

**SUPPLY CHAIN MANAGEMENT PRACTICES AND PROFITABILITY OF
KENOLKOBIL LIMITED**

BY

SIMON MIYARE

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DECLARATION

This research project is my original work and has not been presented for any academic award in any University.

Signature.....Date.....

Simon Miyare

D61/ 80073/2012

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

Signature.....Date.....

Mrs. Zipporah Kiruthu

Lecturer, School of Business,

University of Nairobi

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DEDICATION

This paper is dedicated to my family and all those who have supported me through the academic journey.

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LIST OF ABBREVIATIONS

ANOVA	:	Analysis of Variance
CEO	:	Chief Executive Officer
ERC	:	Energy regulatory commission
ROA	:	Return on Assets
SPSS	:	Statistical Packages for Social Sciences

ABSTRACT

The ultimate goal of firms is profit maximization, regardless of what service or product they offer or the nature of their supply chain practices. Supply chain management uses various tools and strategies to try and improve if not maximize profitability by reducing production, finance and supply costs. Where Supply chain processes are not optimized, the results will be less than optimal results posing an increasingly significant risk to supply chains and business performance. The oil industry in Kenya has become very dynamic, competitive and earns very constrained margins. For the oil marketers to make profits, they need to focus on supply chain efficiency and reduce supply, logistics and financing costs which mainly can be reduced by having smooth supply chain. This study sought to determine the relationship between supply chain management practices and Kenolkobil's profitability.

The study used descriptive research design using mainly primary data collected using questionnaires in addition to secondary data obtained from financial statements and company publications. The study population was all the employees of KenolKobil ltd and all the retail stations run by KenolKobil. Stratified random sampling was used to sample the retail stations to be involved in the study. Before processing the responses, the completed questionnaires were edited for completeness and consistency.

The study found that Kenolkobil's supply chain management practices were strongly related to profitability with coefficient of correlation of 0.8403 where adoption of superior practices led to increased profitability. The analytical model developed by the study containing profitability (dependent variable), supply chain management practices; human resources capacity and technology adopted could explain 94.5% of

changes in profitability. The relationship was positive and strong with coefficient of correlation of 0.9721. The study concludes that supply chain management practices are strongly related to profitability where adoption of superior practices leads to increased profitability. The study recommended that the management to continuously improve their supply chain management practices, benchmark the same and ensure that the practices remain relevant. By maximizing the benefits of efficient supply chain, the company can save on financing costs in addition to achieving competitive advantage over the competitors in addition to the company in recruiting and retaining qualified staff.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Supply chain management is a crucial process for many companies, and many companies strive to have the most optimized supply chain since it translates to lower costs for the company (Verhoef, 2003). Supply chain management is strategic in orientation and recognizes that the competitive strength of a firm is not only determined by its products but also by the operations and activities that place the products into customers' hands and provide supporting services. Efficient and effective supply chain management enhances firm performance and adds value by increasing asset utilization to gain competitive market advantage (Rick, 2004). The responsiveness and efficiency of a company's supply chain improves firm's ability to successfully compete in the global marketplace (Nikos, 2007).

In response to the pressure of globalization, increasingly competitive markets, and volatile market dynamics, many organizations are actively seeking ways to optimize their supply chains and increase their profitability (Hill, 2007). This is achieved by adopting supply chain management practices which ensure the optimization of supply chain as a means to profitably delivering supply to customers and to meet or even exceed customer expectations. Substantial research has been devoted to such topics as designing, managing, and optimizing service delivery systems, with a view to raising service quality (Soteriou and Zenios, 1999).

Supply management has been said to lead to reduced costs and increase customer satisfaction and hence have long-term financial impact on the business (Nagar and Rajan 2005). Highly satisfied customers of a firm out getting products where and when they need them and are likely to purchase more frequently, in greater volume

and buy other goods and services offered by the same service provider (Gronholdt, Martense, Kristensen, 2000). Customer satisfaction has a positive impact on firm profitability due to a number of reasons. First, customer satisfaction enhances customer loyalty and influences customers' future repurchases intentions and behaviours (Verhoef, 2003). When this happens, the profitability of a firm would increase (Mittal and Kamakura 2001). Secondly, highly satisfied customers are willing to pay premium prices and are less price-sensitive. This implies customers tend to pay for the benefits they receive and be tolerant of increases in price, ultimately increasing the economic performance of the firm. Customer satisfaction generates more future sales, reduces price elasticity, and increases the reputation of the firm (Anderson, Fornell, Lehmann, 1994).

