great extent.

4.8: Extent of Profitability in KPLC Kisumu Branch

The extent of profitability was measured using three items. Respondents were asked to rate the extent of element as pertains to KPLC. Responses were elicited on a 5-point scale (1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent). These responses were then analyzed using frequencies, means and standard deviations.

Table 4.10: Rating of Profitability in KPLC Kisumu Branch

Constructs	5	4	3	2	1	Mean	Std. Dev
Overall Mean = 4.00							
a. Electricity bills are paid in time	2(4.4%)	41(91.1%)	2(4.4%)	0(0.0%)	0(0.0%)	4.00	0.3015
b. Electricity bills are fully paid (no installments)	8(17.8%)	36(80.0%)	1(2.2%)	0(0.0%)	0(0.0%)	4.16	0.4240
c. Bills paid are commensurate to services offered.	13(28.9%)	31(68.9%)	1(2.2%)	0(0.0%)	0(0.0%)	4.27	0.4954

Key: 1-No extent, 2-little extent, 3-moderate extent, 4-Great extent, and 5-very great extent

Source: Survey data, 2019

The findings shown in Table 4.10 indicates that the profitability has improved to great extent. The overall mean response score for all the constructs is 4.000, coded as great extent meaning that bills remittances is done by KPLC branch to a great extent.

4.9 Effect of Risk identification on Supply Chain Performance

In order to establish the influence of risk identification on Supply chain performance, Pearson’s correlation and multiple regression analyses were performed and the results are summarized in the Tables 4.11 and 4.15 as shown below.

Table 4.11: Correlations between Risk identification and Supply chain performance

		Risk identification	Supply chain performance
Risk identification	Pearson Correlation	1	.173**
	Sig. (2-tailed)		(.002)
	n	45	45
Supply chain performance	Pearson Correlation	.173**	1
	Sig. (2-tailed)	(.002)	
	n	45	45

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

Probability values in parentheses

Source: Survey data, 2019

As shown in Table 4.12, the correlation coefficient between risk identification and Supply chain performance is positive and significant ($r = 0.173$, $p = 0.002 < 0.05$, $n =$

Table 4.12: Model Summary^b

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.806 ^a	.649	.646	.56719

a. Predictors: (Constant), Risk identification, Risk analysis, Risk evaluation

b. Dependent Variable: Supply chain performance

45). This implies use of risk identifications in strategic planning decision making leads to increased Supply chain performance.

From Table 4.12, we conclude that 64.9 percent of the total variation of the dependent variable (Supply chain performance) explained by the Predictor variables. Which is good indication that supply chain performance has a greater positive impact from its independent variables studied.

Table 4.13: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	182.850	3	60.950	189.459	.000 ^b
	Residual	98.764	41	.322		
	Total	281.614	45			

a. Dependent Variable: Supply chain performance

b. Predictors: (Constant), Risk identification, risk analysis, risk evaluation

Source: Survey data, 2019

From Table 4.13, the p value of $0.000 < 0.05$, therefore we reject the null hypothesis of the possibility of observing the F critical value at any one time.

Table 4.14: Multiple Regression Analysis Estimation Results on the Effect of Risk Assessment Practices on Supply chain performance^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.291	.131		9.824	.000
Risk identification	.035	.031	.038	1.106	.269
Risk analysis	.326	.037	.429	8.745	.000
Risk evaluation	.314	.036	.432	8.716	.000

a. Dependent variable: Supply Chain performance

Source: Survey data, 2019

Table 4.14 exhibits the results of the multiple regression analysis. The results indicate that use of risk identification in strategic decision making was a positive insignificant predictor of Supply chain performance ($\beta = .035$ ($p = .269 > 0.05$)). This value is statistically insignificant since the p-value is greater than 0.05. It can be inferred from this value that a unit change in use of risk identification intensity leads to an increase in Supply chain performance of 0.035, all things being fixed. Thus, the null hypothesis that there is no significant influence of risk identification on Supply chain performance is therefore accepted. These results are in tandem with the findings of Glotbadi et al, 2016 and Langat, 2016 who found that risk identification had either insignificant positive influence on firm performance. However, the findings are at variance with

those of Hague and Islam, 2013 who found that risk identification had a significant positive influence on firm's performance.

4.10 Effect of Risk analysis on Supply chain performance of KPLC Branch

To establish the effect of risk analysis on Supply chain performance, Pearson's correlation and multiple regression analyses were performed and the results are summarized in the Tables 4.15 and 4.16.

