FREIGHT FORWARDING OUTSOURCING AND SUPPLY CHAIN EFFICIENCY IN UGANDA.

A CASE STUDY OF MUKWANO INDUSTRIES LTD.

BY

GRACE MAKUMBI

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DECLARATION

I declare that all material contained in this dissertation which is not my own has been identified as such, and that no material is included for which a diploma or degree has already been previously conferred upon.

The contents of this dissertation reflect my personal views and are not necessarily endorsed by Kyambogo University.

SIGNATURE:.....
MAKUMBI GRACE

DATE.....15/01/2014.....

APPROVAL

This dissertation has been approved as a true record and is ready for submission to the Graduate School of Kyambogo University.

Supervisor:

SIGNATURE:.....

MR. SAMUEL ALFRED WUMA

DATE...15/01/2014

Principal Supervisor:

SIGNATURE:.....

DR. PETER OBANDA

DATE.....15/01/2014

DEDICATION

To my dear wife and children.

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I would like to express my heartfelt appreciation to my supervisors, Dr. Peter Obanda and Mr. Alfred Wuma for their tireless support, guidance and encouragement during the study. May the good Lord continuously reward you.

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LIST OF ACRONYMS

- **3PL** Third Party Logistics
- **4PL** Fourth Party Logistics
- **C.I.F** Cost, Insurance and Freight
- **CO2** Carbon Dioxide
- **F.I.A.T.A** Federation of International Air Transport
- **HfS** Horses for Sources.
- **H.S & E** Health, Safety and the Environment
- **I.C.T** Information and Communications Technology.
- **L.S.E** London School of Economics
- **R.B.V** Resource-Based View.
- **R.D.T** Resource-Dependency Theory.
- **S.C.M** Supply Chain Management
- **S.E.T** Social Exchange Theory
- **S.P.S.S** Statistical Package for the Social Sciences.
- **T.C.E** Transaction Cost Economic Theory
- **U.K** United Kingdom
- **U.S.A.I.D** United States Agency for International Development
- **V.R.I.N** Valuable, Rare, In-imitable and Non-substitutable.
- **W.W.L** Wallenius Wilhelsen Logistics Ltd.

ABSTRACT

In support of modern supply chain management approaches, organizations world over are rapidly outsourcing their non-core functions in order to drive sustainable competitive advantage and supply chain efficiency. In Uganda, firms have hurriedly outsourced their freight forwarding function to third parties in the hope of realizing substantial cost savings, improved service levels and competitive advantage, since freight forwarding costs in Uganda significantly account for up to 40% of the value of imports and 75% of the value of exports.

Much as various literature sources applaud outsourcing, current studies have demonstrated high failure rates on the global and local scene! This study therefore questions whether the hype of firms in Uganda to quickly outsource freight forwarding on the promise of realizing cost savings, improved service quality and delivery precision alone is justified, that is whether freight forwarding outsourcing influences supply chain efficiency, and to what extent it does.

A case study design, incorporating questionnaires and interviews, was used to test the variables, wherein 37 samples were drawn, and results analyzed using correlation and regression tools to examine the influence of freight forwarding outsourcing on supply chain efficiency, and the extent to which decision-making, planning and administration influence supply chain efficiency. A 0.731 and 0.822 correlation coefficients were registered against planning and administration respectively, while administration registered the highest significant Beta coefficient of 0.944.

It was established from the above that, contrary to expectation, freight forwarding outsourcing may not necessarily result in supply chain efficiency, owing to supplier profit margins, supplier deficiencies in the human resource composition, supplier non-compliance issues, non-aligned working culture and lack of collaboration in the outsourcing relationship.

In conclusion, I recommend that outsourcing initiatives should emphasize outsourcing decision-making and planning with a strategic dimension, foster collaboration and win-win approaches in establishing and sustaining outsourcing relationships and putting more emphasis on the administration of the outsourcing relationship, while keeping the human resource factor in mind.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

As businesses evolve over the years, it has become apparent that sustainable competitive advantage can only be achieved by a combination of two business aspects: the quality and marketability of the product being delivered and the efficiency and effectiveness of the delivery process (Razzaque and Sheng, 1998; O'Riordan & Sweeney, 2007; Baluch, 2004). Since Supply Chains control 60-70% of a firm's costs (Dittmann, 2010), organizations have placed greater emphasis on Supply Chain Management practices that drive organizational cost efficiency and shareholder value. One of the SCM practices globally acclaimed to deliver efficiency gains and sustainable competitive advantage is Outsourcing (Mazlan and Ali, 2006).

According to Arnold (2000), outsourcing is an abbreviated version of "*outside resource using*". Outsourcing is the contracting out to an external firm of the ongoing management and delivery of a defined set of services to a prescribed level of performance (Cohen & Young, 2005). It is believed that by outsourcing non-core activities, the outsourcing channel partners will save on time, space and resource costs and focus their efforts on the strategically important aspects of the business(Greaver, 1999), while leveraging the outsource partner's economies of scale and efficient cost structures(C.H Robinson Worldwide Inc, 2011).

Outsourcing of the freight forwarding function has taken centre stage in realizing cost savings for organizations and supply chains; the Freight Forwarder's transportation role has been recognized as a critical strategic element within the supply chain (Stank, 2010). According to Wilding and Juriado (2004), about 40% of global logistics functions, including freight forwarding, are outsourced.

Cost reduction has emerged as the topmost motivation for 48-76% of organizations seeking to outsource worldwide (Power et al, 2006; Aberdeen Group, 2008; Delloite, 2008; PWC, 2008; LSE/HfS, 2011). In Uganda's case, freight transport accounts for up to 75% of the value of exports (Institute of Trade Development, 2011) and 30-40% of the CIF value of imports

(Trademark East Africa, 2011); outsourcing the freight forwarding function in Uganda from a this perspective would be seen to yield major significant cost savings.

However, research developments indicate that over focusing on cost-reduction in outsourcing decisions does not deliver full value (McIvor, 2000; Aberdeen Group, 2008; C.H Robinson, 2011; Xoriant Corp, 2011; Snapp, 2012), and many organizations have not realized the savings envisaged at the time of entering the outsourcing engagement (Farrell, 1999; Ikeda, 2004; Snapp 2012). Particularly, Snapp (2012) contends that outsourcing initiatives that are driven by the desire for cost saving without considering technical and strategic factors do not succeed. Gartner Consulting Inc, 2011 puts the current failure rate of outsourcing initiatives at 30% (Xoriant Corp, 2011), most notable being the cases of J.P Morgan Chase, which involved much more than the loss of the 5 billion US Dollar outsourcing deal (CaseStudyinc.com, 2005), a 400 million US Dollar outsourcing deal between Sprint Nextel and IBM that went sour, with Sprint Nextel reporting that instead of realizing savings, it lost money (Xoriant Corporation, 2011), and Boeing's outsourcing of the multi-million dollar 787 Dreamliner aircraft design with the hope of saving costs, which instead resulted in up to 18 billion US Dollars in additional costs, and a 3 year project lag (Gasparrini, 2011).

A study carried out by Wauke and Luke (2011) indicated that 45% of firms in South Africa that practiced logistics outsourcing did not realize any cost savings. NFT Consult, a firm that provides consultancy services in East Africa reiterates the dominance of the cost reduction motive in outsourcing decisions in the region and contends that cost benefits should never be the primary rationale for outsourcing. According to Ahimbisibwe et al (2012), outsourcing in Uganda is particularly marred by supplier opportunism and lack of trust resulting in increased transaction costs contrary to the efficiency gains promised in Gartner Inc, 2007(Xoriant Corp, 2011).

1.2 Statement of the problem

Outsourcing of freight forwarding services in Uganda in general and Mukwano Industries in particular does not seem to be delivering the highly publicized efficiency gains. Mukwano

industries, like many manufacturing entities in Uganda is realizing that on entering the outsourcing engagement, they are still grappling with rising costs in port storage and demurrage charges (TradeMark S.Africa, 2011), unrelenting cargo delays, unprecedented loss of cargo to Kenya Revenue Authority auctions(Africa Financial Markets, 13th Jan, 2009) and poor service delivery characterized by cargo congestion in Mombasa port (8,000 and 800,000 containers in 2006 and 2012 respectively) (Africa Business Pages, 2012; Business Daily, 13th December 2012). Mukwano Industries in particular was faced by a pile up of more than 150 containers in Mombasa in 2007, stuck for more than 60 days (Africa Business Pages, 2007), which resulted in huge demurrage costs and port storage charges.

It is on this basis that this study sought to examine the influence of freight forwarding outsourcing on supply chain efficiency in Uganda.

1.3 General Objective

The general objective of this study was to examine the influence of freight forwarding outsourcing on supply chain efficiency in Mukwano Industries Ltd.

1.4 Specific Objectives

1. To assess the extent to which freight forwarding outsourcing decision-making influences supply chain efficiency in Mukwano Industries.
2. To analyze the extent to which freight forwarding outsourcing planning influences supply chain efficiency in Mukwano Industries.
3. To examine the extent to which freight forwarding outsourcing administration influences supply chain efficiency in Mukwano Industries.

1.5 Research questions.

The central research question of this study was:

To what extent does strategic freight forwarding outsourcing decision-making and implementation influence supply chain efficiency in Mukwano Industries?

The sub-questions under the above central research question were:-

1. *To what extent does freight forwarding outsourcing decision-making influence supply chain efficiency in Mukwano Industries?*

2. *To what extent does freight forwarding outsourcing planning influence supply chain efficiency in Mukwano Industries?*

3. *To what extent does freight forwarding outsourcing administration influence supply chain efficiency in Mukwano Industries?*

1.6 Scope of the study/delimitation

1.6.1 Study scope

Much as the background of this study originated ideas from outsourcing of services and processes in different disciplines, this particular study focused on outsourcing of freight forwarding and logistics activities. This study focused on outsourcing decision-making, planning and administration in the implementation of outsourcing initiatives in Mukwano Industries Ltd.

1.6.2 Geographical scope

The case study was conducted at Mukwano Industries Ltd located on Plot 30, Mukwano Road, Kampala, Uganda.

1.6.3 Time Scope

This study being an academic research was conducted in a space of not more than 6 months. The study was completed by the 30th of September 2013, since this was the time allowed for the Master of Science in Supply Chain Management course of Kyambogo University.

1.7 Significance of the study

i) The study will provide the freight forwarding fraternity with unique insight into the dynamics of service outsourcing in the logistics sector, and will be an ice-breaker on Freight Forwarding outsourcing in Uganda.

ii) The study will also help inform investors and chief executives, who are the policy makers at the organizational, partnership and national level, of the framework upon which service outsourcing decisions and implementation are based to attain sustainable shareholder value and competitive advantage.

iii) The research will also help academicians and researchers in conducting further study on service outsourcing of other logistics functions like warehousing and distribution, which is also a common practice in Uganda.

1.8 Definition of terms

Commonly used terms in this study will be:
Freight forwarding, Third Party Logistics, Logistics, Supply Chains, Supply Chain Management, Outsourcing, Efficiency.

1.8.1 Freight forwarding

According to FIATA, is a key trade facilitating role involving a range of services including but not limited to carriage, consolidation, storage, handling, packaging and distribution of goods, as well as ancillary and advisory services like customs clearing, procuring of shipping documents and arranging insurance of the goods.

1.8.2 Logistics

This refers to the process of planning, implementation and control of the efficient and cost-effective flow of materials, work in progress, finished goods, services and their related information from the point of origin to the point of final consumption in order to meet customer requirements (Canadian Association of Logistics Management).

1.8.3 Third Party Logistics (3PL)

This refers to multiple logistics services, usually bundled together and being provided by an independent entity to another organization or individual to meet customers' demands. These services include, but are not limited to warehousing and distribution, Transportation, inventory management, packaging and freight forwarding.

1.8.4 Outsourcing

According to Cohen & Young (2005), is the contracting out to an external firm of the ongoing management and delivery of a defined set of services to a prescribed level of performance.

1.8.5 Supply Chains

These are interconnected series of activities or functions involved directly or indirectly in fulfilling a customer request (Chopra & Meindl, 2007). The supply chain players involved in performing these activities include, but are not limited to manufacturers and their suppliers, transporters, warehouses, retailers and end-user customers. The activities within the supply chain include, but are not limited to product development, marketing, operations, distribution, finance and customer service. The activities within the supply chains are aimed at ensuring the efficient flow of inventory, information and funds across the supply chain.

1.8.6 Supply Chain Management

This is the integration, coordination and control of the flow of products, information and funds within the supply chain through supply chain design, planning and technical decisions to ensure efficiency, shareholder value and end-user customer satisfaction (Emmett, 2006).

1.8.7 Performance

This is a composite measure of the output of efficiency and effectiveness of activities and strategies given specific inputs/resources. Performance measures the output and quality of work (USAID, 2010).

1.8.8 Efficiency

According to Gerber (2010), efficiency is defined by Pienaar (2009) as "a measure of the way that the allocation of resources maximizes outputs with the given inputs and technology". Chow et al (1994), according to Kremic et al (2006) define efficiency as "the degree to which resources have been used economically". Efficiency measures the manner in which output is being achieved (criteria based).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter seeks to form a framework for the study of freight forwarding outsourcing in Uganda and its contribution to supply chain efficiency, based on previous studies on the subject of logistics outsourcing. This will be done through a critical and analytical review of the relevant literature.

The first section will review the literature on supply chain management, the outsourcing concept and its evolution over the years, and how this evolution is linked to theory. In this section, the researcher will illustrate through literature the evolution of the freight forwarder and how this has affected supply chains and outsourcing. The researcher will seek to review the literature on freight forwarding and its role in the supply chain.

The second section will focus on the theoretical perspective of the study, and will highlight the theoretical background upon which the study is grounded. This section will review the relevant theories advanced by major scholars that have supported the foundation of this study over the years.

The third section will focus on the conceptual and contextual perspective of freight forwarding outsourcing. The section will include a literature review of outsourcing decision-making and its drivers, outsourcing planning and outsourcing administration and how the three processes influence supply chain efficiency. This section will also review literature on the supply chain efficiency constructs, the challenges and risks of outsourcing, and the various mitigation approaches.

Section four will provide a summary of the literature review by identifying the gaps in the literature and key lessons learnt from the literature.

The last section will seek to identify areas from the study that may need further research.

2.1.1 The Supply Chain

Trent (2004), quoting Mentzer et al (2001), defines a supply chain as a set of three or more organizations linked directly by one or more of the upstream and downstream flows of products, services, finances and information from a source to a customer.

On the other hand, Chopra & Meindl (2007) define a supply chain as an interconnected series of activities or functions involved directly or indirectly in fulfilling a customer request. These activities are not merely functional in nature, but cut across functional and organizational boundaries of members that constitute the supply chain (manufacturers, retailers, distributors, freight transporters, e.t.c). These activities include, but are not limited to, logistics, procurement, manufacturing and inventory management.

The definition of the supply chain in Chopra & Meindl (2007) also incorporates functions traditionally considered as non-supply chain functions. Trent (2004) contends that these non-supply chain functions (finance, legal, engineering, accounting, Information Technology, Human Resources) play an integral role in supporting the traditional supply chain functions, and therefore must be viewed as part-and-parcel of the supply chain.

2.1.2 Supply Chain Management

Trent (2004) defines supply chain management as the process of proactively managing the two-way movement and coordination of the supply chain flows (goods, services, information and funds) from raw material through to the end-user.

Emmett (2006) defines supply chain management as the integration, coordination and control of the flow of products, information and funds within the supply chain through supply chain design, planning and technical decisions to ensure efficiency, shareholder value and end-user customer satisfaction.

From the above definitions, therefore, supply chain management can be broadly defined as the alignment, synchronization, planning and co-ordination of both traditional supply chain activities

and supply chain support functions cross-functionally and across organizational boundaries to ensure realization of efficiency, profitability and customer satisfaction among channel partners.

2.1.3 The Outsourcing Concept

Cohen & Young (2005) define outsourcing as the contracting out to an external firm of the ongoing management and delivery of a defined set of services to a prescribed level of performance. The American Heritage Dictionary, reflecting the dominance of cost as a motive to outsource, on the other hand, defines outsourcing as the procurement of products or services from an outside supplier or manufacturer in order to cut costs.

Since outsourcing has evolved over the years to include other considerations other than cost, outsourcing can therefore be broadly defined as the contracting out or procurement of internally produced works and goods, or internally performed functions, activities or services to an external party to achieve financial, technical and strategic goals. The evolution of outsourcing is explained further in section 2.1.4

2.1.4 Outsourcing Evolution

Outsourcing has traditionally been motivated by how organizations can save on overhead costs (Lonsdale & Cox, 1997, Vining & Globerman, 1999; McIvor, 2000, Carrasco, 2008) other than by how the outsourcing decision determines the firm's long-term sustainable capability and competitiveness (Cohen & Young, 2005; McIvor, 2006; Carrasco, 2008; C.H Robinson, 2011). Much as outsourcing has generally been recognized as a success in realizing short-term cost reduction, many firms bemoan the unrealized level of benefits envisaged at the time of entering the outsourcing engagement (Cohen & Young, 2005; Deloitte & Touche, 2008; H4S, 2011). As a result outsourcing is now viewed as an evolving practice with the focus moving slowly away from being financially motivated to being strategically motivated, with firms looking at reaping the full benefit of the outsourcing initiative. This evolution was modeled by Gottschalk (2004) as below.

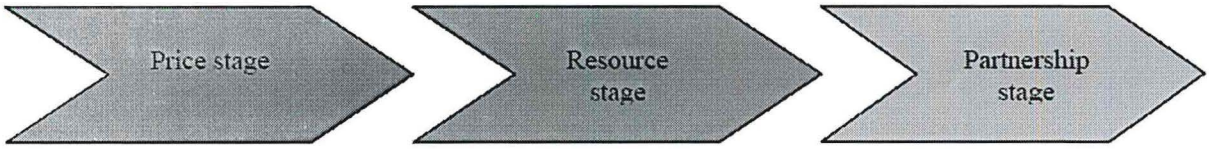


Fig 1. The Model of Outsourcing Relationship evolution (Gottschalk, 2004).

2.1.5 Outsourcing and Supply Chain Management

Chopra & Meindl (2007) view outsourcing as one of the drivers of supply chain performance. In their view, outsourcing decisions affect the responsiveness and efficiency of a supply chain.

Outsourcing of some of the traditional supply chain functions (logistics, inventory management of manufacturing) is aimed at leveraging the supplier's expertise, economies of scale and efficient cost structures (Chopra & Meindl, 2007; C.H Robinson, 2011).

On the other hand, outsourcing of key supply chain functions like freight forwarding has been viewed as elongating the supply chain, making it more difficult to coordinate all the functions. With outsourcing, new players join the supply chain, creating a new ownership structure with many owners working towards differing interests (Chopra & Meindl, 2007) and ultimately reducing supply chain visibility, control and total supply chain profitability.

According to Storey et al (2006), the influence of outsourcing on supply chain efficiency is an area of relatively uncharted research lacking sufficient empirical data to substantiate it.