Supply chain management practice and efficiency is the number one concern for many executives in order to ensure long-term profitability and consistency. Supply chain management has proved critical to not only industrial companies, but to all organizations that create products and/or provide services. With economy expanding and global interconnectedness increase, complexity grows exponentially. Business leaders and operation managers increasingly feel the pressure to proactively manage complexity by constructing control systems that not only function in complex environments, but also adapt and evolve along with them (Edgeman, Dahlgaard, and Scherer, 1999).

Complexity and inefficiency have overtaken a vast majority of companies supply chains, particularly those of large oil marketing companies striving to be global players like KenolKobil Ltd. When ineffectively managed, the supply chain robs companies of profits, market position, growth and return on assets rendering them less competitive. In fact, those companies that have successfully mastered the

phenomenon of streamlining their supply chain complexity have reaped the benefits of healthy profits, shareholder returns, market share growth, increased revenue and return on capital investment (Rick, 2004).

1.1.1 Supply Chain Management Practices

Supply chain is the network created amongst different companies dealing with producing, handling and/or distributing a specific product. Specifically, supply chain encompasses the steps it takes to get a good or service from the supplier to the customer including planning, implementing and controlling the flow of information, materials and services from raw material and component suppliers through the manufacturing of the finished product for ultimate distribution to the end customer. It includes the systematic integration of processes for demand planning, customer relationship collaboration, order fulfilment/delivery, product/service launch, manufacturing/operations planning and control, supplier relationship collaboration, life cycle support, and reverse logistics and their associated risks. Supply chain processes employ a combination of people, systems and technology and are performed by the firm itself or in collaboration with external supply chain partners (Nikos, 2007).

Supply chain is linked to the firm value chain was used by Porter (1985). Value chain management describes the activities the organization performs and links them to the organizations competitive position. Value chain analysis describes the activities within and around an organization, and relates them to an analysis of the competitive strength of the organization. Therefore, it evaluates which value each particular activity adds to the organizations products or services. This idea was built upon the insight that an organization is more than a random compilation of machinery,

equipment, people and money. Only if these things are arranged into systems and systematic activates it will become possible to produce something for which customers are willing to pay a price (Lareau, 2003). Porter (1985) argues that the ability to deal with supply and value chain activities and to manage the linkages between these activities is a source of competitive advantage.

Supply chain management is a subset of operations management which that part of a business organization that is responsible for producing goods and/or services. It basically aims at the maximization of operating profit through the continuous operation of an excellent production and/or delivery system that offers customers the right value (Van, 2008). Companies poised to outdo the competition have adopted supply management practices aimed at increasing profitability and elimination of waste. This entails production of higher yields, reduction of waste and improvement of quality which leads to high customer satisfaction. Being efficient in terms of supply chain requires a focus on management capabilities to develop and promulgate standards, coordinate decision-making, optimize service delivery and to manage the workforce (Lareau, 2003).

The success or failure of companies' supply chain has an impact on the ability of a firm to compete with other firms locally and internationally. The ideal situation for a business organization is to achieve a match of supply and demand. Having excess supply or excess capacity is wasteful and costly; having too little means lost opportunity and possible customer dissatisfaction. Supply chain is responsible for producing products and/or delivering services, it needs the support and input from other areas of the organization. It includes many interrelated activities, such as forecasting, capacity planning, scheduling, managing inventories, assuring quality, motivating employees, deciding where to locate facilities, and more (Nikos, 2007).

1.1.2 Profitability

Profitability is the ability to make profit from all the business activities of an organization, company, firm, or an enterprise. It measures management efficiency in the use of organisational resources in adding value to the business. Profitability may be regarded as a relative term measurable in terms of profit and its relation with other elements that can directly influence the profit. Profitability is the relationship of income to some balance sheet measure which indicates the relative ability to earn income on assets. Irrespective of the fact that profitability is an important aspect of business, it may be faced with some weakness such as window dressing of the financial transactions and the use of different accounting principle (Sunday, and Solomon, 2012).

A company should earn profit to survive and grow over a long period of time. Profits are essential, but all management decision should not be profit centered at the expense of the concerns for customers, employees, suppliers or social consequences. Profit is the difference between revenues and expenses over a period of time (usually one year). Profit is the ultimate 'output' of a company, and it will have no future if it fails to make sufficient profits. The profitability ratios are calculated to measure the operating efficiency of the company (Sunday, and Solomon, 2012).