Table 4.15: Correlations between risk analysis and Supply chain performance

		Risk analysis	Supply chain performance
Risk analysis	Pearson Correlation	1	.187**
	Sig. (2-tailed)		(.001)
	n	45	45
Supply chain performance	Pearson Correlation	.187**	1
	Sig. (2-tailed)	(.001)	
	n	45	45

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

Probability values in parentheses

Source: Survey data, 2019

As shown in Table 4.15, the correlation coefficient between risk analysis and Supply chain performance is positive and significant ($r = 0.187$, $p = 0.001$, $n = 45$). This implies intense use of risk analysis leads to increased Supply chain performance. Similarly, Table 4.15 indicate that risk analysis was a positive significant predictor of Supply chain performance ($\beta = .326$ ($p = .000$)). This value is statistically significant since the p-value is less than 0.05. It can be inferred from this value that a unit change in risk analysis use leads to an increase in Supply chain performance of 0.326, all things being fixed. Therefore, the null hypothesis that there is no significant of risk analysis and Supply chain performance is therefore is rejected. These results are in tandem with the findings of Mburu *et al*, 2015 who found that risk analysis had a significant positive influence on firm performance. However, the findings are at variance with those of Bialas, 2016 who found that risk analysis had either a weak or no influence on firm's performance.

4.11 Effect of Risk Evaluation on the Supply Chain Performance of KPLC

In order to analyze the effect of risk evaluation on Supply chain performance, Pearson's correlation and multiple regression analyses were performed and the results are summarized in the Tables 4.15 and 4.16.

Table 4.16: Correlations between Risk Evaluation and Supply chain performance

		Risk evaluation	Supply chain performance
Risk evaluation	Pearson Correlation	1	.749**
	Sig. (2-tailed)		(.000)
	n	45	45
Supply chain performance	Pearson Correlation	.749**	1
	Sig. (2-tailed)	(.000)	
	n	45	45

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

Probability values in parentheses

Source: Survey Data, 2019

Table 4.16 shows that the correlation coefficient between risk evaluation and Supply chain performance is positive and significant ($r = 0.789$, $p = 0.000$, $n = 45$). This implies use of risk evaluation leads to increased Supply chain performance. Similarly, Table 4.15 indicate that risk evaluation was a positive significant predictor of Supply chain performance ($\beta = .314$ ($p = .000$)). This value is statistically significant since the p-value is less than 0.05. It can be inferred from this value that a unit change in use of risk evaluation leads to an increase in Supply chain performance of 0.314, all things being fixed. Thus, the null hypothesis that there is no significant of risk evaluation and Supply chain performance is therefore is rejected.

These results are similar to the findings of Pagach and Wari, 2011 and Kassim, 2012 who found that risk analysis had a significant positive influence on firm performance. However, the findings are at variance with those of Kasiva, 2012 who found that risk analysis had a weak influence on firm's performance.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Summary of Findings

The analysis indicates that risk analysis was a positive significant predictor of Supply chain performance ($\beta = .326$ ($p = .000$)). It can be inferred from this value that a unit change in risk analysis use leads to an increase in Supply chain performance of 0.326, all things being fixed. With a value of 0.749, which is the highest correlation, shows that risk evaluation leads to increased Supply chain performance. Also, with the correlation value of 0.173, there is high implication that the use of risk identifications in strategic planning decision making leads to increased Supply chain performance in KPLC Kisumu Branch.

Based on multiple regression analysis estimates, the following model summary was deduced:

$$Y_0 = 1.291 + 0.035 (X_1) + 0.326 (X_2) + 0.314 (X_3) + e$$

Where:

Y_0 = Supply Chain Performance

X_1 = Risk identification

X_2 = Risk analysis

X_3 = Risk evaluation

ε = Standard error

The numerical values in the model above tries to explain the proportion of each Independent variables that is used to explain the Supply Chain Performance (Dependent), and all of them have a significant positive influence on the dependent variable.

5.2 Conclusions of the Study

From the findings of objective one, the study concludes that embracing risk identification leads to increased Supply chain performance. From the findings of objective two, it can be concluded that use risk analysis leads to better Supply chain performance. Based on the findings of objective three, the study concludes that adopting use of risk evaluation improves Supply chain performance.

5.3 Recommendations of the Study

Based on conclusion of objective one, KPLC Kisumu Branch should continue embracing risk identification. From the conclusion of objective two, KPLC Kisumu Branch should continue using risk analysis as this was found to improve Supply chain performance. Similarly, from conclusion of objective three, KPLC Kisumu Branch should continue using risk evaluation as this was found to improve Supply chain performance of fund.

Further studies on the Risk assessment practices that affect supply chain performance are encouraged that tackles both parastatals and government agencies in other parts of the country to be able to better our services that leads to growth of the economy.

5.4 Limitations of the Study

The findings of the study cannot be generalized to all KPLC branches in Kenya since the study was limited to KPLC Kisumu Branch and did not incorporate branches in Kenya. The study adopted a correlational research design with its associated weaknesses.