2.1.6 The Role of Freight Forwarding

Freight Forwarding has generally been misconceived as a purely customs clearance role. The freight forwarder has been viewed as an "*architect of transport*" (Schramm, 2012). Early records indicate that freight forwarding was practiced as early as the 1830's; the first recorded freight forwarding company was Thomas Meadows Company Ltd, London, UK in 1836, although oral records indicate that the first freight forwarders of the times were inn-keepers who held personal effects of their guests and arranged with transport carriers and customs offices to forward them to the required destination (Wikipedia encyclopedia). The role of the freight forwarder has evolved over the years from a traditional role of a customs broker to being the architect of transport. This evolution has been modeled by Baluch (2004) as below:

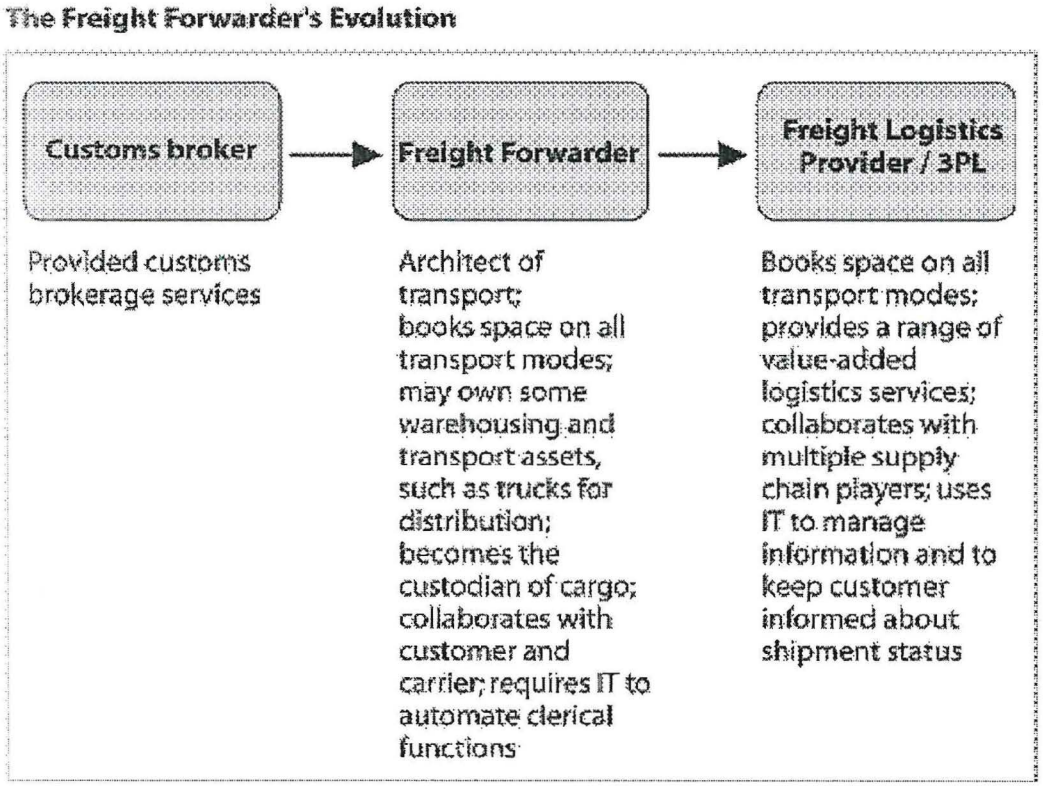


Fig. 2 Source: ***The Changing Role of the Freight Forwarder- Issa Baluch (2004)***

2.2 Theoretical Framework

Much as the rise in outsourcing as a practice is a relatively new phenomenon, its origin can be traced as far back as the genesis of commerce itself. In his work entitled *The Wealth of Nations*, Adam Smith indirectly coined the concept of outsourcing in these words:

> If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry employed in a way in which we have some advantage (Adam Smith, 1776 as cited in Vitasek & Manrod (2013)).

Peter Druker and Tom Peters in the 1990s echoed Adam Smith's thinking, advising organizations to "do what you do best and outsource the rest", and giving rise to the rapid increase in outsourcing. The concept of outsourcing as an area for research traces its origin from six specific theories, which form the basis of this study. This is highlighted in the table below.

Figure 3: Outsourcing Theoretical Framework

TOTAL COST OF OWNERSHIP THEORY (TCO). • Also known as the Coase Theorem is based on the work of Coase (1937) • Focuses on inclusion of all costs in an outsourcing engagement, including cost of entering and executing contracts. • Is a background theory behind the TCE theory.	**SOCIAL EXCHANGE THEORY (SET).** • Based on George Hammons (1960s) • Concentrates on Buyer-Supplier value exchange and forms a basis for strategic outsourcing and partnerships.
TRANSACTION COST ECONOMIC THEORY (TCE). • Based on Williamson (1975), took the Coase theory to the next level. • Focuses on the financial dimension of outsourcing. • Includes cost of contracting, negotiations and governance.	**RESOURCE-BASED VIEW(RBV).** • Based on Prahalad & Hamel (1990), Barney (1991) & Cheon et al (1995). • Focuses on Resource competitive advantage.
GAME THEORY. • Based on the work of John Nash (1994) • Known as the Nash Equilibrium. • Focuses on the art of collaboration for win-win and forms a basis for vested outsourcing.	**RESOURCE-DEPENDENCE THEORY (RDT).** • Based on Pfeffer & Salancik (1978). • Focuses on resource location and the strategic dimension of outsourcing.

2.2.1 Total Cost of Ownership Theory (TCO)

The Total Cost of Ownership theory is established from the work of Ronald Coase (1937). In his work, "The Nature of the Firm", Coase introduced the concept of transaction costs by differing from the traditional thinking of the economists of the time who often only considered production and transportation costs in computing the total costs of doing business. Coase advanced the view that firms ought to know the total costs of any business problem, and should also include transaction costs- the costs of entering and executing contracts. The TCO theory supports outsourcing by accounting for all costs in outsourcing decision-making (Vatisek & Manrod, 2013).

2.2.2 Transaction Cost Economic Theory(TCE)

The Transaction Cost Economic (TCE) theory is attributed to the work of Oliver Williamson (1975), who advanced the view that manufacturing organizations ought to retain manufacturing functions in-house as long as the product development costs, production costs, transportation costs, contracting, negotiation and governance costs are lower if the function is performed in-house than if this function is farmed out to an external resource. The TCE theory concentrates on cost as a motivating factor for organizations to outsource (Vasiliauskiene et al, 2011). One way the TCE theory views cost reduction is through engaging in outsourcing contracts that build trust and business continuity. Williamson (1975) states that the more rigid outsourcing contracts are, the higher the transaction costs will be; in the words of Williamson himself, "the muscular approach to buying goods and service is myopic and inefficient". Since cost has been the primary factor motivating outsourcing decisions (Deloitte, 2008; Horsesforsources.com, 2011; Ernest & Young, 2011; MacFarlane, 2012), the TCE theory has found relevance over the years.

2.2.3 Game Theory.

Game Theory is based on the work of John Nash (1994). In his work, Nash advanced the view that working collaboratively towards mutually desirable goals often results in achieving the best results. Game theory gave rise to what is now referred to as "vested outsourcing", which simulates collaboration, innovation and mutual trust among partners in achieving win-win results in an environment where all parties are vested in each other's success (Vatisek & Manrod, 2013). Game theory is a panacea for one of the assumptions raised by Adam Smith (1776) - man's propensity for self-interest, which gave rise to the economic theories of supply and demand. Game theory therefore advocates for collaborative relationships to enable both parties bridge the demand and supply gap.

2.2.4 Social Exchange Theory (SET).

The Social Exchange Theory (SET), developed by George Hermons in the 1960s, asserts that the basic form of human interaction is through the exchange of resources. This branch of sociology places emphasis on the economic cost-benefit advantage accruing as a result of establishing interpersonal relationships (Perunivic & Pedersen, 2007). This theory rides on the principle of mutual benefit currently advocated in outsourcing engagements.

2.2.5 Resource-Based View (RBV).

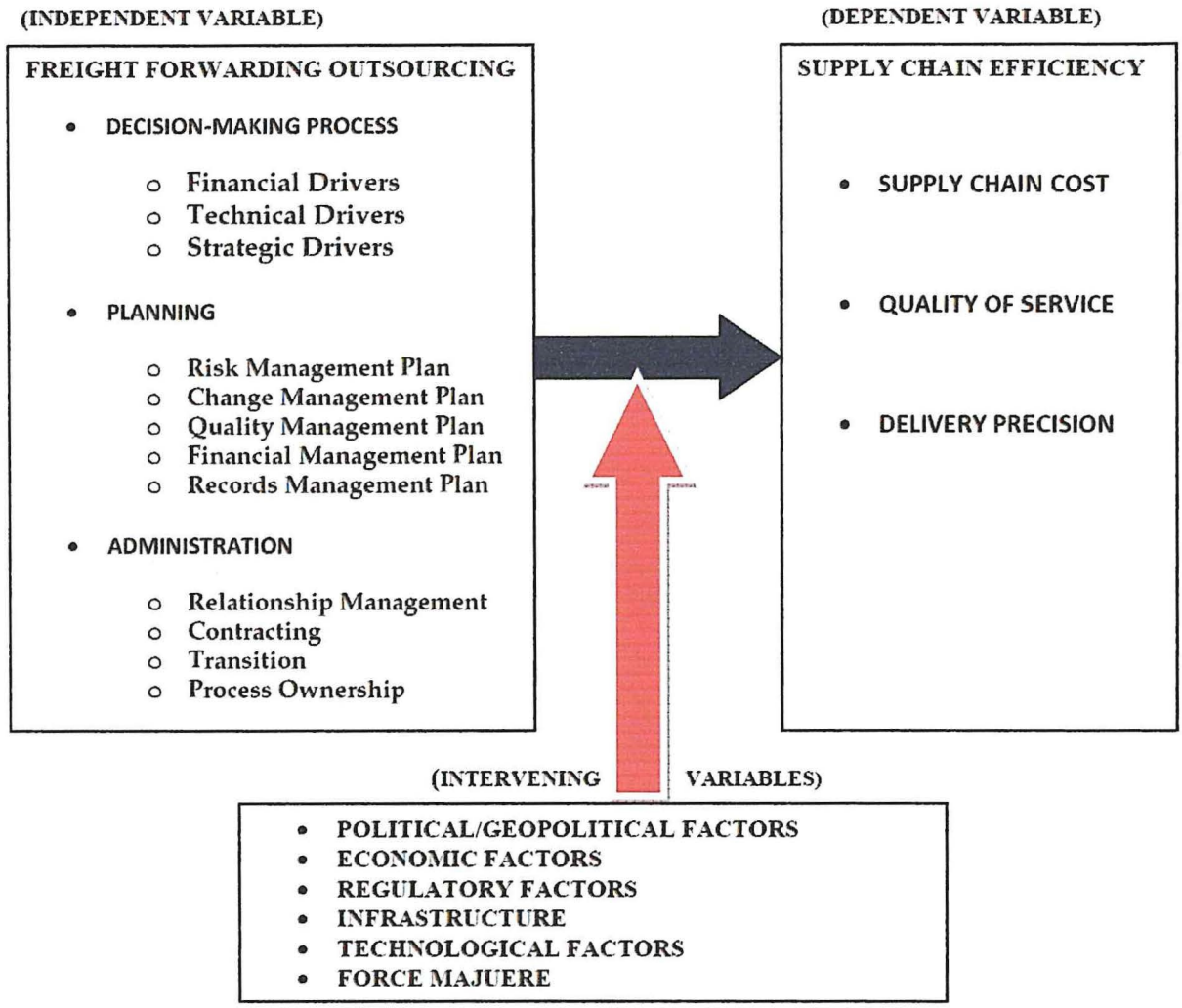
The RBV theory, based on the work of Prahalad & Hamel (1990), sees firms as a unique bundle of resources that distinguish one firm from another, and give firms a sustainable competitive edge. To identify the strategically important resources, the same must satisfy four major elements (Value, Rarity, Non-imitability and non-substitutability) abbreviated as the VRIN framework of the Resource Based Theory (Barney, 1991, Cheon et al, 1995). Those resources that are not considered strategically important according to the above criterion are considered non-core and have to be farmed out to an external resource (Quinn and Hilmer, 1995). The RBV theory revolves around the presumption that only activities in which the firm has core competence drive a firm's competitiveness (Barney, 1991).

2.2.6 Resource Dependency Theory

The Resource Dependency theory (RDT) lies on the premise that firms don't possess all the resources they need, and therefore to some degree, have to depend on the external environment (Pfeffer and Salancik 1978, Pfeffer 1984). This theory therefore advances one of the major drivers for outsourcing- lack of core competence and internal resource capacity, and forms a foundation for strategic outsourcing.

2.3 Conceptual Framework

Fig 4: The Freight Forwarding Outsourcing Conceptual Framework



The above conceptual framework diagram illustrates the conceptual and contextual environment of the study. The conceptual framework diagrammatically illustrates the influence of freight forwarding outsourcing (independent variable) on supply chain efficiency (dependent variable).

The conceptual framework demonstrates the relationship between outsourcing decision-making and supply chain efficiency. Outsourcing decision-making is operationalised through three

outsourcing decision-making drivers: financial drivers, technical drivers and strategic drivers. Outsourcing decision-making drivers demonstrate the outsourcing priorities and the relationship envisaged by the outsourcing entity, and these have an influence on efficiency in terms of cost, quality of service and delivery precision.

Outsourcing planning as part of the outsourcing process involves the systematic creation and organization of activities with the aim of achieving the strategic goals of an outsourcing initiative. In the conceptual framework, outsourcing planning is operationalised through risk, change, quality, financial and records management planning and demonstrates how each of these influences supply chain efficiency in terms of supply chain cost, quality of service and delivery precision.

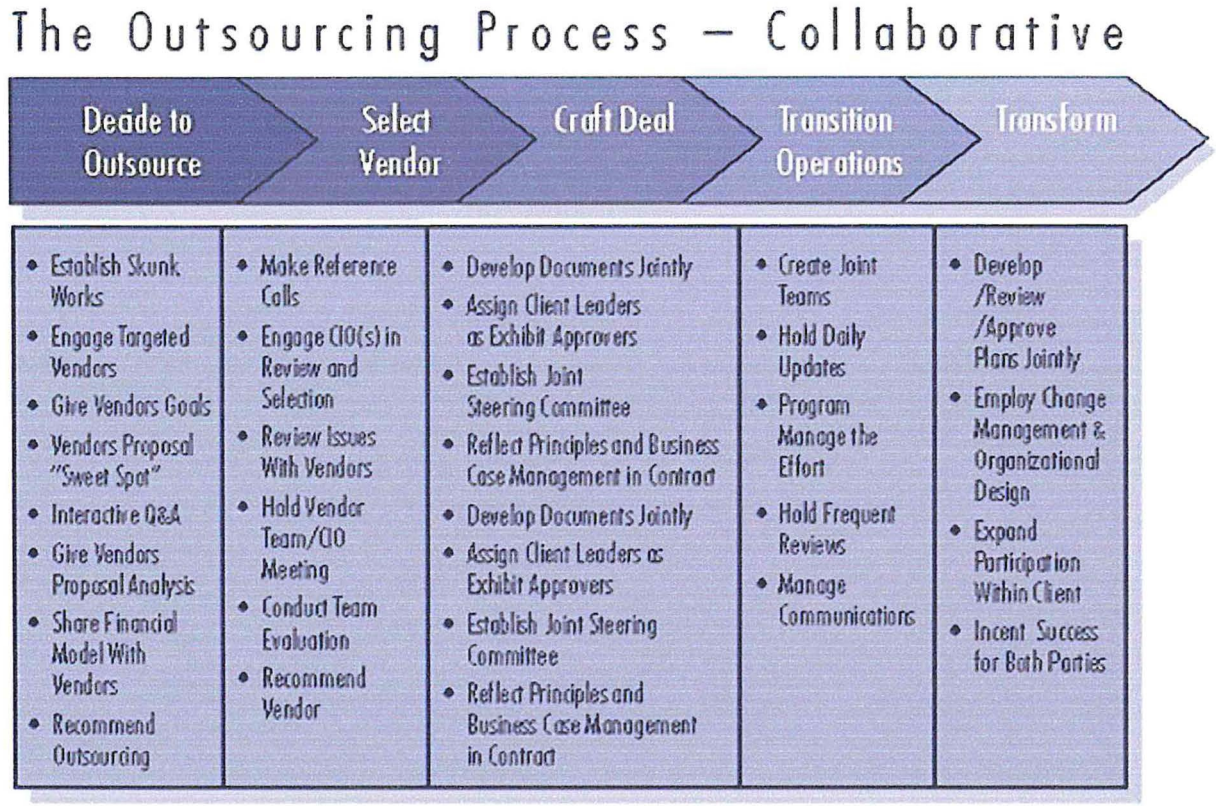
Outsourcing administration as part of the outsourcing process is the implementation and control of tasks as laid out during the outsourcing planning stage. In the conceptual framework, outsourcing administration is operationalised through relationship management, contracting and contract management, transition administration and process ownership, and how each of these sub-variables influence supply chain efficiency in terms of supply chain cost, quality of service and delivery precision.

However, the above influence is moderated by other factors. These factors have been analytically established as political/geopolitical factors, economic factors, regulatory factors, technological factors, infrastructure factors and force majeure, but are not measured in this study.

2.3.1 Outsourcing Decision-Making, Planning and Administration.

Outsourcing's success is hinged on two cornerstones: the time, energy and resources invested in the decision-making process and the planning and administration of the outsourcing engagement. Hancock (2010), following a collaborative approach, modeled the outsourcing process phases as indicated in figure 5 below.

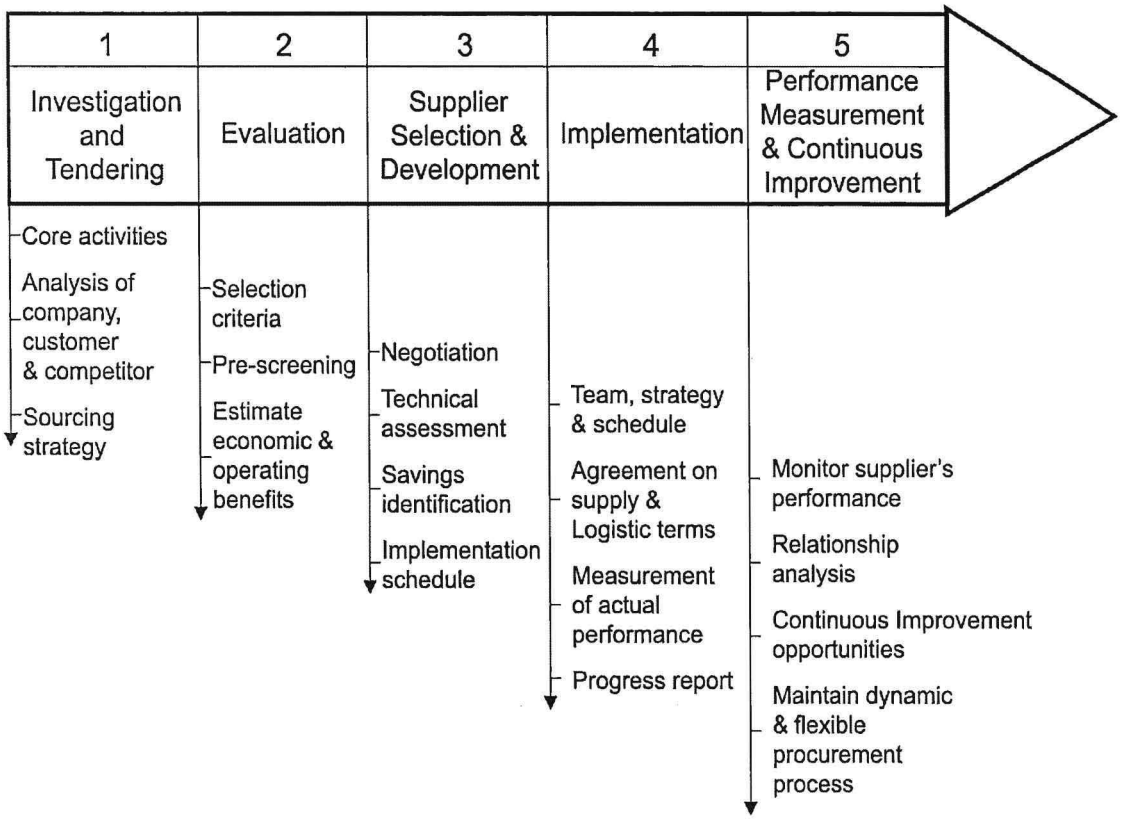
Figure 5: The Outsourcing Process: Decision-Making and Implementation



Source: John Hancock (2010), Transition Partners: Sourcing Advisory

Zeng (2003) advanced a 5 step outsourcing process model (see figure 6) which outlines the 2 major elements of the outsourcing process under adoption in this study: the outsourcing decision-making and the outsourcing implementation. Some of the sub-elements that form the 2 elements captured under this study cut across the whole process stages and may not be solely attributed to a particular stage. A detailed explanation of the 2 elements is reviewed in section 2.3.1.