Return on Assets (ROA) expresses the net income earned by a company as a percentage of the total assets available for use by that company is the most common measure of firm's profitability. ROA suggests that companies with higher amounts of assets should be able to earn higher levels of income. ROA measures management's ability to earn a return on the firm's resources (assets). The income amount used in this computation is income before the deduction of interest expense, since interest is

the return to creditors for the resources that they provide to the firm. The resulting adjusted income amount is thereby the income before any distribution to those who provided funds to the company. ROA is computed by dividing net income plus interest expense by the company's average investment in asset during the year (Sunday, and Solomon, 2012).

1.1.3 Supply Chain Practices and Profitability

Supply chain management enables firms and management to continuously improve all areas of supply chain performance. The alignment of people, processes, supply chain, demand and technology helps the organization optimize resources, opportunities and performance (Drucker, 2000). Supply chain management practices provides for a way to foster continuous improvement and helps firms to address their today's challenges and capitalize on tomorrow's opportunities (Fleming, Coffman and Harter, 2005).

Supply chain management is necessary but not sufficient for competitive advantage since any number of supply chain management practice can be adopted and copied; as rivals imitate one another's improvements in quality, cycle times, or supplier partnerships, strategies converge and competition becomes a series of races down identical paths that no one can win (Porter, 1996). In today's challenging business environment, when the cost of breaks in the supply chain can cascade across the business, active supply chain management is an enterprise performance management tool (Duggan, 2009).

Disruption in the supply chain in terms of delivery of products to their own customers due to supply chain disruptions would have potential downstream implications for brand reputation, regulatory compliance, product safety, and other risks. When a needed supply is not received when it is expected, or the quantity is less than expected

or the quality is not up to standard, the consequences are not only a loss of sales and profits. Supply chain disruptions can also have a number of other adverse consequences all of which negatively affects profitability including loss of customers, damage to image, reputation or brand, reduced share price, higher cost of capital, inability to maintain customer services, failure to meet legal or regulatory requirements, delays in projects, products or other, strategic growth plans and lower employee morale (Nikos, 2007).

One of the goals of Supply chain management is to achieve profit maximization. In order to achieve this, there are various factors that can be utilised. A few of these strategies are production mix efficiency, product route efficiency, and resource commitment (Jaggi, 1992). Giuntini (1996) describes a situation in which a management process that is not optimised will result in less than optimal results. Such results lead to solid and hazardous waste, as well as increasing operational costs. This forward supply chain issue creates a desire and need for a well-organised and robust reverse logistics system. Supply chain disruptions pose an increasingly significant risk to supply chains and firm's profitability.

1.1.4 KenolKobil Limited

KenolKobil ltd is the second largest oil marketer in Kenya with presence in East and Central Africa. It is an indigenous oil marketing conglomerates with an expansive investment portfolio in oil marketing. The Group has subsidiaries in nine African countries outside Kenya (Head Office) including; Uganda, Tanzania, Rwanda, Zambia, Ethiopia, Burundi, Zimbabwe, Mozambique and the Democratic Republic of Congo. The company trades in both crude and refined petroleum products which

include motor fuels, industrial oils, LPG, aviation fuels, lubricants and various other specialist oils (KenolKobil, 2014).

Kenolkobil is a public listed company and in the financial year 2012, it made the biggest loss of Ksh. 6 billion (Kenolkobil, 2012). In July 2013, the company management changed where a new CEO was appointed. In attempt to take the company back to profitability, the company's management since 2013 have been taking measures to streamline the operations of the company (KenolKobil, 2013).

The company operates in the energy sector in Kenya which is highly dynamic and competitive with both local and international players. Currently there are three international oil companies and several local oil companies. The international oil companies in Kenya include; Shell Kenya Limited, Oil Libya Kenya Limited, Total Kenya Limited, while the local companies include; Kenol Kobil, Hashi Energy, National Oil Corporation of Kenya and Galana Oil. There has been an influx of smaller; local oil companies in the market that, though lacking nation-wide presence nonetheless, make the industry highly competitive. Oil companies in Kenya are presently involved in oil marketing only, since Kenya has not yet commenced drilling oil. The sector is regulated by the energy regulatory commission (ERC). Petroleum fuels constitute the main source of commercial energy in Kenya (Energy Regulatory Commission, 2012).