5.5 Suggestions for Further Research

An exclusive study on the risk management practices and challenges facing parastatals in Kenya can be investigated. Future research should be conducted on determinants of Supply chain performance and status of risk analysis outputs implementation in public and private enterprises in Kenya and in the East and central Africa and compare results.

Further research could also be conducted on determinants of risk identifications, risk analysis and policies in other firms in Kenya. Comparisons could be done on whether or not there is any variation or similarity with the KPLC Kisumu Branch scenario. Lastly, future research efforts could use more robust research designs such as time series and secondary data.

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APPENDICES

Appendix I: Participants' Consent Form

Dear Respondent,

My name is Kirui Jemurgor Janet I am a post graduate candidate at Maseno University, pursuing a Master degree in Supply Chain Management.

As a requirement of my course, I am conducting a study on, "*Effect of Risk assessment practices in kisumu, Kenya: A case of Kenya power Kisumu.*" By this letter, I am Kindly requesting you to voluntarily provide information which will facilitate the achievement of the study's objectives.

You are kindly asked to participate in filling the questionnaires or responding to the interview as truly as possible. Your information, views and opinions will be treated with uttermost confidentiality and used only for the purpose of this study. Additionally, your identity will be anonymous and you may withdraw from participating in the study at your own volition.

Participant: Please, sign below if you agree to participate in this study.

Name ;.....(Optional) Sign; Date;

Thank you.

APPENDICES

Appendix II: Questionnaire

This questionnaire seeks to assess the effect of Risk assessment practices on Supply chain performance at Kenya Power Company. All the information you give will be treated with confidentiality and used for academic purposes only and nothing else whatsoever. Please take a few minutes to complete this questionnaire.

SECTION A: DEMOGRAPHIC INFORMATION

Please tick appropriately

1. Age bracket of staff (to the nearest full year)

- 18-30 years
- 31-40 years
- 41-50 years
- Above 51 years

2. Highest Education Level of staff

- Primary level College level
- Secondary level University level

Any other please specify.....

3. Working experience of staff

- Below 1 year 1-2 years
- 3-5 years 6 and above
- 6-10 years

4. Gender of staff

- Male
- Female

5. Which is your Department

- Marketing Finance
- Human Resource Procurement
- Transport

B: RISK ASSESSMENT PRACTICES

Kindly indicate by marking/ticking () in the box the extent to which the following have been given emphasis:

Key Use scale 1-5 where 1= no extent, 2=little extent, 3= moderate extent, 4=Great extent, 5=Very great extent

No	ISSUES	1	2	3	4	5
	Part I Risk Identification					
1	Risk identification reflects our supply chain management objectives					
2	Risk identification objectives are SMART					
3	Risk identification process is easily understood					
4	Risk identification process is focused on satisfying customer					
	Part II Risk Analysis					
6	Risk analysis objectives are specific, measurable and realistic					
7	Risk analysis objectives are easily understood					
8	Risk analysis objectives are focused on satisfying customers					
9	There is a relationship between risk assessment and risk analysis objectives					
	Part III Risk Evaluation					
11	Risk evaluation procedures are well implemented					
12	Risk evaluation Policies are effective					
13	Employees hardly deviate from set risk evaluation policies					
14	Risk evaluation practice is geared to ensure customer satisfaction					

SUPPLY CHAIN PERFORMANCE-To what extent do you think risk assessment has led to the following form of supply chain performance in your organization?

Use scale 1-5 where 1- no extent, 2=little extent, 3= moderate extent, 4=Great extent, 5=Very great extent

	SUPPLY CHAIN PERFORMANCE	1	2	3	4	5
	Customer satisfaction					
1	Services offered are convenient to customers					

2	KPLC staff do follow up after service to customers					
3	Old Clients bring others for service					
	Cost Reduction					
4	Number of KPLC services has greatly increased					
5	Different form of payments are used					
	Profitability					
6	Electricity bills are paid in time					
7	Bills paid are commensurate to services offered.					

Appendix III: Proposed Budget

Particulars / Item	Cost (KSH)
Stationery	7, 500
Literature Review and Proposal Writing	9,000
Data Collection	15,500
Data Analysis	12,000
Printing Works	7, 000
TOTAL	51,000

Appendix IV: Work Schedule

PLANNED ACTIVITY	MONTH / YEAR 2019					
	ONE	TWO	THREE	FOUR	FIVE	SIX
Problem Identification	i					
Review of Literature	i					
Proposal Writing		i				
Proposal Presentation		i				
Data Collection and Entry			i			
Data Analysis				i		
Draft Project Presentation				i		
Final Project Presentation					i	
Submission of Project to Examination						i