Figure 6: The outsourcing Process: Process and Design for efficient Management



Source: Supply Chain Management: An International Journal, Vol. 8, Iss: 4, pp 367-379, Amy Z. Zeng(2003)

McIvor et al (2009) models the outsourcing decision and implementation process in a 4-stage model in a more elaborate way as follows:

Stage 1: Process Importance Analysis

This involves the determination of the level of importance of processes that have to be performed in order to meet customer's needs. The analysis involves the process of separating critical processes from non-critical processes and aids in establishing the critical success factors that will drive competitive advantage as a result of outsourcing and form a basis for the outsourcing decision- the "make or buy" decision.

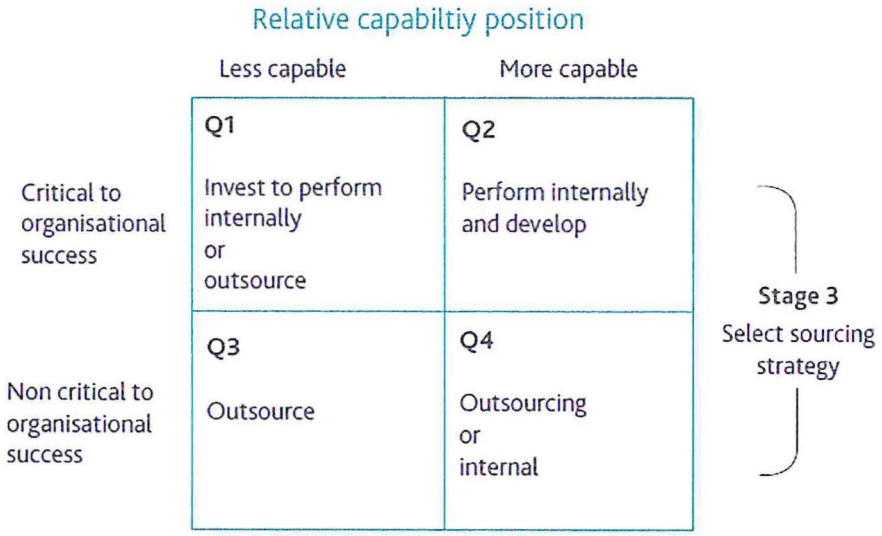
Stage 2: Assessment of Process Capability.

This process involves the analysis of the internal capabilities of the outsourcing entity in relation to the competitors and their service providers. This process supports the decision-making on whether the outsourcing of a function will either support or be detrimental to the outsourcing firm's competitive position. Process capability analysis, according to McIvor et al (2009) takes on two forms: Cost analysis, which compares the cost of sourcing a process or function internally against sourcing it from an external party, and benchmarking, which looks at the relative cost, flexibility, quality and service position of the firm against its suppliers and competitors.

Stage 3: Selecting the Sourcing Strategy

This stage involves the selection of the best outsourcing strategy or model for the selected processes based on the process importance analysis and the process capability analysis aimed at keeping the firm's competitive position. McIvor et al (2009) advanced 4 outsourcing strategies in a decision matrix as illustrated in figure 6 below.

Figure 7: Outsourcing Strategy options.



Source: A study of Performance Measurement in Outsourcing Decision-McIvor et al, 2009.

Stage 4: Implementing and Managing the Outsourcing Arrangement

This stage involves several issues that are to be considered before, during and after the management and implementation of the outsourcing relationship (McIvor et al, 2009). This is further explained in detail in section 2.1.4.

Outsourcing Decision-Making

Outsourcing decision-making is a bold strategic direction with far-reaching consequences that involves a binding commitment of an organization in a permanent or semi-permanent working relationship with another organization. Islam & Sobhani (2008) define the outsourcing decision as a strategic decision that has the potential to transform the operations strategy of an organization. According to Tajdini & Nazari (2012), outsourcing decision-making can be a matter of survival or failure for an organization. The decision to outsource part of the functions formerly offered in-house must therefore be motivated by a conscious balance between the gains or expectations and risks associated with the outsourcing engagement (Kremic et al, 2006).

According to Nardo(2003), the decision-making process, especially for strategic issues like outsourcing, is a daunting task, and can be modeled into a 4-stage process, as illustrated in figure 8 below, involving data collection, prioritization of objectives, evaluation of options and simulation of the expected outcome.

Figure 8. The 4-Step Decision Making Process

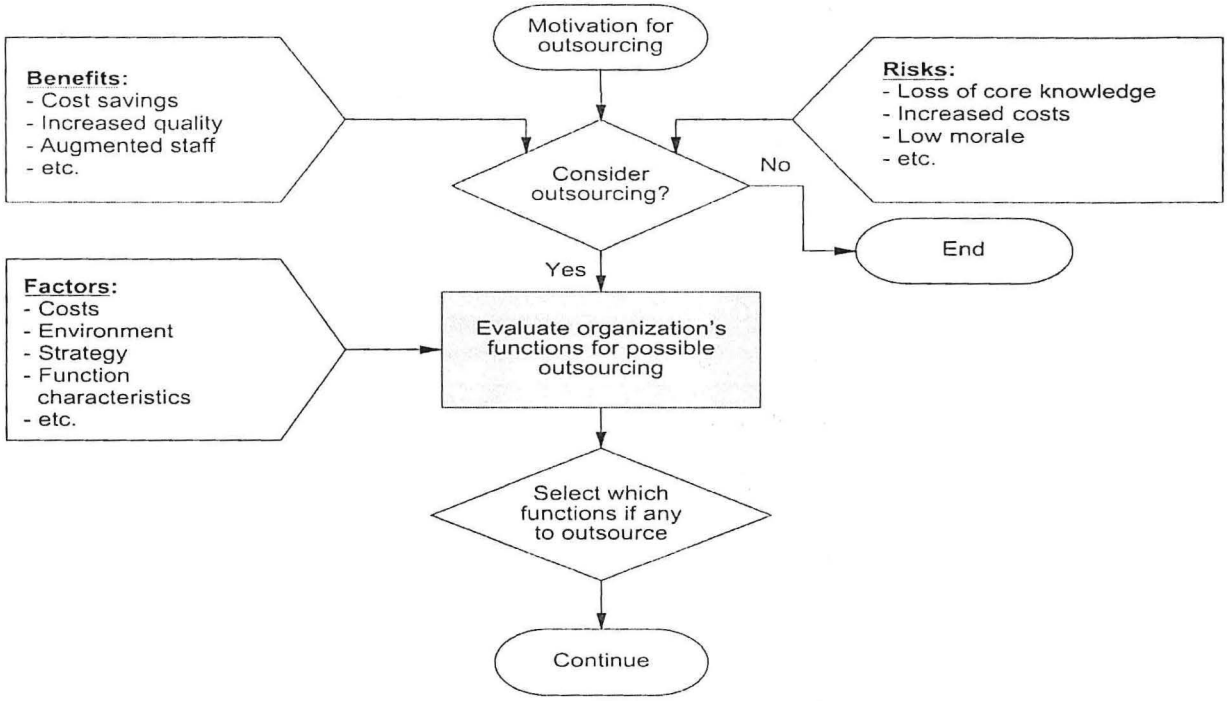
Data Collection:	Questionnaires Historical Data Literature
Objective Prioritization:	Analytical Hierarchy Protocol Conjoint Analysis Gut Instinct
Option Evaluation:	Segmentation (matrices) Balanced Scorecards Real Options$^{\alpha}$ Decision tree Analysis$^{\alpha\beta}$
Outcome Simulation:	Iterative Experience Monte Carlo$^{\alpha\beta}$ Artificial Intelligence$^{\chi}$

α Requires detailed financial data
β Requires objective data
χ Need McKinsey to develop©

Source: Strategic Outsourcing Model: Decision-making Framework (Nardo, 2003)

On the other hand, Kremic et al (2006) advanced a framework for making outsourcing decisions as a balancing act between benefits, factors and risks. This framework is illustrated in figure 9 below:

Figure 9: Outsourcing Decision Framework.



Source: Outsourcing Decision Support by Kremic et al (2006) - *Supply Chain Management: An International Journal, Volume 11, No. 6, 467-482.*

McIvor (2000) through a review of literature indicated four common outsourcing dimensions that form a basis for outsourcing decision-making. These included *cost, risk, supplier influence and strategy.*

Feeny et al (2005) base the outsourcing decision-making on three considerations, which are *delivery competence, transformational competence and relationship competence.*

Kremic et al (2006) on the other hand, advanced three dimensions of the outsourcing decision-making which are *cost, strategy and politics.* The first 2 dimensions are prevalent in the public and private sectors, but the third, which is politics, is only common in the public sector.

From the foregoing definition of outsourcing and the review of literature, the outsourcing decision-making in this study will focus on three broad drivers of the outsourcing decision-making: *financial, technical and strategic drivers*.

Financial Drivers

Cost reduction is the dominant factor in outsourcing decision-making among other factors (Power et al, 2006, HfS/LSE, 2011). Outsourcing of freight forwarding functions under this consideration is looked at in terms of lower freight rates, favorable credit terms (limit in period and amount), free demurrage days and lower demurrage rates (UNESCAP, 2000, Parker, 2011).

Technical Drivers

The technical dimension in the freight forwarding outsourcing decision basically consists of service and capacity considerations. Under the service consideration, outsourcing organizations consider value adding services, quality assurance, risk management portfolio, professional ethics and shipment visibility. Under the capacity consideration, outsourcing firms consider facilities, systems, geographical presence, experience, legal and professional compliance, staffing and health, safety and the environment (UNESCAP, 2000; PF Collins, 2003; Parker, 2011).

Strategic Drivers

The strategic consideration in outsourcing involves how the overall vision of the freight forwarding company aligns with the vision, objectives and corporate culture of both the outsourcing firm and the supply chain (strategic fit). It also involves how flexible the freight forwarder is to changes in the outsourcing firm's business requirements and environment. Strategic drivers also includes concentration of the outsourcing firm on core competence, and the potential of the freight forwarder for growth expressed in terms of its investment in research and development and creativity (innovation)(PF Collins, 2003)

Outsourcing Planning

Outsourcing planning is a phase in the process of outsourcing starting with the development of strategic plans and implementation plans that aid in managing the relationship with the vendor and monitoring and evaluating the performance of the outsourcing project (Drakeley, Undated).

According to Drakeley(Undated), developing a strategic plan involves the setting of clear vision, goals and measurable performance objectives of the outsourcing project, which make it possible to steer the project course and enable implementers and decision makers to track effectiveness and demonstrate results.

Planning also involves the design of management policies and procedures in ensuring the project stays on course and achieves it objectives. According to Choi (2008), this involves setting up support functions such as project management, change management, quality management, risk management, issues management, financial management and records management. According to Deloitte (2008), formation of robust governance structures and processes at this stage provide the company and the service provider the mechanism to manage daily operations at the administrative phase, deal with unpredictable issues and ensure that the service provider's operations remain well aligned with the company's outsourcing strategy and the overall goals of the supply chain.

Outsourcing Administration

The administration of an outsourcing engagement involves the implementation and control of tasks as set out in the strategic plan and the implementation plan to ensure that they meet the outsourcing strategy's objectives (McIvor et al, 2009). This involves the establishment of contractual obligations between the outsourcing entity and the service provider, management of the relationship with the service provider, establishment of clear communication flows internally and between the outsourcing entity and the service provider, managing the transition (change) from the old to the new, clearly defining responsibilities and roles in the process and assigning

process ownership teams, defining deliverables and agreeing on the metrics to measure their attainment, design and communication of service level agreements (SLAs) with the service provider, and designing of roll-back plan and contingency planning for the project (McIvor et al, 2009; Glade, 2010).

Supply Chain Efficiency

Pfeffer and Salancik (1978) define efficiency as '*an internal measure of performance*', while Borgström (2006) views supply chain efficiency as a cost-related advantage that has a direct influence on value through supply chain relationships. Efficiency is the major goal of supply chain management, and measures how well organizations optimize their supply chains to maximize profitability.

Borgström (2006) views supply chain efficiency from a network perspective, linking different organizations within the supply chain; measurement of efficiency in a single organization in the network in his view is therefore ineffective, as goals in a supply chain are set in a collaborative manner between network partners, and efficiency is dependent on factors that a single organization in the network may not have control over.

On the other hand, according to Storey et al (2006), various literature sources have used the internal supply chain or the buyer-supplier relationship other than the wider supply chain network as suitable units of analysis in evaluating supply chain efficiency, and within those confines, have advanced efforts towards improving the efficiency of existing processes.

Even when goals in the supply chain are set collaboratively, the impact of efficiencies or inefficiencies on the supply chain flows (inventory, information of finances) within one link in the supply chain has a ripple effect across the whole supply chain. Therefore, evaluation of the inbound and outbound aspects of the flows within the internal supply chain of an organization may provide insight into the efficiency stand of the extended supply chain.

Problems of Supply chain efficiency

One of the major problems affecting supply chain efficiency today is *double marginalization.* According to de Albeniz & Simchi-Levi (2007), double marginalization occurs when one of two organizations within the same supply chain optimizes its inventory levels and prices while considering only its own benefit, thus creating negative externalities for the other channel partner(s). For instance, if a manufacturer makes to order and the retailer orders for stock, there is a tendency for the manufacturer to hike the price of the retailer's small orders above the actual cost, while the level of inventory planned by the retailer is way below the level of inventory that maximizes total supply chain profits. This phenomenon creates an environment where the supply chain is operating at sub-optimal level (de Albeniz & Simchi-Levi, 2007).

In his examination of the health sector supply chains, Everard (2001), takes the above argument to the next level and affirms that supply chain efficiency is often marred by opportunism and selfish interest among channel partners. He elaborates this stand in the following words:

> "Each link in the chain operates solely in its own best interest with little or no concern for the overall efficiency of the chain. This "every man for himself" approach has created deep-seated distrust among the links in the chain who though should be partners, usually function more like adversaries. For example, contracting relationships are almost completely about price. Long-term relationships, supply chain efficiencies, and value proven value added services have been relegated to the back burner." (Lynn James Everard, 2001, Pg. 3)

Everard's position was also supported in Sunil & Meindl(2007), who argue that differing interests among channel partners within the supply chain makes supply chain management a more difficult task in realizing efficiency and profitability.

Supply Chain Efficiency Measures.

Borgström (2006) argues that a realistic measure of supply chain efficiency is a compounded evaluation of *cost, quality, delivery precision and capability,* which is also a measure of the relationship between the channel partners.

On the other hand, Feeny et al (2005) view the outsourcing benefits as being *cost, quality and functionality* aspects, as their focus is on the information technology sector.

Pettersen (2008) advances two constructs of supply chain efficiency: *cost and performance*, where cost is a *financial measure* and performance is a *customer service measure*. The two efficiency constructs, according to Pettersen (2008) include measures such as cost, delivery precision, lead-time, inventory turnover, internal performance, and customer satisfaction, quality and service grade.

For the purpose of this study, the researcher has adopted the supply chain efficiency constructs from Borgström (2006), as these are more specific and reflect both qualitative and quantitative perspective of the supply chain goals. These shall be categorized into 3 constructs: *cost, quality of service and delivery precision.*

Supply Chain Cost

According to Chopra & Meindl (2007), the major objective of supply chain management is to reduce costs across the whole supply chain in order to deliver customer value. Supply chain costs consist of inventory costs, facility and handling costs, transportation and distribution costs (Inbound and Outbound costs) and information costs.

Outsourcing of freight forwarding therefore aims at leveraging efficiency in transportation and distribution.

Supply Chain Service Quality

Chopra & Meindl (2007) affirm that supply chain service quality measures include *order response time, product variety, product availability, customer experience, time to market, order visibility and returnability.*

Supply Chain Delivery Precision

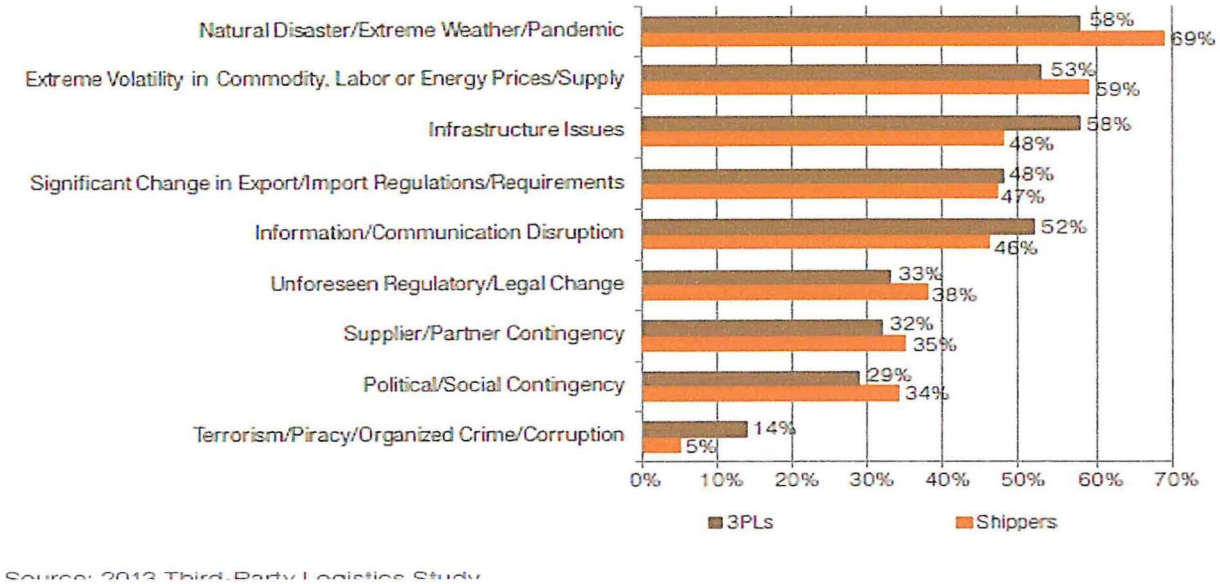
The Volvo Manual (2010) defines Delivery precision as on-time delivery and delivery of correct items. However, for the purpose of this study, delivery precision means and includes order transit time, timely delivery of ordered quantity and delivery of order in original or expected state of quality. According to Wallenius Wilhelsen Logistics (WWL) (2009), delivery precision is one of the 5 metrics that organizations ought to manage to take control of their supply chains, the others being collection precision, CO_2 per unit, cost per unit and damage precision. WWL (2009) advances the view that providers and buyers ought to agree on lead-time and that's when the providers can be held accountable for delivery precision, as continually pushing them for reduced lead-time would result in damages, rising fuel costs and severe environmental impact.

External Factors

Trading organizations have recognized that forces outside their environment have a direct effect on their operations and may impact heavily on supply chain efficiency. Axelrod (2004) hinges on these externalities and argues that their impact my drive the business to the extent of having to transfer to another service provider or even back-source.

Langley and Campgemini (2012) illustrated these external factors in figure 10 below:-

Fig. 10: Supply Chain Disruptions: External Factors.



Source: Langley & Campgemini: 2013 Third Party Logistics Study

Political/Geopolitical Factors

The internal security of a nation greatly impacts on an organization's supply chain. In politically turbulent times, supplies necessary to manufacture a product become difficult to import across borders, so organizations are unable to meet demand in the short and long run. Much as the organization has outsourced the freight forwarding function, political instability acts as an impediment to realization of supply chain goals.

Economic Factors

Changes in global fuel prices have an influence on the outsourcing and supply chain costs. Especially in non-OPEC countries, a shift in the global petroleum indices has greater impact on the final pump price and is a determinant of the final cost of raw materials and finished goods. According to Arvis et al (2007), fuel prices are a major determinant of supply chain costs for land-locked countries like Uganda; a country's inflation and the global economic depression are other contributing factors.

Regulatory Factors

According to Axelrod (2004), introduction of new laws and regulations may affect outsourcing achieving supply chain efficiency to the extent that they pose a divergence from the outsourcing contract provisions, which makes implicit and explicit costs to satisfy the discrepancy incumbent on the outsourcing firm. The Finance Bill (2011) of Uganda (as amended) introduced a tax on the exportation of raw hides and skins. All firms that were exporting the hides were now faced by an additional cost to their supply chain, rendering their products uncompetitive.

Globalization also opens up local firms to new markets as well as new competitors, which may affect the outsourcing decision making; due to increased competition firms may decide to outsource their non-core functions to concentrate on activities where they have core competence to boost their competitive advantage (McIvor, 2010).

Infrastructure Factors

Transportation infrastructure disruptions have an impact on outsourcing meeting its objectives. In a land-locked country like Uganda, transportation infrastructure in form of passable all-weather roads, railways, signaling and well-developed terminals play a major role in the movement of raw materials and finished goods. Jacoby & Hodge (2008), in a study by the Council of Supply Chain Management Professionals, concluded that investment in freight transportation infrastructure has an effect of reducing direct transportation costs by 10%, resulting in supply chain improvement and reduction of operating costs by 1%. On the other hand, according to Langley & Campgemini (2012), poor transportation infrastructure was one of the major supply chain disruptions recorded in the 3rd Party Logistics survey conducted in 2012. Such disruptions may halt production and lead to a rise in operating costs.

The performance of the Northern Corridor, the main transport artery linking countries in the East and Central Africa, according to Arvis et al (2007), is hampered by two factors related to infrastructure management and quality: Kenya's poor infrastructure quality and poor rail performance.

Technological Factors

Rapid changes in technology following the ever changing consumer tastes and preferences have an influence on outsourcing and on supply chain efficiency. According to McIvor (2008; 2010), much as an in-house function or process adds value to the supply chain today, changes in technology may render the process or function less valuable in the future, and the firm may decide to outsource this function and concentrate on those functions that provide future competitive differentiation.

Force Majeure.

Force Majeure refers to those unforeseen and uncontrollable events. These include acts of god, acts of war, acts of terrorism and industrial disputes. Acts of God include fire, thunder and lightning, floods, storms, earthquakes and Tsunami's. These events directly cause supply chain disruptions and affect efficiency.

2.3.2 Challenges of Freight Forwarding Outsourcing

Outsourcing of freight forwarding is not without its risks and challenges. Loss of control of the outsourced operations is one of the major challenges faced by any organization engaged in outsourcing. Giving up control means the firm leaves the process at the mercy of the logistics service provider. However, as Razzaque & Sheng (1998) quotes Bowman (1994), outsourcing firms in reality do not totally relinquish their control as outsourcing does not prevent them from monitoring the activities of the third party logistics provider.

Besides losing control of critical functions, failure of the outsourcer to properly select and manage the relationship with the service providers poses a threat to the success of outsourcing initiatives (Razaqque & Sheng, 1998, Kremic et al, 2006). Improper choice of a service provider and mismanagement of the relationship puts the outsourced processes and functions at risk and exposes the outsourcer directly. According to Kremic et al (2006), lack of a guiding methodology for managers in selection of a service provider and management of the outsourcing initiative has been a major cause of outsourcing failure.

Other challenges include unreliable promises made by the providers in a bid to secure the deal, which would result in frustrating the relationship and the objectives(Razzaque & Sheng, 1998) Outsourcing entities may also have unrealistic expectations which may not be met by the service provider, leading to frustration (Kremic et al, 2006).

Outsourcing entities have found it difficult to filter out trustworthy service providers, especially when it comes to issues of confidentiality and relinquishing proprietary information. Trust issues have far- reaching consequences to the extent of an organization losing its competitive advantage or its identity (Axelrod, 2004).

The list of outsourcing challenges and risks cannot be exhaustively dealt with in this review, but a summary has been adopted from Kremic et al (2006) detailing the risks and associated literature references as shown in the Figure 11 below:-

Fig. 11 Risks of Outsourcing

Potential risk	References
Unrealized savings or hidden costs	Alexander and Young (1996), (*Journal of Accountancy*, 1996), (*Works Management*, 1999), Antonucci *et al.* (1998), Brown (1997), Dubbs (1992), Earl (1996), Elliot (1995), Hendry (1995), Jennings (1997), Jones (1993), Kakabadse and Kakabadse (2000a, b), Lonsdale (1999), McEachern (1996), Prahalad and Hamel (1990), Quinn and Hilmer (1994), Willcocks *et al.* (1995)
Less flexibility	*Management Accounting* (1998), Antonucci *et al.* (1998), Bryce and Useem (1998), Gordon and Walsh (1997), McCray and Clark (1999), Roberts, V. (2001), Tefft (1998), Willcocks and Currie (1997)
Poor contract or poor selection of partner	*Management Accounting* (1997, 1998), Crone (1992), Domberger and Fernandez (1999), Gordon and Walsh (1997), Hill (1994), Jorgensen (1996), Klopack (2000), Krizner (2000), Lee and Kim (1999), Mullin (1996), Willcocks *et al.* (1995)
Loss of knowledge/skills and/or corporate memory and the difficulty in reacquiring a function	Campbell (1995), Earl (1996), Gilbert (1999), Jennings (1997), Kakabadse and Kakabadse (2000a, b), Kelleher (1990), Leavy (1996), McEachern (1996), McIvor (2000a), Paoli and Prencipe (1999), Prahalad and Hamel (1990), Quinn and Hilmer (1994), Quinn (1999), Roberts, V. (2001), Willcocks and Currie (1997), Willcocks *et al.* (1995)
Loss of control/core competence	Anthes (1991), Antonucci *et al.* (1998), Elliot (1995), Jennings (1997), Kakabadse and Kakabadse (2000a, b), Katz (1995), (Klopack (2000), Leavy (1996), Lonsdale (1999), McEachern (1996), Ngwenyama and Bryson (1999), Quinn and Hilmer (1994), Razzaque and Chen (1998), Roberts, V. (2001)
Power shift to supplier	Antonucci *et al.* (1998), Campbell (1995), Kakabadse and Kakabadse (2000a), Katz (1995), Lonsdale (1999), Quinn (1999), Quinn (1999), Roberts, V. (2001), Willcocks and Currie (1997)
Supplier problems (poor performance or bad relations, opportunistic behavior, not giving access to best talent or technology)	Avery (2000), Baden-Fuller *et al.* (2000), Brown (1997), Bryce and Useem (1998), Earl (1996), Elliot (1995), Iyer and Kusnierz (1996), Kakabadse and Kakabadse (2000a), Katz (1995), Laabs (1998), Lawes (1994), Lonsdale (1999), Mans (1998), Quinn and Hilmer (1994), Razzaque and Chen (1998), Roberts, V. (2001), Vining and Globerman (1999), Willcocks and Currie (1997), Willcocks *et al.* (1995), Willis (1996)
Losing customers, opportunities, or reputation	Blumberg (1998), Brown (1997), Kakabadse and Kakabadse (2000a), Quinn and Hilmer (1994), Roberts, V. (2001)
Uncertainty/changing environment	Earl (1996), Gordon and Walsh (1997), Lawes (1994), Lonsdale (1999), Willcocks and Currie (1997)
Poor morale/employee issues	Blumberg (1998), Gordon and Walsh (1997), Kakabadse and Kakabadse (2000a), Quinn (1999), Razzaque and Chen (1998), Story (2000)
Other:	
Loss of synergy	Campbell (1995), Willcocks and Currie (1997)
Create competitor	Klopack (2000)
Conflict of interest	Avery (2000), Gordon and Walsh (1997)
Security issues	Graham (1996), Peltier (1996)
False sense of irresponsibility	Roberts, P. (2001), Sherter (1997), Widger (1996)
Legal obstacles	Gordon and Walsh (1997), Graham (1996)
Skill erosion	Lafferty and Roan (2000)

Source: Outsourcing Decision Support: Benefits, Risks & Decision factor (Kremic et al, 2006)

2.3.3 Mitigating Approaches in Freight Forwarding Outsourcing.

Razzaque & Sheng (1999), advocate for collaboration between the outsourcing entity and the service provider as a measure of solving problems and uncertainties as they arise. They advocate for collaborative planning and strategy mapping as frequently as possible.

According to Langley & Campgemini (2012), Business continuity planning ranks among the highest measures employed in mitigating the risks associated with outsourcing and supply chain

efficiency. However, caution needs to be taken to ensure responsibilities are appropriately assigned to ensure continued compliance to avert future disruptions to the supply chain.

A more advanced approach in the mitigation of risks in relation to business continuity planning is the formation of a risk management organization or cross-functional risk management team, whose mandate would be to define cross-functional solutions. Langley & Campgemini (2012) advocate for this approach and advance the view that it produces more efficient and effective solutions than business continuity planning.

Langley & Campgemini (2012) in their study of Third Party Logistics performance provide a comprehensive list of mitigation approaches to outsourcing risks as illustrated in Figure 12.

Figure 12: Outsourcing Mitigation Approaches.

Source: 2013 Third Party Logistics Study, Langley & Campgemini (2012).

2.4 Summary of the Literature Review

2.4.1 Gaps in the Literature

The available literature on outsourcing in developing countries concentrates more on outsourcing from the supply perspective; most developing economies have been viewed as profitable outsourcing (off-shoring) destinations due to the low cost of labor(Axelrod, 2004). Literature on

outsourcing in developing economies from the demand perspective is still lacking, and as a result the practice is still taking shape. More-so, there is insufficient literature specifically on outsourcing of the freight forwarding function. Most of the literature available on outsourcing in Uganda focuses on other logistics activities like warehousing and distribution, ICT and other peripheral routine and non-critical functions like catering and garbage collection. Most literature that tends to address outsourcing in freight forwarding looks at this function from a much broader spectrum of logistics activities. The literature is also limited to outsourcing in developed economies.

2.4.2 The marked differences in the outsourcing macro-economic environment

Trading organizations in developing countries are hurriedly adopting the outsourcing models from developed economies (USAID, 2010) without considering the difference in socio-economic and macro-economic environment. Freight forwarding in developing countries like Uganda is characterized by high cost of operation due to under-developed port infrastructure and transport networks, stringent tariff and non-tariff barriers to trade as a result of under-developed economic blocs, less advanced technologies, and comparably higher sea freight and air freight rates as a result of lower trade volumes moving in and out of the continent (Beradda & Ciro 2009).

The Logistics Performance Index 2011 indicates that freight forwarding and transport costs are predominantly higher in East African countries than in developed economies by up to 70% (Institute of Trade Development, 2012). The situation is exacerbated by Uganda's geographical hinterland location (World Bank, 2007), the un-dissipating rise in global fuel prices and ever-increasing costs of shipping (A.T Kearney, 2009).

2.4.3 No One Size fits all Outsourcing Model

An attempt by trading organizations in developing nations to rush and outsource logistics and freight forwarding functions based on pre-designed outsourcing models implemented in developed economies may result in the failure in realization of the supply chain benefits of outsourcing initiatives. Craig (2008) contends that in service outsourcing, there is no "one-size

fits all" outsourcing strategy. This opinion is supported by other authors (John Balchin, 2010, Lou Maiuri, 2010, Ernest & Young, 2011). The alarming one out of four failed attempts by firms in developed countries to reap the benefits of the "one-size-fits all" outsourcing strategy between 2000 and 2007(according to Landis et al, 2005, Orbys Consulting et al 2006, Meredith 2008) caused many firms intending to outsource to rethink their strategy, as the implementing firms realized they did not achieve the promised 25-30% cost reduction due to other intervening factors like culture and geographical time-zones (Claudio Muruzabal, 2008). Indeed, macro-economic factors, government policy and factors within the organization's internal and external environment should be carefully studied and included in the outsourcing strategy before engaging into an outsourcing initiative. (Vasiliauskiene et al, 2011).

CHAPTER THREE

METHODOLOGY

3.1 Introduction

As outlined in the previous chapters, the main purpose of this study was to analyze the relationship between freight forwarding outsourcing and supply chain efficiency in Mukwano Industries. This chapter will demonstrate how the relationship between freight forwarding outsourcing and supply chain efficiency has been measured by choosing the appropriate methodology to test the hypotheses and arrive at the expected outcome of the study. This chapter will in effect elaborate on the research design, the area of study, the target population, sampling techniques and sample selection procedure, the research instruments used, the data collection procedure, validity and reliability measures employed, data analysis tools and processes and any limitations to the study.

3.2 Research Design

The researcher used a case study research design. The case study design has enabled the researcher conduct the study within a short time-frame (Cohen et al, 2007). The researcher employed a hybrid research strategy incorporating the use of both qualitative and quantitative methods of data collection to triangulate common phenomena identified in the results of both methods of data collection to make generalizations on the case study unit (Kothari, 2003) and to balance the study by eliminating the element of bias associated with the use of one method of data collection (Mugenda & Mugenda, 2003).

3.3 Area of the Study

The study was conducted at Mukwano Industries, Kampala as the case study organization. Mukwano Industries was particularly chosen as a case study because the company once performed the freight forwarding function in-house, but later decided to outsource the function to third party logistics companies. Mukwano Industries has over the years expanded its operations with the increase in cross-border trade with countries neighboring Uganda, which exposed the researcher to a rich information source on the operations within the case study.

3.4 Target Population

The study targeted Mukwano Industries' senior and line Managers (10) who are more knowledgeable in the strategic and tactical aspects of the business, the Operations supervisors and personnel (10) who are knowledgeable in the planning, operations and distribution functions of the study entity, the Procurement Officers (04) who provided insight into supplier selection criteria, performance measurements and actual supplier performance over time, the Stores Managers and personnel (02) who handle the inventory management function, Sales and Marketing Executives (03) who provided valuable information from the customer feedback mechanisms within Mukwano Industries and Finance and Accounts executives (11), who are knowledgeable in the financial aspects of the business.

3.5 Sampling Technique and Sample selection

A sample is a proportion of the population whose results can be generalized as representing the entire population (Amin, 2005). The sampling was carefully done as to ensure representativeness of the sample to the population, and at the same time ensuring collection of relevant data to the study.

The researcher employed both probabilistic and non-probabilistic sampling techniques in selecting a sample. The researcher employed a combination of simple random sampling and purposive sampling techniques in selecting a representative sample for this study.

3.5.1 Simple Random Sampling

Simple random sampling was used to select a sample of respondents from Mukwano Industries Ltd who possess similar job-role qualities within departments and each had an equal chance of being selected from the population (Cohen et al, 2007). A sample size of 31 respondents out of a population of 33 was chosen from senior and line Managers.

3.5.2 Purposive Sampling

The researcher used the purposive sampling technique to select those respondents in Mukwano Industries Ltd who posses specialist knowledge in the field under study in order to obtain in-depth knowledge and information on the subject matter (Kumar, 1996; Cohen et al, 2007; Trochim & Donnelly, 2008) and help save time (Kothari, 2004). Purposive sampling was also used to select a sample of 3 respondents out of a population of 3 for Sales and Marketing Executives, and a sample size of 4 respondents out of a population of 4 was chosen from Procurement officers.

The sample size and sample selection is illustrated in the table below:-

Table I: Sample Size and Sampling Technique

Respondents	**Population**	**Sample Size**	**Sampling Technique**
Senior & line Managers(Operations Managers, Stores Managers, Procurement Managers and Finance Heads and their deputies)	33	31	Simple Random Sampling and Purposive Sampling
Procurement Officers	4	4	Purposive Sampling
Sales & Marketing Executives	3	3	Purposive Sampling
Total	**40**	**37**	

Source: Adopted from Krejcie, R.V and Morgan, D.W (1970) as cited in Amin (2005)

3.6 Research Instruments

The researcher used both primary and secondary data collection methods. Primary data was collected using questionnaires and semi-structured interview guides. Secondary data was collected from company literature like magazines and from Mukwano Industries Ltd's company web page.

3.6.1 Questionnaires

Questionnaire is a set of techniques of data collection in which individuals are asked to respond to a standard (same) set of questions in a predetermined order(de Vaus,2002 as cited in Saunders et al, 2003). The researcher used structured, close-ended questionnaires. Structured, close-ended questionnaires helped elicit responses specific to this case-study (Cohen et al, 2007), and seemed economical and time-saving as they were easily administered (Mugenda & Mugenda, 2003; Amin, 2005). The Likert scale was employed to collect responses on the relationships between the variables under study. Data on the drivers of the outsourcing were collected using the 5-point Likert scale to measure the importance or strength of each variable in the outsourcing decision-making, planning and administration. The use of the Likert scale ensured flexibility in responses and helped avoid the tendency of respondents responding to questions with a certain mental set (Amin, 2005).

3.6.2 Interview Guides

The researcher conducted interviews using a semi-structured interview guide to supplement the data collected using the questionnaire method, which enabled the researcher obtain more relevant quality information from respondents' responses that could not specifically be captured in the questionnaires (Saunders et al, 2003). Three key personnel were interviewed at Mukwano Industries Ltd, including the General Manager- Distribution, the General Manager- Finance and the General Manager –Operations and Supply Chain.

Interviews are known for eliciting responses about complex and deep issues that may not be well qualified where a questionnaire has been employed (Cohen et al, 2007). This method of data collection also helped in triangulation of data from different methods and sources to compare the results for similarity and reliability (Saunders et al, 2003).

KYAMBOGO UNIVERSITY

P. O. BOX 1 KYAMBOGO Tel: 0414 – 285037, 289267 Fax: 256-41-220464 Website www.kyu.ac.ug

Office of the Dean Graduate School

Your ref.....
Our ref: KYU/GSch/01/13

26th August, 2013

To Whom It May Concern

Dear Sir/Madam

RE: LETTER OF INTRODUCTION

This is to introduce to you **GRACE MAKUMBI** registration number: **2011/HD/307/MSc.SCM** who is a student of Kyambogo University pursuing a Master of Science in Supply Chain Management of Kyambogo University.

He is carrying out a research on ***"Freight Forwarding Outsourcing and Supply Chain Efficiency in Uganda"*** A case study of Mukawno Industry in partial fulfillment of the requirement for the award of the Master of Science in Supply Chain Management of Kyambogo University.

This is to kindly request you to grant him permission to carry out this study in your establishment.

Any assistance rendered to him will be highly appreciated.

Yours faithfully,

Dr. M.A. Byaruhanga Kadoodooba
Dean, Graduate School

KYAMBOGO UNIVERSITY
26 AUG 2013
OFFICE OF THE DEAN
GRADUATE SCHOOL

3.6.3 Validity and reliability

Data Validity

Data validity refers to the ability of research instruments to elicit the desired response from the target population (Kothari, 2003). To ensure this desired response, the questionnaires in this study were subjected to scrutiny by 5 experts in the field of study prior to their deployment in the field to eliminate vague and ambiguous questions and streamline the content structure, flow and conciseness, in other words ensure content validity (Saunders et al, 2003). The results of the pre-test were used to subject the questionnaire to a content validity test using the following formula:

$$CVI = \frac{K}{N}$$

Where:

CVI	Content Validity Index
K	Total Number of Items rated as relevant
N	Total number of items in the questionnaire

A total of 57 items out of 75 in the questionnaire were rated as relevant, yielding a content validity index as calculated below.

$$CVI = \frac{57}{75} = 0.76$$

According to Amin (2005) an acceptable content validity index of a research instrument should be 0.70 and above. Since the questionnaire content validity obtained for this study was 0.76, the questionnaire deployed in this research was within the acceptable range ($>0.7<1$) as recommended by Amin (2005).

Reliability

Sample Reliability

Sample reliability refers to the representativeness of the sample to the population (Cohen et al, 2007). A reliable sample ensures that the responses from the sample more than adequately represent the apparent responses from the population. To ensure sample reliability, the chosen sample in this study was subjected to the Friedman's Chi square statistic test. (Cohen et al, 2007).

The results of the test indicated that the sample chosen was statistically significant having returned a p value of 0.00 ($X^2 = 1506.717$, $p = 0.00$), as indicated in the Table II below.

Table II: Friedman's Test of Sample Reliability

ANOVA with Friedman's Test

		Sum of Squares	df	Mean Square	Friedman's Chi-Square	Sig
Between People		218.555	33	6.623		
	Between Items	2616.031[a]	72	36.334	1506.717	.000
Within People	Residual	1634.298	2376	.688		
	Total	4250.329	2448	1.736		
Total		4468.884	2481	1.801		

Grand Mean = 2.99

a. Kendall's coefficient of concordance W = .585.

Source: SPSS Primary Data.

Instrument Reliability

Instrument reliability refers to the ability of research instruments to generate similar results if they are administered repeatedly (Kothari, 2004). Instrument reliability measures the consistency of research instruments (Saunders et al, 2003). To ensure instrument reliability, the questionnaire in this study was pilot tested for consistence, and responses were subjected to the Cronbach's

Alpha Reliability test using SPSS software to measure internal consistency of responses (Amin, 2005).

The results from the reliability tests showed that the all variables tested returned a Cronbach's alpha statistic of more than 0.50, indicating that the research instruments were reliable as to provide consistent results if administered repeatedly, as supported by Kothari (2004).

The results of the above test are indicated in the Table III below.

Table III:Instrument Reliability results from Cronbach's Alpha Test.

Variable	No. of Items Tested	Alpha Test Stat.
Decision-Making	18	0.645
Outsourcing Planning	10	0.918
Outsourcing Administration	12	0.931
Supply Chain Efficiency	15	0.605

Source: SPSS Raw Data.

Data Reliability

The researcher used both qualitative and quantitative research methods of data collection to uplift the reliability of responses (Mugenda and Mugenda, 2003). The questionnaires also had room for anonymity of respondents to avoid respondents' bias.

3.7 Data Collection Procedure

The researcher, after approval of the research proposal, and upon obtaining the letter of introduction from Kyambogo University Graduate School, designed questionnaires for collection of qualitative and quantitative data. The questionnaire was piloted to ensure validity and

reliability before the researcher administered it to the target population, and any necessary changes resulting from the pre-test were made. The data was collected starting with qualitative and quantitative data by questionnaire and then finally proceeded with semi-structured interviews of key personnel in Mukwano Industries.

3.8 Data analysis

3.8.1 Qualitative Data Analysis

The data from semi-structured interviews was sorted and responses grouped by theme and then by feedback to enable easier interpretation. The responses were checked for completeness and accuracy and conclusions made on the basis of responses by research objective.

3.8.2 Quantitative Data Analysis

The data from close-ended questionnaires relating to outsourcing variables was checked for completeness and accuracy. The data collected was categorized, coded and then fed into SPSS (Statistical Package for Social Sciences in Research) software and analyzed to determine relationships and trends between freight forwarding outsourcing and supply chain efficiency in Mukwano Industries.

The researcher used Pearson's coefficient of determination/ regression and Pearson's correlation coefficient tools in SPSS software to analyze the "cause and effect" relationship between freight forwarding outsourcing and supply chain efficiency, and the relationship between the variables as recommended in Saunders et al (2003). Pearson correlation coefficient tool in SPSS was used to examine the influence of each independent variable (decision-making, planning and administration) on the dependent variable (supply chain efficiency), that is, to assess the relationship between the independent variable and the dependent variable. Pearson's regression coefficient tool, specifically multiple regressions, was used in the study to examine the extent to which each independent variable (decision-making, planning and administration) influences the

dependent variable (supply chain efficiency) in relation to other independent variables (Saunders et al, 2003).

3.9 Limitations of the study

The use of the case-study research design chosen to take into consideration the short time-frame for the academic research constrained the researcher from collecting data from other freight forwarding outsourcing entities to further boost the study's reliability.

CHAPTER FOUR

ANALYSIS, PRESENTATION AND INTERPRETATION OF RESULTS.

4.1 Introduction

The previous chapter concentrated on the research methods employed in data collection and data analysis to test the research hypothesis. The following sections in this chapter will therefore concentrate on the findings of this study on the influence of freight forwarding outsourcing on supply chain efficiency in Mukwano Industries Ltd in particular and Uganda in general. This chapter will present the results from the analysis of data gathered during the study and its interpretation in context of the research objectives.

4.2 Response Rate

A sample size of 34 respondents out of 37 was used for the quantitative study. The researcher sent out 37 questionnaires, out of which 34 were fully completed and returned, yielding a 91.8% response rate. The researcher also interviewed 3 key personnel to supplement data from the questionnaires, yielding a combined response rate of 92.5%. A response rate of 70% and above is generally considered very good according to Mugenda & Mugenda (2003). Therefore the response rate obtained in this study, being well above 70% is considered generally acceptable.

The response rate results from this study are illustrated under Table IV below.

Table IV: Response Rate.

Total No. in Sample	Total No. of Responses	Ineligible	Response Rate
40	37	0	92.5%

Source: SPSS Primary Data.

4.3 Results on the background characteristics of respondents

This section presents the background of respondents by department of respondent, experience in position, respondent's experience in the company, respondent's level of education, age group and gender of respondent. These are presented in the next subsections.

Table V: Distribution of Respondents by Department.

Department	Frequency	Percent
Operations	11	32.4
Procurement	07	20.6
Stores	03	8.8
Finance and accounts	06	17.6
Sales and marketing	06	17.6
Distribution and depot	01	2.9
Total	34	100.0

Source: SPSS Primary Data

The results in Table V above illustrate that operations department had the highest number of respondents standing at 32.4% (11) , followed closely by the procurement department at 20.6% (7) , while the finance and accounts and sales and marketing departments shared an equal response percentage of 17.6% (06) each. Stores department registered 8.8% (03), while distribution and depot registered 2.9% of the total respondents in the study.

The findings above indicate that the respondents that dominated the case study were those that would provide the most relevant information on the subject of outsourcing and its influence on the supply chain.

Table VI: Distribution of Respondents by rank

Rank of respondent	Frequency	Percent
Top management	01	2.9
Middle management	23	67.6
Lower management	07	20.6
Non-managerial	03	8.8
Total	34	100.0

Source: SPSS Raw Data

From the analysis of the data as illustrated in Table VI above, most of the respondents who participated in this study were from middle management 23 (67.6%) followed by those from lower management 07 (20.6%) followed by 03 (8.8%) while 01 (2.9%) was from top management. On aggregate, over 91% (cumulative percentage) of the respondents are in management positions, which demonstrates the level of understanding of these respondents of strategic issues pertaining the outsourcing decision-making, and its influence on supply chain efficiency. These findings suggest that since most of the respondents were in management positions, they are decision makers and hence able to provide first hand information on the influence of freight forwarding outsourcing on supply chain efficiency.

Table VII: Distribution of Respondents by Experience in the Organization.

Experience	Frequency	Percent
0 to 3 years	14	41.2
4 to 8 years	06	17.6
9 to 12 years	06	17.6
13 to 15 years	04	11.8
Above 15 years	04	11.8
Total	34	100.0

Source: SPSS Raw Data

Results from Table VII above shows that 14 (41.2 %) of the respondents have experience of 0 to 3 years followed by those with experience of 4 to 8 years and 9 to 12 years, each comprising 06 (17.6%)). On aggregate, more than 58% of the respondents in the study have more than 3 years' experience in Mukwano Industries, which indicates that majority of the respondents have had firsthand experience of freight forwarding outsourcing in Mukwano Industries Ltd, which only took place in December 2011, and are aware of its influence on supply chain efficiency in the organization.

Table VIII: Distribution of Respondents by Age group.

Age group	Frequency	Percent
18 to 24 years	03	8.8
25 to 39 years	05	14.7
31 to 35 years	09	26.5
36 to 40 years	09	26.5
Above 40 years	08	23.5
Total	**34**	**100.0**

Source: SPSS Primary Data.

Results from Table VIII shows that most of the respondents were in the age group 31 to 35 years and 36 to 40 years each with 09 (26.5%) of the respondents. Few of the respondents were in the age group above 40 years 08 (23.5%). The results indicate that 91.2% of the respondents were actually between 25 years and above, indicating that the respondents were of a mature age.

Table IX: Distribution of Respondents by gender.

gender of respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	23	67.6	67.6	67.6
	Female	11	32.4	32.4	100.0
	Total	34	100.0	100.0	

Source: Raw Data

The gender composition of the respondents is 67.6% for male and 32.4% female. Since the study conducted was a case-study, where balancing the gender composition of the sample may be more difficult, a gender composition of 32.4% for female against 67.6% for male represents a fairly representative sample.

Table X: Distribution of Respondents by level of Education

respondents level of education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Certificate	5	14.7	14.7	14.7
	Diploma	2	5.9	5.9	20.6
	Degree	20	58.8	58.8	79.4
	Postgraduate	5	14.7	14.7	94.1
	Other	2	5.9	5.9	100.0
	Total	34	100.0	100.0	

Source: SPSS Raw Data

Table X above indicates that from the study, more than 79% of the respondents are at graduate level and above, implying that the majority of the respondents were able to comprehend the content and significance of the study and respond appropriately. It also indicates that the responses received are from an informed set of respondents.

4.4 Results on the substantive objectives(empirical results)

The variables under study, that is, outsourcing decision-making, outsourcing planning, outsourcing administration and supply chain efficiency were operationalised into quantitative and qualitative items.

4.4.1 Descriptive Results

Qualitative results from Interviews.

The researcher conducted interviews of key personnel in Mukwano Industries, these being the General Manager- Distribution, the General Manager- Finance and the Manager- Operations & Supply Chain, using a semi-structured interview guide. The results of the interview were grouped and responses matched against each interview question as illustrated in Table XX below:

Table XX: PRESENTATION OF THE RESULTS FROM INTERVIEW OF KEY PERSONNEL AT MUKWANO INDUSTRIES LTD.

Nr.	Question	Responses
1.0	**INTRODUCTORY QUESTIONS**	
1.1	What is Mukwano Industries and What do they do?	• Manufacturing firm dealing in a range of household fast moving consumer goods (FMCGs).
1.2	What role does Freight forwarding play in Mukwano Industries?	• More than 70% of raw materials used in manufacturing processes are imported (requires shipping, transport and customs clearance • Exportation of finished and semi-finished products (requires freight forwarding).
1.3	How does Mukwano access freight forwarding Services?	• Mukwano Industries used to perform the function in-house till 2011 • Now outsources the function to Bollore Africa Logistics.
2.0	**FREIGHT FORWARDING OUTSOURCING DECISION-MAKING**	
2.1	What were the reasons for Mukwano Industries to outsource the freight forwarding function?	• Outsourcing as best practice motive • To concentrate on core business • Shedding off extra labour and other resources • Risk mitigation- transfer risk to the professionals- 3PL.
2.2	In your opinion, what do you think was the most important reason among the ones you have mentioned above?	• Outsourcing as best practice motive • To concentrate on core business • Shedding off extra labour and other resources
2.3	What qualities were you looking for while outsourcing the freight forwarding function?	• ISO Certified firms-Quality assurance • HR composition- professionals • Service delivery levels- quality, cost and efficiency • Global representation(geographical coverage) • Communication/IT infrastructure Facilities(access to transport, handling equipment)

2.4	In your opinion, which qualities do you think were most important in this decision?	• Service delivery levels- quality, cost and efficiency
2.5	In your opinion, would there be anything else you would have considered, apart from the above, to select the right candidate for the job?	• Financially sound, the ability to make arrangements for outlaying port charges on behalf of Mukwano Ind. (freight & port charges are in the range of USD3M/month) • With Credit facilities- 30 days, freight forwarder has to be financially sound.
2.6	At what level does Mukwano Industries view its relationship with the third party logistics provider(s)?	• There is no control of the function at the moment, as this was outsourced completely. • Only a small team does routine follow-up to plan.
2.7	In your opinion, what do you think of such a relationship?	• There is a risk involved, as the service providers are unaware of the level of urgency Mukwano Industries attaches to specific orders. • There is also a proprietary risk as company information may be leaked to the competition by the freight forwarder.
3.0	**FREIGHT FORWARDING OUTSOURCING IMPLEMENTATION**	
3.1	During the implementation of the outsourcing project, what were the phases Mukwano Industries underwent to ensure success of the project?	• Phase 1: Had an implant office in Mukwano Industries • Phase 2: Employee transfer- key personnel were taken on by the freight forwarder. • Phase 3: Phased Information and project transfer to the freight forwarder • Phase 4: Full control of the project by freight forwarder.
3.2	In your opinion, in what ways did each of the phases serve its purpose?	• Ensured that there is minimum interruption during the phased implementation of the outsourcing deal.
3.3	How does Mukwano Industries know that they have achieved their objectives as anticipated at the signing of the outsourcing deal?	• Monthly review meetings between finance and operations departments • Internal and external key performance indicators are set and are measured on monthly basis against financial and operational service levels. • A service level agreement was signed between Mukwano Industries and the contracted freight forwarder, and is also

		reviewed on a monthly basis. • Results show that the performance has not been good.
3.4	In your opinion, under the circumstances, would you have expected better results?	• Yes, because the results we are getting are not good as compared to what we expected.
4.0	**CHALLENGES**	
4.1	What are the challenges Mukwano Industries faced before the company decided to outsource its freight forwarding?	• We did not have any challenges per se; we had a good in-house team, which understood the way we work.
4.2	How did Mukwano Industries deal with these challenges?	• Not applicable
4.3	What challenges does Mukwano Industries face while implementing the freight forwarding outsourcing project?	• Higher costs (forwarder adds a markup on the cost price) than what Mukwano used to spend, yet service levels are lower. • Working hours of freight forwarder do not coincide with the operations of Mukwano Industries • Freight forwarder is not addressing the non-tariff barriers (police, customs, regulatory bodies, weighbridges, border stops) as a professional, and this is costing Mukwano Industries. • 90% of the cargo handled in-house used to go though "green channel" (express release), now when the function is outsourced, all the cargo has to be verified first, which increases risk of damage and pilferage, transit time, and demurrage/storage costs, stock-outs. • Lack of compliance of the freight forwarder in terms of audits with regulatory bodies affects us directly, as it delays our shipments, yet we were 100% compliant when we used to handle the shipments ourselves.
4.4	How has Mukwano dealt with these challenges now? How about in the future?	• Mukwano is yet to rethink whether to sign a 5-year agreement with the contracted freight forwarder, as was initially planned. • Chances are that the freight forwarding function will be back sourced. • Mukwano still has a sound internal team which can take charge of the freight forwarding function if the company is to back-source the function.

Source: Primary Data from Interview at Mukwano Industries Ltd.

Freight forwarding outsourcing decision-making in Mukwano Industries

The results from the interview as illustrated in Table XX, subsections 2.1 to 2.5 above indicate that freight forwarding outsourcing decision-making in Mukwano Industries concentrated on all the factors under study in the outsourcing decision-making (the financial, technical and strategic factors).

Financial factors

During the interview at Mukwano industries, the financial factors identified as having motivated the firm to outsource the freight forwarding function included, among others, the credit terms offered by the freight forwarder, which indicated that the service provider had to be financially sound. In response to this question, the GM- Finance at Mukwano Industries responded as follows:-

> " of course they should be financially sound; our requirements for payments in terms of port charges and our freight charges go to the tune of about 3 million US dollars in a month...so if you are to give us 30 days' credit you should be able to be financially sound...."

From the interview, the freight rates, demurrage tariff and storage tariff as considerations in the decision-making did not feature as the respondents were of the view that the service provider would be gauged more on service delivery, much as freight rates are a consideration. The Manager- Supply Chain at Mukwano Industries responded on this question in the following words:

> "... We graded the firms in terms of service delivery...."

A major factor that was also identified from the interview as a motive for outsourcing was the need to reduce the organization's overheads and capital costs in non-core activities, thus calling for the shedding off of extra labour and other resources. The Manager- Supply Chain emphatically pointed out this fact in the following words:

"... Don't invest money where you have no earnings. It is not your core business. So identify your core business, shed off all the extra labour, the extra worry, and give it to the professionals....so that's what we have been trying to follow..."

Technical factors

The technical factors identified from the interviews as motives for outsourcing the freight forwarding function in Mukwano Industries Ltd, as indicated in Table XX above included service quality assurance, ability of the freight forwarder to effectively communicate, ownership or possession of facilities, geographical coverage/global representation, human resource composition of the freight forwarder, and technological advantage. The Manager- Supply Chains emphasized these motivators in the following words:

"...We were looking at a firm that is ISO certified, a firm that has professionals in it... we were also looking at that kind of firm that has global representation, how easier it is to provide transport, how easier to have communication means....."

Strategic factors

One of the strategic factors identified as a driver of freight forwarding outsourcing in Mukwano Industries was the need to concentrate on the organization's core business. In the words of the Manager- Supply Chain at Mukwano Industries during the interview, in response to the question on the motive for outsourcing the freight forwarding function:

"We used to do it (Freight Forwarding) in-house for a very long time, and like modern ways, we go for best practice. We said we better concentrate on our core business and outsource whatever we believed was not our core business".

The need to transfer risk to the service provider was also identified during the interview as a strategic motive for outsourcing the freight forwarding function in Mukwano Industries Ltd. The Manager-Supply Chain at Mukwano Industries Ltd said of this issue in these words:

" shed off all..... the extra worry, and give it to the professionals"

Freight forwarding outsourcing implementation in Mukwano Industries

The implementation of the outsourcing engagement as detailed from the research findings in Table XX above indicate that the implementation of freight forwarding outsourcing in Mukwano Industries Ltd followed a phased approach.

Phase one involved the setting up of a project team that included key staff from both Mukwano Industries Ltd and the contracted service provider, Bollore Africa Logistics Ltd.

Phase two involved the merger of the two groups into one project team situated at the Mukwano Industries premises on Mukwano Road, Kampala, Uganda. During this phase, the key staffs from Mukwano industries were assimilated into Bollore Africa Logistics Ltd.

Phase three involved training and phased transfer of information and new project files from the Mukwano Industries to the project team. At this stage old files were transferred to the project team on completion of delivery and audit checks.

Phase four, which was the last phase, included the handover of the whole responsibility to Bollore Africa Logistics Ltd to solely manage the freight forwarding function.

The phased approach applied at Mukwano Industries was explained by the Manager- Supply Chain in the following words:

> " First of all, we agreed to have an implant office in our premises. And 2, we agreed that when we are closing our own firm, we had some key people, they should take them on …those that knew the kind of documentation that we did and how our work was moving….. Then we moved part of the new files to them, while the old files remained on our side, and then we moved the rest of the files to them. Then the last phase, we let them run the show."

Influence of freight forwarding outsourcing planning on supply chain efficiency

From the interview, subsection 3.2 of Table XX revealed that outsourcing planning helped reduce disruptions in operations associated with outsourcing transitions. The Manager- Supply Chain responded to this question in these words:

> "We had a smooth transition and hardly any interruptions in our operations because we had our former key staff on the ground as a team working hand in hand with the freight forwarder."

By inference, the disruptions could have caused a spike in machine and manpower idle-time and associated costs in the supply chain.

Influence of freight forwarding outsourcing administration on supply chain efficiency

Relinquishment of control of Proprietary information

The interview revealed that there was a risk of exposure of key proprietary information as a result of actual roll-out of the freight forwarding outsourcing project. The GM- Finance reiterated this matter in these words:

> "You pass on a lot of information to a third party, and you do know how they use that information. Therefore, in terms of control of our own information.... we are not 100% in full control."

Supply chain links working at cross-purposes.

The interview also revealed that there freight forwarding outsourcing administration was marred by both organizations within the supply chain working at cross purposes, resulting in failure to on delivery precision. The Manager- Supply Chain stressed this issue in the following words:

> "Since they are only doing freight forwarding, they are not like us, who were doing the service and actually knowing why we are doing it. So, that bit of urgency cannot be realized fully. We knew when we needed a certain kind of material, and what urgency we attached to it. With them, they do it as their normal process using their normal KPIs.

> Sometimes for us we set very high KPIs, but for them they are looking at general performance. So you find that they cannot fully satisfy our needs."

Non-aligned working culture

According to the study, the interviews revealed that there is a gap in the working culture between Mukwano Industries and the service provider evidenced by a divergence between the working hours of the service provider and those of Mukwano Industries, which greatly affects the company's operations. The Manager- Supply Chain and the GM- Finance voiced their concern on this question in the following words:

> " Their working time, on Saturday they work half day...we work the whole day, so there is loss of time. They close office at 5:00pm, yet we run a factory which works 24/7...."

Increased cost of service

The results from the interview indicated that Mukwano Industries is paying more than what they used to pay for the same service, when the freight forwarding function was being managed in-house, as the freight forwarders' profit margins inflate the costs to Mukwano Industries Ltd. The GM-Finance voiced his concern with the following words:

> "In the beginning, we were not spending that much, because we were looking at our in-house firm as a support centre and not a cost centre. Now these guys are in business, and must put margins to make sure they make profits, so we pay a little bit more than we used to, and yet we are not getting the level of service that we used to get".

Non-compliance of the freight forwarder with regulatory bodies

Results from the interview also revealed that the lack of compliance of the freight forwarder in terms of audits with regulatory bodies has affected the outsourcing entity directly in terms of delays in shipment delivery and its associated costs of demurrage, storage, loss of final consumer orders and sales. In comparison with the previous performance where 90% of the cargo handled in-house used to be express released, now when the function was outsourced, all the cargo has to

be verified first, which increased the risk of damage and pilferage, transit time, and demurrage/storage costs. The Manager- Supply Chain elaborated this phenomenon in these words:

> "When we were still clearing ourselves, over 90% of our cargo was released through the *green channel*.... Now, more than 90% of our cargo is subjected to verification! So that is causing more delays and more costs to us. When we were doing it ourselves, we were much more compliant. So in terms of risk management, URA (Uganda Revenue Authority) does not look at us (Mukwano Industries) separately. They are looking at the clearing agent as the importer, so when the agent is not compliant, we are also part of that (the problem)."

Performance Measurement of freight forwarding outsourcing in Mukwano Industries

Results from the interview guide as shown in Table XX above indicate that the performance measurement of the freight forwarding outsourcing project is done on a monthly basis through review meetings on financial and operational aspects of the outsourcing project.

The results also show that the company has in place internal and external key performance indicators to measure performance and these are reviewed on a monthly basis against financial and operational service levels. A service level agreement was also signed between Mukwano Industries and the contracted freight forwarder, and is also reviewed on a monthly basis.

On the whole, the conclusion of the performance standards has been that the performance has not been good, as indicated in section 3.3 and 3.4. The GM- Finance and the Manager- Supply Chain concluded in these words:

> "Their performance has not been good....We are not happy."

Mitigation Factors in Freight forwarding outsourcing in Mukwano Industries

The results from the interview indicate that much as the firm is due to sign a 5-year outsourcing deal, Mukwano Industries is seriously contemplating on back-sourcing the freight forwarding

function, since the organization still has a sound internal team that can take charge of the freight forwarding function if the company is to back-source this function. The Manager- Supply chain pointed out this sentiment in these words:

> ".. We are looking at it having an agreement of 5 years, but we are going to look at the whole thing, and chances are that we shall go back and do it ourselves"

Quantitative results from questionnaires

Respondents in Mukwano Industries Ltd were requested to do self rating based on dichotomous questions and Likert scale questions.

Objective one: The influence of Freight forwarding outsourcing decision-making on Supply Chain Efficiency in Mukwano Industries Ltd.

The first objective of the study was to assess the extent to which freight forwarding outsourcing decision-making influences supply chain efficiency in Mukwano Industries Ltd.

Outsourcing Decision Factor Choice in the Freight forwarding outsourcing decision-making.

In the study the researcher employed dichotomous questions ("Yes" and "No") to gather data on the dominant drivers in the freight forwarding outsourcing decision in Mukwano Industries Ltd, where "YES" was assigned a nominal value of 1 and "NO" a nominal value of 2.

Table Xa: Financial Drivers in Outsourcing Decision-making: Average Index.

Statistics

		freight rates offer	credit terms offer	freetime offer	handling tariff offer
N	Valid	34	34	34	34
	Missing	0	0	0	0
Mean		1.09	1.15	1.47	1.32
Std. Deviation		.288	.359	.507	.475

Source: SPSS Primary Data.

The results from the study as illustrated in Table Xa above indicate that the financial drivers were dominant in the outsourcing decision-making, having registered a mean of between 1.09 and 1.47, which is below 1.5.

Table Xb: Financial Drivers in Outsourcing Decision-making: Frequency & Percentage

Financial factors indicators	Scale	Frequency	Percent
The freight rates provided by the freight forwarder	Yes	31	91.2
	No	03	8.8
The credit terms offered by freight forwarder	Yes	29	85.3
	No	05	14.7
The demurrage/ storage free time offered by freight forwarder	Yes	18	52.9
	No	16	47.1
The demurrage and handling tariff of the freight forwarder	Yes	23	67.6
	No	11	32.4

Source: SPSS Primary Data.

Table Xb shows that 31 (91.2%) of the respondents agreed that freight rates offered by the freight forwarder were a major consideration in the freight forwarding outsourcing decision in Mukwano Industries Ltd compared to 03 (8.8%) who said "No". This indicated that freight rate offers were highly significant in the outsourcing decision-making. Further 85.3% showed that credit facilities offered by the freight forwarder were a major consideration in the outsourcing decision compared to 14.7% who said "No". Over 52.9% showed that storage and demurrage free time offered by the freight forwarder was considered in the outsourcing decision compared to 16 (47.1%) who disagreed. Finally 23 (67.6%) showed that the demurrage and handling tariff

of the freight forwarder was a consideration in the outsourcing decision-making. These results indicated that financial drivers were dominant in the freight forwarding outsourcing decision in Mukwano Industries Ltd in particular and in other manufacturing firms in general.

Table XIa: Technical Drivers in Outsourcing Decision-making: Average Index.

Statistics

	service quality	risk management	Technology	facility ownership	geographical coverage	project experience	HR composition	statutory compliance	HS&E compliance	Professional accreditation
N Valid	34	34	34	34	34	34	34	34	34	34
N Missing	0	0	0	0	0	0	0	0	0	0
Mean	1.21	1.15	1.26	1.21	1.21	1.00	1.53	1.15	1.35	1.29
Std. Deviation	.410	.359	.448	.410	.410	.000	.507	.359	.485	.462

Source: SPSS Primary Data.

From the study, as illustrated in Table XIa above, nine out of ten technical drivers in freight forwarding outsourcing decision-making in Mukwano Industries registered a mean average of between 1.0 and 1.35 indicating that these factors were considered in the outsourcing decision-making. However, one particular factor," the human resource composition of the service provider", registered a mean of 1.53, indicating that this factor was not considered in the outsourcing decision-making in Mukwano Industries.

Table XIb: Technical Drivers in Outsourcing Decision-making: Frequency & Percentage.

Indicators of technical factors	Scale	Frequency	Percent
Service quality assurance, e.g ISO Certification, C-TPAT.	Yes	27	79.4
	No	07	20.6
The ability of the freight forwarder to manage risks	Yes	29	85.3
	No	05	14.7
The ownership or possession of facilities for handling cargo	Yes	25	73.5
	No	09	26.5

The geographical coverage of the freight forwarders network of offices	Yes No	27 07	79.4 20.6
The professional experience of the freight forwarder in similar projects	Yes No	34 00	100.0 00
The statutory compliance of the freight forwarder	Yes No	29 05	85.3 14.7
The human resource composition of the freight forwarder	Yes No	16 18	47.1 53.9
Adherence of the freight forwarder to health safety & environmental issues	Yes No	22 12	64.7 35.3
Accreditation of the freight forwarder to professional bodies e.g. UFFA, PPDA	Yes No	24 10	70.6 29.4

Source: SPSS Primary Data.

Results from Table XIb above show that most of the respondents(27 representing 79.4%) agreed that service quality assurance was considered in the outsourcing decision-making in Mukwano Industries Ltd compared to 07 (20.6%) who disagreed. They further showed that risk management potential was a major consideration in the outsourcing decision registering 85.3% of total respondents in agreement, compared to 05 (14.7%) who disagreed. Respondents also significantly agreed that technology was a major consideration in the freight forwarding outsourcing decision, having registered 25 (73.5%) of respondents in agreement, compared to 9 (26.5%) who disagreed. In addition 27 (79.4%) agreed with facility ownership and geographical coverage of the freight forwarder as major technical considerations in the outsourcing decision-making compared to 20.6% who disagreed. Furthermore, experience of the freight forwarder in similar projects topped the charts, registering 34 (100%) in agreement that this factor was a major technical consideration in freight forwarding outsourcing in Mukwano Industries Ltd. 29 respondents (representing 85.3% of the respondents) agreed that statutory compliance of the freight forwarder was a major consideration in freight forwarding outsourcing, compared to 05 (14.7%) who disagreed. Respondents showed that freight forwarder's adherence to Health, Safety and the environment was a major outsourcing consideration posting a 64.7% figure of those in agreement, compared to 35.3% of those who disagreed. Further, 70.6% of the respondents agreed that professional accreditation of the freight forwarder was a major consideration in outsourcing decision-making in Mukwano Industries Ltd, compared to 29.4% who disagreed.

On the other hand, however, 52.9% of the respondents disagreed that human resource composition was considered in the outsourcing decision in Mukwano Industries Ltd, compared to 47.1% who were in agreement.

Table XII-a.: Strategic Drivers in Outsourcing Decision-making: Average Index.

Statistics

		Flexibility and adaptability	investment in R&D	focus on core competence	cultural fit
N	Valid	34	34	34	34
	Missing	0	0	0	0
Mean		1.09	1.29	1.12	1.47
Std. Deviation		.288	.462	.327	.507

Source: SPSS Primary Data.

The results from the strategic drivers of freight forwarding outsourcing decision-making in Mukwano industries Ltd as illustrated in Table XII-a above indicate that all four factors were considered in the freight forwarding outsourcing decision, having registered a mean of between 1.09 and 1.47, which is below 1.5.

Table XII-b.: Strategic Drivers in Outsourcing Decision-making: Frequency & Percentage.

Strategic factors indicators	Scale	Frequency	Percent
The ability of the freight forwarder to quickly adapt to the changing needs of Mukwano industries	Yes	31	91.2
	No	03	8.8
The evidence of investment of the freight forwarder in development of new ideas and logistics solutions	Yes	24	70.6
	No	10	29.4
The need of Mukwano industries to focus on the core business of production and marketing of its products	Yes	30	88.2
	No	04	11.8
The compatibility of the freight forwarder's work related norms and culture with that of Mukwano industries	Yes	18	52.9
	No	16	47.2

Source: SPSS Primary Data

As illustrated in Table XII-b above, 31 (91.2%) of respondents agreed that the ability of the freight forwarder to quickly adapt to the changing needs of Mukwano Industries was a major strategic consideration in the freight forwarding outsourcing decision, compared to 03 (8.8%) who disagreed. Further 24 (70.6%) agreed that the evidence of investment in new ideas and logistics solutions by the freight forwarder was a significant consideration in the decision-making to outsource freight forwarding in Mukwano Industries Ltd, compared to 29.4% who disagreed. 30 respondents (representing 88.2%) agreed that the need of Mukwano industries to focus on core business of production and marketing of its products was a major decision factor considered in the outsourcing of freight forwarding function in Mukwano Industries Ltd, compared to 04 (11.8%) who disagreed. Finally 52.9% of the respondents agreed that the compatibility of the freight forwarders' work related norms and culture with that of Mukwano industries Ltd (cultural fit) was considered as a significant factor in the decision to outsource the freight forwarding function by Mukwano Industries Ltd, compared to 16 (47.2%) who disagreed.

In general respondents agreed that strategic factors were significantly considered in the freight forwarding outsourcing decision-making in Mukwano Industries Ltd.

Outsourcing Decision Factor Importance in the Freight forwarding outsourcing decision-making.

The researcher combined the dichotomous questionnaires with questions on the level of importance of each variable in outsourcing decision-making to measure the gap between the actual factors considered in the outsourcing decision and the dominant factors that are considered more important in the freight forwarding outsourcing decision. The financial, technical and strategic drivers were measured by their level of importance, and coded values as indicated below.

Not Important	=	1
Fairly Important	=	2
Not Sure	=	3
Important	=	4
Very Important	=	5

Table XIIIa: Importance of Financial Drivers in Outsourcing Decision-making

Indicators of importance of financial factors	Scale	Frequency	Percentage	Mean	Std. Dev
The freight rates offered by the freight forwarder	Not important	01	2.9	4.50	.862
	Fairly important	00	00		
	Not sure	02	5.9		
	Important	09	28.5		
	Very important	22	64.7		
The credit terms offered by the freight forwarder	Not important	01	2.9	4.09	.996
	Fairly important	02	5.9		
	Not sure	03	8.8		
	Important	15	44.1		
	Very important	13	38.2		
The demurrage/ storage free time offered by freight forwarder	Not important	02	5.9	3.56	1.133
	Fairly important	05	14.7		
	Not sure	05	14.7		
	Important	16	47.1		
	Very important	06	17.6		
The demurrage/ storage and handling tariff of freight forwarder	Not important	02	5.9	3.79	1.200
	Fairly important	05	14.7		
	Not sure	01	2.9		
	Important	16	47.1		
	Very important	10	29.1		

Source: SPSS Primary Data.

The results from the study as shown in Table XIIIa above indicate that the financial drivers in the freight forwarding outsourcing decision-making in Mukwano Industries Ltd registered a relatively high level of importance in the freight forwarding outsourcing decision, having registered a mean of between 3.56 and 4.50, which is above 3.5 on the 5-point Likert scale.

Results from Table XIIIa above indicate that 64.7% of the respondents agreed that freight rates offered by the freight forwarder are a very important factor in the outsourcing decision-making. Further 44.1% of the respondents agreed that credit terms offered are important followed by 38.2% who showed that they are very important. 47.1% of the respondents agreed that the demurrage free time offer and demurrage storage tariff structure are important outsourcing decision factors.

The above results indicate that the financial factors have a significant level of importance in outsourcing decision making.

Table XIIIb: Importance of Technical Drivers in Outsourcing Decision-making

Indicators of technical factors	Scale	Frequency	Percentage	Mean	Std. Dev
Service quality assurance	Not important	01	2.9	3.56	1.160
	Fairly important	08	23.5		
	Not sure	03	8.8		
	Important	15	44.1		
	Very important	07	20.6		
The ability of freight forwarder to manage risks	Not important	01	2.9	3.91	1.053
	Fairly important	04	11.6		
	Not sure	02	5.9		
	Important	17	50.0		
	Very important	10	29.4		
The state of art technologies possessed by the freight forwarder	Not important	03	8.8	3.50	1.212
	Fairly important	05	14.7		
	Not sure	04	11.8		
	Important	16	47.1		
	Very important	06	17.6		
The ownership or possession of facilities for handling cargo	Not important	06	17.6	3.56	1.353
	Fairly important	13	38.2		
	Not sure	03	8.8		
	Important	10	29.4		
	Very important	02	5.9		
The geographical coverage of the freight forwarders network of offices.	Not important	01	2.9	3.76	1.103
	Fairly important	06	17.6		
	Not sure	01	2.9		
	Important	18	52.9		
	Very important	08	23.5		
The professional experience of the freight forwarder in handling similar projects	Not important	00	00	4.24	.781
	Fairly important	02	5.9		
	Not sure	01	2.9		
	Important	18	52.9		
	Very important	13	38.2		
The statutory compliance of the freight forwarder	Not important	00	00	3.65	.981
	Fairly important	07	20.6		
	Not sure	03	8.8		
	Important	19	55.9		
	Very important	05	14.7		

The human resource composition of the freight forwarder	Not important	06	17.6	2.68	1.249
	Fairly important	13	38.2		
	Not sure	03	8.8		
	Important	10	29.4		
	Very important	02	5.9		
Adherence of the freight forwarder to health, safety & the environment	Not important	04	11.8	2.97	1.141
	Fairly important	08	23.5		
	Not sure	09	26.5		
	Important	11	32.4		
	Very important	02	5.9		
Accreditation of the freight forwarder to professional bodies	Not important	00	00	3.21	1.067
	Fairly important	13	38.2		
	Not sure	04	11.8		
	Important	14	41.2		
	Very important	03	6.8		

Source: SPSS Primary Data.

According to Table XIIIb above, the analysis of the technical drivers of freight forwarding outsourcing decision-making indicated mixed results. Eight out of ten constructs registered a mean of between 3.21 and 4.24, indicating that service quality assurance, risk management potential, facility ownership, geographical coverage, investment in technology, project experience, statutory compliance and professional accreditation are relatively important factors in the freight forwarding outsourcing decision at Mukwano Industries Ltd

On the other hand, Human resource composition of the 3PL and compliance to Health, safety and the environment both registered mean figures of 2.68 and 2.97 respectively, indicating that the two technical factors are considered as not important in the freight forwarding outsourcing decision-making.

Table XIIIc: Importance of Strategic Drivers in Outsourcing Decision-making

Indicators of importance of strategic factors	Scale	Frequency	Percentage	Mean	Std. Dev
The ability of the freight forwarder to quickly adapt to changing business needs of Mukwano Industries.	Not important	01	2.9	4.15	.925
	Fairly important	01	2.9		
	Not sure	03	8.8		
	Important	16	47.1		
	Very important	13	38.2		
The evidence of investment of the freight forwarder in the development of new ideas and logistics solutions	Not important	00	00	3.74	.931
	Fairly important	05	14.7		
	Not sure	05	14.7		
	Important	18	52.9		
	Very important	06	17.6		
The need of Mukwano industries to focus on core business of production and marketing of its products	Not important	00	00	4.38	.888
	Fairly important	01	2.9		
	Not sure	06	17.6		
	Important	06	17.6		
	Very important	21	61.8		
The compatibility of the freight forwarders work related norms and culture with that of Mukwano industries	Not important	03	8.8	3.24	1.158
	Fairly important	07	20.6		
	Not sure	06	17.6		
	Important	15	44.1		
	Very important	03	8.1		
The compatibility of the freight forwarders vision and mission to the outsourcing strategy goals of Mukwano industries	Not important	03	8.8	3.38	1.206
	Fairly important	06	17.6		
	Not sure	05	14.7		
	Important	15	44.1		
	Very important	03	14.7		

Source: SPSS Primary Data

The analysis of the results from the study, as illustrated in Table XIIIc above revealed that all the 5 strategic drivers in the freight forwarding outsourcing decision-making in Mukwano Industries Ltd (flexibility and adaptability, investment in R&D, focus on core competence and strategic and cultural fit) were considered important, as they registered average indices ranging between 3.24 and 4.38, which is above 3.0.

The standard deviations were all low suggesting that respondents had similar views and opinions on the importance of the strategic drivers in the freight forwarding outsourcing decision making.

To get an overall view of how respondents rated on decision making all the three constructs (financial, technical and strategic drivers) discussed were aggregated into one average index decision table XIIId below:

Table: XIIId: Freight Forwarding Outsourcing Decision-making: Aggregated average Index.

Decision statistics		Value
Mean		1.2353
95% internal for mean	Lower bound	1.1777
	Upper bound	1.2928
Median		1.2000
Std. Deviation		.027

Source: SPSS Primary Data

Results from table XIIId above show that the average mean on outsourcing decision-making, mean = 1.2353. This mean value was between 1.177 and 1.2928 and low standard deviation of 0.27, suggesting that the respondents in the sample had similar views and opinions on the factors considered in the freight forwarding outsourcing decision making.

Objective two: The influence of Freight forwarding outsourcing planning on Supply chain efficiency in Mukwano Industries.

The second objective of the study was to analyze the extent to which freight forwarding outsourcing planning influences supply chain efficiency in Mukwano industries Ltd. The researcher used ranking scales to elicit responses on the level of agreement on the influence of outsourcing planning on supply chain efficiency in Mukwano Industries Ltd.

The researcher allocated values to the response categories as indicated below:

Strongly Disagree	=	1
Disagree	=	2
Uncertain	=	3
Agree	=	4
Strongly Agree	=	5

Table XIV: Outsourcing Planning

Indicators of outsourcing planning	Scale	Frequency	Percentage	Mean	Std. Dev
Proper planning of the freight forwarding outsourcing activities has enabled Mukwano industries to obtain lower freight rate offers	Strongly disagree	01	2.9	3.50	1.052
	Disagree	06	17.6		
	Neutral	07	20.6		
	Agree	15	44.1		
	Strongly agree	05	14.7		
Planning of the freight forwarding outsourcing activities has resulted in favourable credit terms to Mukwano industries	Strongly disagree	00	00	3.38	.817
	Disagree	05	14.7		
	Neutral	13	38.2		
	Agree	14	41.2		
	Strongly agree	02	5.9		
Proper planning of the freight forwarding out sourcing activities has enabled Mukwano industries reduce demurrage and storage costs	Strongly disagree	00	00	3.56	1.133
	Disagree	09	25.5		
	Neutral	05	14.7		
	Agree	12	35.3		
	Strongly agree	08	23.5		
Proper planning of the freight forwarding outsourcing activities has enabled Mukwano industries reduce inventory holding costs	Strongly disagree	01	2.9	3.50	.992
	Disagree	05	14.7		
	Neutral	08	35.5		
	Agree	16	47.1		
	Strongly agree	04	11.8		
Freight forwarding outsourcing planning has increased product availability to customers at Mukwano industries	Strongly disagree	01	2.9	3.62	.992
	Disagree	04	11.8		
	Neutral	05	14.7		
	Agree	21	61.8		
	Strongly agree	03	8.8		
The planning process of freight outsourcing activities has helped reduce response time to shipment orders	Strongly disagree	00	00	3.56	.860
	Disagree	05	14.7		
	Neutral	08	23.5		
	Agree	18	52.9		
	Strongly agree	03	8.8		
The planning of the freight forwarding outsourcing activities has helped reduce the time products take to reach the customer	Strongly disagree	01	2.9	3.74	.931
	Disagree	06	17.6		
	Neutral	06	17.6		
	Agree	15	44.1		
	Strongly agree	06	17.6		
Planning of freight forwarding outsourcing activities has enabled Mukwano industries improve shipment transit time	Strongly disagree	00	00	3.59	.857
	Disagree	05	14.7		
	Neutral	05	14.7		
	Agree	18	52.9		
	Strongly agree	06	17.6		

The planning of freight forwarding out sourcing activities has enabled Mukwano industries ensure full delivery as ordered.	Strongly disagree	00	00	3.59	.857
	Disagree	05	14.7		
	Neutral	07	20.6		
	Agree	19	55.9		
	Strongly agree	3	08.8		
The planning of freight forwarding out sourcing activities has enabled Mukwano industries improve shipment safety in transit	Strongly disagree	00	00	3.76	.855
	Disagree	04	11.8		
	Neutral	05	14.7		
	Agree	20	58.8		
	Strongly agree	05	14.7		

Source: SPSS Primary Data.

Table XIV above shows that all ten efficiency sub-constructs registered mean figures of between 3.38 and 3.76, which is above 3.00, indicating that freight forwarding outsourcing planning has had a positive influence on supply chain efficiency in terms of reduction in freight costs (3.50), reduction in finance costs(3.38), reduction in storage and demurrage charges(3.56), reduction in inventory holding costs(3.50), increase in product availability (3.62), reduction in order response time(3.56), reduction in time-to-market(3.56), reduction in shipment transit time(3.74), increase in order completion(3.59) and increase in safe delivery precision(3.76).

In summary, the respondents agreed that freight forwarding outsourcing planning has had a positive influence on supply chain efficiency in Mukwano Industries, having registered an average mean of 3.58 against all three efficiency constructs (Cost, Quality and Delivery Precision).

Objective three: The influence of Freight forwarding outsourcing administration on Supply Chain Efficiency in Mukwano Industries Ltd.

The third objective of the study was to assess the influence of freight forwarding outsourcing administration on supply chain efficiency in Mukwano Industries Ltd. The researcher used ranking scales to elicit responses on the level of agreement on the influence of administration of outsourcing initiative on supply chain efficiency in Mukwano Industries Ltd. The researcher allocated values to the response categories in the questionnaire as indicated below:

Strongly Disagree	=	1
Disagree	=	2
Uncertain	=	3
Agree	=	4
Strongly Agree	=	5

Table XV: Outsourcing Administration

Indicators chain supply efficiency	Scale	Frequency	Percentage	Mean	Std. Dev
Outsourcing administration and legal costs	Strongly disagree	00	00	3.76	.741
	Disagree	01	2.9		
	Neutral	11	32.4		
	Agree	17	50.0		
	Strongly agree	05	14.7		
Outsourcing administration and information costs	Strongly disagree	00	00	3.76	.855
	Disagree	04	11.8		
	Neutral	05	14.7		
	Agree	20	58.8		
	Strongly agree	05	14.7		
Outsourcing administration and idle time costs	Strongly disagree	00	00	3.38	.853
	Disagree	006	17.6		
	Neutral	11	32.4		
	Agree	15	44.1		
	Strongly agree	02	5.9		
Outsourcing administration and overhead/ rental costs	Strongly disagree	00	00	3.91	.900
	Disagree	02	5.9		
	Neutral	09	26.5		
	Agree	13	38.2		
	Strongly agree	10	29.4		
Outsourcing administration and finance costs	Strongly disagree	00	00	3.53	.788
	Disagree	04	11.8		
	Neutral	10	29.2		
	Agree	18	52.9		
	Strongly agree	02	5.9		
Outsourcing administration and processing process time	Strongly disagree	00	00	3.38	.888
	Disagree	06	17.6		
	Neutral	12	35.3		
	Agree	13	38.2		
	Strongly agree	03	8.8		
Deliverables and quantity cost	Strongly disagree	01	2.9		

precision	Disagree	06	17.6	3.24	.890
	Neutral	12	32.4		
	Agree	14	38.2		
	Strongly agree	01	8.8		
Outsourcing administration and product availability	Strongly disagree	01	2.9	3.32	.978
	Disagree	06	17.6		
	Neutral	11	32.4		
	Agree	13	38.2		
	Strongly agree	03	8.8		
Outsourcing administration and time to market	Strongly disagree	00	00	3.38	.817
	Disagree	06	17.6		
	Neutral	10	29.4		
	Agree	17	50.0		
	Strongly agree	01	2.9		
Outsourcing administration and complete deliveries	Strongly disagree	00	00	3.50	.862
	Disagree	06	17.6		
	Neutral	07	20.6		
	Agree	19	55.9		
	Strongly agree	02	5.9		
Outsourcing administration and safety on transit	Strongly disagree	00	00	3.50	.862
	Disagree	05	14.7		
	Neutral	10	29.4		
	Agree	16	47.1		
	Strongly agree	03	8.8		
Outsourcing administration and shipment transit time	Strongly disagree	01	2.9	3.56	.960
	Disagree	04	11.8		
	Neutral	08	23.5		
	Agree	17	50.0		
	Strongly agree	04	11.8		

Source: SPSS Primary Data

The results from the study as illustrated in Table XV above show that on the whole, over 50% of the respondents agreed that freight forwarding outsourcing administration has enabled Mukwano Industries reduce legal costs, information costs, idle time costs, overheads and rental costs, finance costs, procurement process time, time to market, shipment transit time, increased service quality, cost and precision expectations, product availability, complete delivery of orders, increased safety of orders in transit.

The results of the study indicate that all twelve constructs under outsourcing administration registered a mean of 3.24 and above, indicating that freight forwarding outsourcing

administration has had a positive supply chain influence on efficiency in Mukwano Industries Ltd in terms of reducing legal costs, information costs, overheads and rental costs, finance costs, idle time costs as a result of operational disruptions during transition, procurement process time, shipment transit time, time to market, increased delivery completion of orders, shipment/order safety in transit, product availability and attainment of the organization's cost, quality and service expectations.

4.4.2 Inferential Results

The study included the use of inferential measures to enable the researcher analyze the relationship between the variables. The researcher used Pearson's coefficient of determination/regression and Pearson's correlation coefficient tools in SPSS to measure the relationship between the variables, and whether the independent variable (freight forwarding outsourcing) has an influence on the dependent variable (supply chain efficiency).

Correlation Results

Objective One: The Influence of freight forwarding outsourcing decision-making on supply chain efficiency

To assess whether outsourcing decision making had an influence on supply chain efficiency, the two variables were related using Pearson's correlation coefficient index as illustrated in table XV below.

Table XVI: Pearson's correlation coefficient index between freight forwarding outsourcing decision making and supply chain efficiency.

		Efficiency	Decision-Making
Efficiency	Pearson correlation	1	0.075
	Sig. (2-tailed)		.674
	N	34	34
Decision-Making	Pearson correlation	0.075	1
	Sig. (2-tailed)	.674	
	N	34	34

Source: SPSS Primary Data.

Table XVI above shows a Pearson's correlation coefficient index between supply chain efficiency and freight forwarding outsourcing decision-making r = 0.075, sig = .674 greater than 0.05. This suggests an insignificant relationship between freight forwarding outsourcing decision making and supply efficiency in Mukwano industries, as it implies that the two variables are not in any way related. This result indicates that freight forwarding outsourcing decision-making has no impact on supply chain efficiency in Mukwano Industries Ltd.

Objective Two: The Influence of freight forwarding outsourcing planning on supply chain efficiency

To examine whether freight forwarding outsourcing planning had an influence on supply chain efficiency, the researcher related the two variables using Pearson's correlation coefficient index as illustrated in Table XVII below.

Table XVII: Pearson's correlation coefficient index between freight forwarding outsourcing planning and supply chain efficiency.

		Efficiency	Planning
Efficiency	Pearson correlation	1	.731**
	Sig. 2-tailed		.000
	N	34	34
Planning	Pearson correlation	.731**	1
	Sig. 2-tailed	.000	
	N	34	34

**Correlation is significant at 0.01 level 2-tailed

Source: SPSS Primary Data.

Table XVII above shows Pearson's correlation coefficient index between freight forwarding outsourcing planning and supply chain efficiency r = .731**, Sig = .000 less than 0.01 implying that there was a highly positive significant relationship between freight forwarding outsourcing planning and supply chain efficiency in Mukwano Industries at the one percent level 2-tailed. This further implies that more effective and streamlined the outsourcing planning, the more supply chain efficiency is realized, and the reverse is true.

Objective Three: The influence of freight forwarding outsourcing administration on supply chain efficiency

In order to analyse whether freight forwarding outsourcing administration has an influence on supply chain efficiency, the two variables were subjected to Pearson's correlation coefficient analysis in SPSS. The results are as illustrated in Table XVIII below.

Table XVIII: Pearson's correlation coefficient index between freight forwarding outsourcing administration and supply chain efficiency.

		Efficiency	Administration
Efficiency	Pearson correlation	1	.822**
	Sig (2-tailed)		.000
	N	34	34
Administration	Pearson correlation	.822**	1
	Sig (2-tailed)	.000	
	N	34	34

**Correlation is significant at 0.01 level 2-tailed

Source: SPSS Primary Data

Table XVIII above shows the Pearson correlation coefficient index between freight forwarding outsourcing administration and supply chain efficiency (r = .822**, Sig = .000 less than 0.01), suggesting a highly positive significant relationship between freight forwarding outsourcing administration and supply chain efficiency in Mukwano Industries Ltd. This further signifies that a more streamlined administration of the freight forwarding outsourcing functions results in greater supply chain efficiency, and the reverse is true.

Regression Results

The data from the study was subjected to Pearson's coefficient of determination or regression tool in SPSS in order to analyse the extent to which freight forwarding outsourcing influences supply chain efficiency. This tool predicts the influence of one independent variable on several dependent variables, and plots a model (line of goodness of fit). The results from multiple regression analysis are illustrated in Table XIXa below.

Table XIXa: Regression R–Square and Adjusted R-Square statistic between freight forwarding outsourcing and supply chain efficiency.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.830[a]	.689	.647	.21368

a. Predictors: (Constant), Admin, Decision, Importance, Planning

Source: SPSS Primary Data.

Table XIXa above indicates that the independent variable has an $r^2 = 0.689 > 0.50$, implying that 68.9% of the dependent variable can be explained by a variance in the independent variables. The adjusted $r^2 = 0.647 > 0.50$, which is a more accurate measure, as illustrated in Table XIXa above, implies that the independent variables accounts for 64.7% of the variance in the dependent variable. Since the adjusted r-square statistic is greater than 0.50, there is a significantly high level of variance in the dependent variable explained by a variance in one, some or all the independent variables. Other factors outside this study contribute to 35.3% of the variance in the dependent variable.

In order to determine the significance of relationship between the independent variable and the dependent variable, the multiple regression analysis proceeded by included the use of the analysis of variance (ANOVA) statistic, whose results are illustrated in Table XIXb below.

Table XIXb: Analysis of Variance to test level of significance of relationship between freight forwarding outsourcing and supply chain efficiency.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.938	4	.735	16.088	.000[b]
	Residual	1.324	29	.046		
	Total	4.262	33			

a. Dependent Variable: Efficiency

b. Predictors: (Constant), Admin, Decision, Importance, Planning

Source: SPSS Primary Data

Table XIXb above shows that the significance level of relationship is recorded as (Sig. = 0.00 < 0.01), indicating that the independent variable (freight forwarding outsourcing) has a very statistically significant relationship with the dependent variable (supply chain efficiency), since the significance level is less than 0.01.

In order to examine which of the independent variable constructs (decision-making, planning and administration) has a stronger influence on the dependent variable (supply chain efficiency), the researcher proceeded to analyse the standardized and un-standardized coefficients from the SPSS output to determine the Beta (β) weighting value of each independent variable. The Beta values help to predict the standard deviation units that will change in the dependent variable (supply chain efficiency), if one standard deviation unit is changed in the independent variables (freight forwarding outsourcing).

Table XIXc below illustrates the results of the coefficients of determination.

Table XIXc: Beta Coefficient regression analysis between Outsourcing and Supply Chain Efficiency in Mukwano Industries.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.338	.623		3.753	.001
	Decision	-.083	.085	-.118	-.969	.340
	Planning	-.063	.130	-.127	-.486	.631
	Admin	.478	.130	.944	3.675	.001

a. Dependent Variable: Efficiency

Source: SPSS Primary Data.

Outsourcing decision-making and supply chain efficiency.

The results as illustrated in Tables XIXa, XIXb and XIXc above, indicate that the independent variable- outsourcing decision-making has a negative effect on the dependent variable-supply chain efficiency ($\beta = -0.118$), but is not statistically significant (at 0.340, $\rho > 0.05$), implying that for every standard deviation unit of change introduced in outsourcing decision, there is a 11.8% reduction in supply chain efficiency in Mukwano Industries Ltd.

These results indicate that freight forwarding outsourcing decision-making has a statistically weak negative influence on supply chain efficiency in relation to other independent variables. However, the likelihood of this result happening by mere chance alone is in more than 5% of the cases, standing at ($\rho = 0.340$) 34% probability , implying that other factors could be significantly influencing supply chain efficiency, other than outsourcing decision-making.

Outsourcing planning and supply chain efficiency

Tables XIXa, XIXb and XIXc demonstrate that the independent variable- outsourcing planning has a statistically negative effect on the dependent variable- supply chain efficiency ($\beta = -0.127$), but is not statistically significant (at 0.631, $\rho > 0.05$), indicating that for every standard deviation unit of change introduced in outsourcing planning, there is a 12.7% reduction in supply chain efficiency in Mukwano Industries Ltd.

The above results show that freight forwarding outsourcing planning has a statistically weak negative influence on supply chain efficiency in relation to other independent variables. However, the likelihood of this to statistically happen by chance is in more than 5% of the cases, standing at ($\rho = 0.631$) 63.1% probability, implying that other factors, other than outsourcing planning and outsourcing decision-making could be greatly influencing supply chain efficiency in Mukwano Industries Ltd.

Outsourcing administration and supply chain efficiency

Results from Tables XIXa, XIXb and XIXc above indicated that the independent variable- outsourcing administration- had a significantly strong positive effect on supply chain efficiency ($\beta = 0.944$) and was statistically significant (at 0.001, $\rho < 0.05$), indicating that for every standard deviation unit introduced in freight forwarding outsourcing administration, there is a 94.4% increase in supply chain efficiency in Mukwano Industries Ltd.

The above results show that freight forwarding outsourcing administration had a strong positive influence on supply chain efficiency in Mukwano Industries Ltd in relation to other independent variables, and the likelihood of this to statistically happen by chance is in less than 5% of the cases, standing at ($\rho = 0.001$) 1% probability, implying that freight forwarding outsourcing administration has strongly increased supply chain efficiency in Mukwano Industries Ltd.

In conclusion therefore, the results from the interview guide indicate that there is a statistically significant relationship between freight forwarding outsourcing and supply chain efficiency, with technical factors taking the dominant position in importance in the outsourcing decision-making, and outsourcing administration having the most significant influence on supply chain efficiency in Mukwano Industries Ltd.

CHAPTER FIVE

DISCUSSION, SUMMARY, CONCLUSION, RECOMMENDATIONS AND SUGGESTIONS

5.1 Introduction

The purpose of the study was to examine the influence of freight forwarding outsourcing on supply chain efficiency in Uganda, with Mukwano Industries Ltd as a case study entity. The preceding chapters highlighted the theoretical and conceptual framework of the study, the review of literature supporting the study, the research methods that were employed in data collection and analysis and the findings of the study and their interpretation.

This chapter focuses on the discussion of the findings of the study and their relation to the research objectives. The next section provides a summary of the ideas developed from the findings of the study. The conclusion of this study follows, with final remarks on the findings and their significance on the research topic. The next sections present recommendations derived from the findings of the study as well as the suggested areas of further research.

5.2 Discussion

In this section, the discussion of the findings obtained from the study is presented. The study used a self-administered questionnaire and an interview guide. These two research instruments provided valuable information upon which the findings of the study are based and discussed in this section. The discussion of the study findings is done objective by objective.

5.2.1 Objective One

The first objective of the study was to assess the extent to which freight forwarding outsourcing decision-making influences supply chain efficiency in Mukwano Industries Ltd. The findings of the study revealed that there is a negatively insignificant relationship between outsourcing decision-making and supply chain efficiency. These findings agreed with the opening remarks in

the statement of the problem in Chapter one that *"outsourcing of freight forwarding services....in Mukwano Industries does not seem to be delivering efficiency gains"*.

From the inferential findings, freight forwarding outsourcing decision-making at the selection level (Yes and No values) registered strong average index values, indicating that all factors in the decision-making were considered by management of Mukwano Industries Ltd when outsourcing the freight forwarding function.

However, the level of importance of these outsourcing decision factors is varied, as indicated from the results, with diminishing importance values being registered in two technical factors- the human resource factor and the Health, Safety & Environment factor. The diminishing values in these two factors are an indication that there could be a human resource problem from the supply side, which could have negatively influenced supply chain efficiency, accounting for the negative regression coefficient (β), much as the impact is statistically insignificant.

Figures from descriptive results indicate that the financial factors registered the highest mean values at both the selection level (Yes & No) and in the level of importance. However, the inferential results indicate that the same factors registered an insignificant correlation coefficient and the lowest coefficient of Beta, implying that the financial factors in outsourcing decision-making have no influence on supply chain efficiency in Mukwano Industries Ltd. This finding resonates with Snapp (2012), who contends that outsourcing initiatives that are inclined on the financial aspects of the outsourcing decision, without putting technical and strategic factors under consideration, do not succeed.

Descriptive statistical and qualitative results on the strategic factors indicate that much as the two strategic factors related to cultural fit and strategic fit (compatibility factors in Table XIIIc) registered average indices above 3.0 on the 5-point Likert scale; these factors have no influence on supply chain efficiency in Mukwano Industries Ltd. Results from the interview reveal that the there is lack of synergy and compatibility between Mukwano Industries Ltd and the contracted service provider, with both organizations serving conflicting objectives, which has

resulted in poor service delivery. This phenomenon on the impact of outsourcing is supported by Sunil & Meindl (2007) in the following words:

> With the chain broken into many owners, each with its own policies and interests, the chain is more difficult to coordinate. Potentially, this problem can cause each stage of the supply chain to work only towards its own objectives, rather than the whole chain's, resulting in the reduction of overall supply chain profitability. (Sunil & Meindl 2007, p.63).

Therefore, freight forwarding outsourcing decision-making has had an insignificant influence on supply chain efficiency in Mukwano Industries Ltd.

5.2.2 Objective Two

The second objective of the study was to analyse the extent to which freight forwarding outsourcing planning influences supply chain efficiency in Mukwano Industries Ltd. The findings of the study revealed that freight forwarding outsourcing planning has a highly significant positive influence on supply chain efficiency in Mukwano Industries. These findings indicate that outsourcing planning positively influences supply chain efficiency.

From the descriptive and inferential results from the study, freight forwarding outsourcing planning registered significantly high average indices and a positively significant correlation coefficient against supply chain efficiency, in support of Choi (2008) who contends that outsourcing planning's role in setting up a framework for all support functions in the outsourcing initiative drives supply chain efficiency. Power et al (2008) advanced that outsourcing initiatives can be fruitful if they are properly planned, supporting the above results of the study.

In consideration of the above, therefore, freight forwarding outsourcing planning has had a major positive influence on supply chain efficiency in Mukwano Industries Ltd.

5.2.3 Objective Three

The third objective of the study was to examine the extent to which freight forwarding outsourcing administration influences supply chain efficiency in Mukwano Industries Ltd. The findings of the study revealed that there is a highly positive significant relationship between freight forwarding outsourcing administration and supply chain efficiency.

The results from the study show that outsourcing administration registered a significantly high average index, a significantly positive correlation coefficient and a significantly positive regression coefficient, implying that freight forwarding outsourcing administration has a significantly(dominant) positive influence on supply chain efficiency in relation to decision-making and planning.

These findings were also supported by Power et al (2006) who contend that the predominant reason for the failure of the US Federal Bureau of Investigations (FBI) outsourcing deal in 2004 was the "lack of effective management oversight of the project and external contractor", indicating that if this function was streamlined through effective administrative measures, the FBI would not have scrapped the project after spending US$170 million.

In a nutshell, therefore, freight forwarding outsourcing administration has significantly influenced supply chain efficiency in Mukwano Industries.

5.3 Summary

The results of the study indicate that freight forwarding outsourcing decision-making has a statistically insignificant negative influence on supply chain efficiency in Mukwano Industries Ltd, although outsourcing planning and outsourcing administration all have a positive influence on supply chain efficiency, with outsourcing administration being the dominant independent variable, having the highest positive influence on supply chain efficiency.

The study revealed that after outsourcing the freight forwarding function, Mukwano Industries Ltd is paying more than it used to pay for the same service, and is yet receiving a lower level of service than it was getting when the freight forwarding function was performed in-house.

The study also revealed that freight forwarding outsourcing has encountered administrative and technical challenges that have greatly impacted supply chain efficiency in Mukwano Industries; the organization is thinking of back-sourcing the function to mitigate the risks.

The descriptive results indicated that the human resource factor from the supplier's side was not considered as important in freight forwarding outsourcing decision-making, and may have had a significantly negative influence on supply chain efficiency.

The non-compliance of the freight forwarder with regulatory bodies, as highlighted in the results from the interviews, has indirectly affected Mukwano Industries Ltd in terms of delays in release of cargo, storage and demurrage charges and stock-outs.

According to the results from the interviews, there is no cultural and strategic cohesion or compatibility between Mukwano Industries Ltd and the freight forwarding service provider, evidenced by the lack of understanding of the business needs of Mukwano Industries Ltd, disparity in working culture, which has affected Mukwano Industries in terms of increased costs and lower service levels.

5.4 Conclusion

From the study findings and discussion, freight forwarding outsourcing decision-making has a negative, but statistically insignificant influence on supply chain efficiency.

Furthermore, freight forwarding outsourcing planning has a negative, but statistically insignificant influence on supply chain efficiency in Mukwano Industries Ltd.

In addition, freight forwarding outsourcing administration has a highly positive and statistically significant influence on supply chain efficiency in Mukwano Industries Ltd. It therefore signifies that proper management and administration of the freight forwarding outsourcing project results in the attainment of efficiency in the organization's supply chain; the reverse is also true.

On the whole, greater emphasis and resources should be put on outsourcing administration for the organization to realize higher supply chain efficiency.

5.5 Recommendations

In the event that manufacturing firms in Uganda, like Mukwano Industries Ltd, decides to sign a 5-year outsourcing deal with a freight forwarder, the researcher recommends that the company undertakes a thorough audit of the service provider to ensure that the organization has the necessary skilled human resource to handle the freight forwarding function, and understands their business needs. In an effort to close the human resource gap and create synergy, the researcher recommends that Manufacturing supply chains institute cross-posting of staff, on-site training of service provider's staff and knowledge transfer.

The researcher recommends that, to bridge the divide between the service provider and manufacturing firms in Uganda seeking to outsource their freight forwarding functions like Mukwano Industries Ltd, the organizations should encourage the service provider to synchronize their working hours with those of the outsourcing entity by providing an extra bonus for overnight and off-duty deliveries, for example. A practice of aggregate planning with the service provider should be encouraged, and information transfer and knowledge sharing would go a long way in ensuring that there is synergy and compatibility.

In the event that the manufacturing supply chains like Mukwano Industries Ltd in Uganda re-think their outsourcing decision and decide to back source the freight forwarding function, a lot of caution needs to be taken to ensure that the current human resource is well trained and have the necessary skills, remuneration and job security to manage the freight forwarding function

well and to avoid loss of morale usually associated with back sourcing. Proper planning needs to be done to ensure that the transition is as seamless and painless as possible.

In conclusion, the above study has revealed that, contrary to popular opinion in the media and academia, outsourcing does not necessarily enhance cost efficiency; it has to be carefully decided, planned for and effectively administered with a strategic dimension to foster mutual benefit and synergy.

5.6 Suggestions/Further Research Areas

An interesting area of research is the outsourcing of the supply chain management function and its applicability in the Ugandan context. This practice has been advanced in Vaisiliauskas & Jakubauskas (2007), who placed the supply chain manager at the 5PL level in the logistics pyramid, just above the 4PL freight integrator.

Another area of further research is on the growing trend of mergers and acquisitions in the freight forwarding sector, and how this has shaped the freight logistics landscape in Uganda.

Further study can also be carried out on the influence of the intervening variables on supply chain efficiency, as these have been pointed out, but not measured in the study.

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APPENDIX I

LETTER OF REQUEST FOR QUESTIONNAIRE SESSION.

KYAMBOGO UNIVERSITY SCHOOL OF MANAGEMENT AND ENTREPRENUERSHIP

Dear Respondent,

This questionnaire is intended to facilitate the study on **"Freight Forwarding Outsourcing and Supply Chain Efficiency in Uganda; A Case of Mukwano Industries Ltd".** This study is for academic purposes and is carried out as a partial requirement for the award of the Masters of Science Degree in Supply Chain Management of Kyambogo University.

This letter is to request you to spare some few minutes to respond to this questionnaire. Your responses are very important for this study and shall be treated with utmost confidentiality and anonymity.

I thank you very much for your valuable time.

Yours faithfully

Grace Makumbi

APPENDIX II

QUESTIONNAIRE.

SECTION A: BACKGROUND INFORMATION

1. What is your position in Mukwano Industries?

Director	○
Operations Department	○
Procurement Department	○
Stores Department	○
Finance and Accounts	○
Sales and Marketing	○

2. How do you rank your position within Mukwano Industries?

Directorate Level	○
Top Management Level	○
Middle Management Level	○
Lower Management Level	○
Non-managerial staff.	○

3. How long have you worked in this position?

0-3 Years	4-8 Years	9-12 Years	13-15 Years	Above 15 Years
○	○	○	○	○

4. How long have you been employed by Mukwano Industries?

0-3 Years	4-8 Years	9-12 Years	13-15 Years	Above 15 Years
○	○	○	○	○

5. What is your highest level of education?

Certificate	Diploma	Degree	Postgraduate	Other(Please specify)
○	○	○	○	

6. What is your age group?

18 - 24 years	25 – 30 years	31 – 35 years	36 – 40 years	Above 40 years
○	○	○	○	○

7. Gender

Male ☐ **Female** ☐

c)		Strategic Factors	YES	NO
	i)	The ability of the freight forwarder to quickly adapt to the changing needs of Mukwano Industries	○	○
	ii)	The evidence of investment of the freight forwarder in development of new ideas and logistics solutions	○	○
	iii)	The need of Mukwano Industries to focus on the core business of production and marketing of its products	○	○
	iv)	The compatibility of the freight forwarder's work-related norms and culture with that of Mukwano Industries	○	○

2. How would you rank the following factors according to their level of importance in the decision to outsource the freight forwarding function at Mukwano Industries?

Please indicate the appropriate response to the above question with a tick in the corresponding check-box.

a)		Financial Factors	Not Important	Fairly Important	Not Sure	Important	Very Important
	i)	The freight rates offered by the freight forwarder	○	○	○	○	○
	ii)	The credit terms offered by the freight forwarder	○	○	○	○	○
	iii)	The demurrage/storage free-time offered by the freight forwarder	○	○	○	○	○
	iv)	The demurrage, storage and handling tariff of the freight forwarder	○	○	○	○	○

b)		Technical Factors	Not Important	Fairly Important	Not Sure	Important	Very Important
	i)	Service Quality Assurance, eg. ISO, C-TPAT, FIATA, certification of the freight forwarder.	○	○	○	○	○
	ii)	The ability of the freight forwarder to manage risks	○	○	○	○	○
	iii)	The state of the art technologies possessed by the freight forwarder	○	○	○	○	○
	iv)	The ownership or possession of facilities for handling cargo (e.g trucks, Yards, Containers, Warehouses, e.t.c)	○	○	○	○	○
	v)	The geographical coverage of the freight forwarders network of offices.	○	○	○	○	○
	vi)	The professional experience of the freight forwarder in handling similar projects.	○	○	○	○	○
	vii)	The statutory compliance of the freight forwarder	○	○	○	○	○
	viii)	The Human Resource composition of the freight forwarder	○	○	○	○	○
	ix)	Adherence of the freight forwarder to Health, Safety and Environment (H.S & E) issues.	○	○	○	○	○
	x)	Accreditation of the freight forwarder to professional bodies(e.g UFFA, UCIFA, PPDA, KIFWA, USC, e.t.c)	○	○	○	○	○

c)		Strategic Factors	Not Important	Fairly Important	Not Sure	Important	Very Important
	i)	The ability of the freight forwarder to quickly adapt to the changing business needs of Mukwano Industries Ltd	○	○	○	○	○
	ii)	The evidence of investment of the freight forwarder in the development of new ideas and logistics solutions	○	○	○	○	○
	iii)	The need of Mukwano Industries to focus on the core business of production and marketing of its products.	○	○	○	○	○
	iv)	The compatibility of the freight forwarders work-related norms and culture with that of Mukwano Industries	○	○	○	○	○
	v)	The compatibility of the freight forwarders vision and mission to the outsourcing strategy goals of Mukwano Industries	○	○	○	○	○

SECTION C: OUTSOURCING IMPLEMENTATION

This section focuses on the extent to which the planning, management (administration) and the monitoring and evaluation functions of the freight forwarding outsourcing project have influenced supply chain efficiency (In terms of Cost, Service Quality and Delivery Precision) in Mukwano Industries Ltd.

In this section, please respond by ticking the appropriate response in the corresponding check-box alongside the statements.

a)	• **Freight Forwarding Outsourcing Planning and Supply Chain Efficiency.** **The Influence of freight Forwarding Outsourcing Planning on Cost in Mukwano Industries.**	**Strongly Disagree**	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
1	Proper planning of the freight forwarding outsourcing activities has enabled Mukwano Industries obtain lower freight rate offers.					
2	Planning of the freight forwarding outsourcing activities has resulted in favorable credit terms to Mukwano Industries.					
3	Proper planning of the freight forwarding outsourcing activities has enabled Mukwano Industries reduce demurrage and storage costs					
4	Proper planning of the freight forwarding outsourcing activities has enabled Mukwano Industries reduce the cost of holding inventory.					
	The Influence of freight Forwarding Outsourcing Planning on Quality of Service in Mukwano Industries.					
5	Freight forwarding outsourcing planning has increased product availability to end consumers at Mukwano Industries.					
6	The planning process of freight forwarding outsourcing activities has helped reduce response time to shipment orders.					
7	The planning of freight forwarding outsourcing activities has helped reduce the time products take to reach the consumer.					
	The Influence of freight Forwarding Outsourcing Planning on Delivery Precision in Mukwano Industries.					

8	Planning of freight forwarding outsourcing activities has enabled Mukwano Industries improve shipment transit time.					
9	The planning of freight forwarding outsourcing activities has enabled Mukwano Industries ensure full deliveries as ordered.					
10	The planning of freight forwarding outsourcing activities has enabled Mukwano Industries improve shipment safety in transit.					

b)	• **Freight Forwarding Outsourcing Administration and Supply Chain Efficiency.** **The Influence of freight forwarding outsourcing administration on Supply chain costs in Mukwano Industries.**	**Strongly Disagree**	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
1	Setting up of clear contractual obligations of the freight forwarding outsourcing project has enabled Mukwano Industries reduce or eliminate commercial and legal disputes.					
2	Establishment of clear communication lines in the freight forwarding outsourcing relationship has resulted in smooth and faster flow of information between the service providers and Mukwano Industries.					
3	Effective management of the transition of freight forwarding functions from Mukwano Industries to the service provider has enabled Mukwano Industries reduce operational disruptions.					
4	The transfer of freight forwarding functions from Mukwano Industries to the service provider has enabled Mukwano Industries reduce rental and overhead costs on some fixed assets and manpower.					
5	Effective management of risks in the freight forwarding outsourcing activities has enabled Mukwano reduce its finance costs.					
	The Influence of freight forwarding outsourcing administration on Quality of Service in Mukwano Industries.					
6	Clear definition of roles and process ownership of the freight forwarding outsourcing processes has helped reduce the procurement process time at Mukwano Industries.					
7	Clear definition of project deliverables and measurement metrics of the Freight forwarding activities has enabled Mukwano Industries attain or exceed their cost,					

	quality and service expectations.					
8	Establishment of clear communication lines in the freight forwarding outsourcing relationship has helped increase materials and product availability at Mukwano Industries.					
9	Establishment of clear communication lines in the freight forwarding outsourcing relationship has helped in reducing the time products reach the market.					
	The Influence of freight forwarding outsourcing administration on Delivery Precision at Mukwano Industries.					
10	Effective management of risks in the freight forwarding outsourcing activities has resulted in an increase in complete delivery of orders at Mukwano Industries.					
11	Effective management of risks in the freight forwarding outsourcing activities has helped reduce the number of incidents at Mukwano Industries.					
12	Service Provider's understanding of Mukwano Industry's business needs in the freight forwarding outsourcing relationship has resulted in reduction in transit time of materials and products at Mukwano.					

SECTION D: SUPPLY CHAIN EFFICIENCY

This section focuses on the extent to which supply chain efficiency in terms of Cost, Service Quality and Delivery Precision have been attained at Mukwano Industries Ltd as a result of outsourcing the freight forwarding function.

In this section, please respond by ticking the appropriate response in the corresponding check-box alongside the statements.

a)	• **Cost efficiency** **The extent to which Cost efficiency has been influenced by Freight forwarding outsourcing at Mukwano Industries.**	**Strongly Disagree**	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
1	Outsourcing of freight forwarding has helped reduce the overall cost of freight of imports and exports at Mukwano Industries					
2	Outsourcing of freight forwarding at Mukwano Industries has helped reduce capital costs as a result of credit offerings.					
3	Outsourcing of freight forwarding has helped reduce the exposure to demurrage and storage costs on shipments at Mukwano Industries.					
4	Outsourcing of the freight forwarding activities has enabled Mukwano Industries reduce the cost of holding inventory.					
5	Outsourcing of freight forwarding functions at Mukwano Industries has helped reduce legal costs.					
6	Freight forwarding outsourcing at Mukwano Industries has enabled the organization reduce on information costs.					
7	The process of freight forwarding outsourcing has helped reduce cost of idle-time and overhead costs at Mukwano Industries					
8	Freight forwarding outsourcing at Mukwano Industries has helped reduce the cost of finance in freight forwarding activities.					

b)	• **Quality of Service** **The extent to which quality of service has been influenced by Freight Forwarding Outsourcing at Mukwano Industries.**	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	Freight forwarding outsourcing at Mukwano Industries has made products unavailable to customers.					
2	Freight forwarding outsourcing at Mukwano Industries has resulted into increased order response time.					
3	Outsourcing of the freight forwarding functions by Mukwano Industries has resulted in increased time to market of final products.					
4	Outsourcing of the freight forwarding functions by Mukwano Industries has lengthened the procurement process time.					

a)	• **Delivery Precision** **The extent to which Cost efficiency has been influenced by Freight forwarding outsourcing at Mukwano Industries.**	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	Outsourcing of freight forwarding at Mukwano Industries has helped reduce the overall transit time of orders to ensure timely delivery.					
2	Outsourcing of freight forwarding at Mukwano Industries has helped increase the number of complete order deliveries.					
3	Outsourcing of freight forwarding at Mukwano Industries has helped increase safety of orders while in transit and upon delivery.					

Thank You.

APPENDIX III

INTERVIEW GUIDE

1. Introduction Questions.

i) What is Mukwano Industries and What do they do?
ii) What role does Freight forwarding play in Mukwano Industry's business?
iii) How does Mukwano access freight forwarding Services?

2. Freight Forwarding Outsourcing Decision

i) What were the reasons for Mukwano Industries to outsource the freight forwarding function?
ii) In your opinion, what do you think was the most important reason among the ones you have mentioned above?
iii) What qualities were you looking for in your decision to outsource freight forwarding?
iv) In your opinion, which quality do you think was most important in this decision?
v) In your opinion, would there be anything else you would have considered, apart from the above, to select the right candidate for the job?
vi) At what level does Mukwano Industries view its relationship with the third party logistics provider(s)?
vii) In your opinion, what do you think of such a relationship?

3. Freight Forwarding Outsourcing Implementation

i) During the implementation of the outsourcing project, what were the phases Mukwano Industries underwent to ensure success of the project?
ii) In your opinion, in what ways did each of the phases serve its purpose?
iii) How does Mukwano Industries know that they have achieved their objectives as anticipated at the signing of the outsourcing deal?
iv) In your opinion, under the circumstances, would you have expected better results?

4. Challenges.

i) What are the challenges Mukwano Industries faced before the company decided to outsource its freight forwarding?
ii) How did Mukwano Industries deal with these challenges?
iii) What challenges does Mukwano Industries face while implementing the freight forwarding outsourcing project?
iv) How has Mukwano dealt with these challenges now? How about in the future?

Thank You for your time.