1.2 Research Problem

Profitability is a prime concern in all organizations. The ultimate goal of firms is profit maximization, regardless of what service or product they offer or the nature of their Supply chain practices (Rothschild, 2006). Supply chain management uses various tools and strategies to try and improve if not maximize profitability by

reducing production, finance and supply costs. Supply chain management deals with the logistics of how the products are acquired to how or when the products get to the customers and how well the supply chain function is performed. One of the goals of supply chain management is to achieve profit maximization (Jaggi, 1992). In situation where Supply chain process is not optimised, the results will be less than optimal results posing an increasingly significant risk to supply chains and business performance (Giuntini, 1996). Kenol Kobil Group adopted a strategy to ensure continuous performance improvement from 2013 under the management plan to turn round the company from huge losses made in 2012 to profitability. One of the strategies adopted was streamlining company's Supply chain in order to reduce supply, logistics and financing costs; the question remaining unanswered is whether adoption of these supply chain management practices strategies have led to the company's higher profitability.

The oil industry in Kenya has become very dynamic, competitive and earns very constrained margins. For the oil marketers to make profits, they need to focus on supply chain efficiency and reduce supply, logistics and financing costs which mainly can be reduced by having smooth supply chain. Previous studies have not focused on supply chain management practices impact on profitability and research on the area has been largely neglected. Adyang (2012) studied the procurement category management among fast moving consumer goods companies in Kenya and found that proper supply chain practices led to higher profitability. Duggan, (2009) conducted a study on achieving operational excellence in the financial Sector in United States and found that during the global downturn of 2009, many businesses cut costs and adopted operational excellence which boosted their efficiencies, enabled their survival and led to increase in profitability. Muthoni (2010) studied enhancement of operational

excellence in the retail service workshop processes in General Motors East Africa Limited and found that through operational excellence, General Motors had increased service quality, customer satisfaction and service performance in its retail service workshop processes.

However, none of the reviewed studies have studied the effect of supply chain management practices on firms' profitability in the oil industry. Informed by this need by the oil industry to remain profitable in Kenya and the knowledge gap highlighted above, this study will seek to find out the effect of supply chain practices on firm's profitability using Kenolkobil ltd as case study. The study answered the questions; what is the effect of supply chain management on firm's profitability? Does personnel productivity, skills and competency have any effect on profitability? Does technology advancement in supply chain management have an impact on profitability? Is there a relationship between supply chain practices management and profitability?

1.3 Objectives of the Study

The general objective of this study was to determine the relationship between supply chain management practices and profitability at KenolKobil Limited. The specific objectives were:

- i. To evaluate the effect personnel skills and competency on profitability.
- ii. Examine the relationship between technology adopted in supply chain function and profitability.
- iii. To determine the relationship between supply chain activity management and profitability.

1.4 Value of the Study

The research findings are of significance to various parties who include the oil marketing companies' management, the general public and customers and researchers and academicians. To the oil marketing companies' management and more specifically Kenolkobil, the study findings have demonstrated the effect of supply chain practices on firms' profitability. By the management adopting the study findings, they will be able to improve the performance of the firm.

To the customers and the general public, adoption of the results of this study by oil marketers will lead to improved processes which will lead to superior services and more customer satisfaction. Streamlining supply chain management by oil marketing companies will lead to higher profitability. Increased firms profitability also implies that the firms will be able to develop better products, achieve growth and create employment.

The findings of the study have provided strong empirical evidence on the ongoing debates on the how to make oil marketing companies more profitable without increasing costs so as to shield the economy from the effects of increased energy costs that drives inflation. It has bridged the gap that exists in literature on the effect of supply management practices and profitability of oil marketing firms in Kenya and has formed the basis of future research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews existing literature on supply chain, operations management and firms' performance. This involves review of theoretical aspects related to the study, empirical studies that relate to supply chain practices, profitability and research gaps therein.

2.2 Theoretical Review

A Theory is a set of statements or principles devised to explain a group of facts or phenomena especially one that has been repeatedly tested or is widely accepted and can be used to make predictions about natural phenomena (Popper, 1963). Theories are analytical tools for understanding, explaining, and making predictions about a given subject matter (Hawking, 1996). A formal theory is syntactic in nature and is only meaningful when given a semantic component by applying it to some content facts and relationships of the actual historical world as it is unfolding (Zima, 2007). This study will be based on human capital theory, Schumpeterian theory, and Porter's competitive advantage theory which is discussed below.

2.2.1 Human Capital Theory

Human Capital theory was proposed by Schultz (1961). Schultz (1961) in an article entitled "Investment in Human Capital" introduces his theory of Human Capital. The theory argues that both knowledge and skill are a form of capital, and that this capital is a product of deliberate enterprise growth. The concept of human capital implies an investment in people through education and training leads better supply chain management. Schultz argues that investment in education and training leads to an

increase in human productivity, which in turn leads to a high firm's profitability and excellent supply chain management practices.

This theory emphasizes the supply addition that people contribute to supply chain management function and an organization at large. It regards people as assets and stresses that investments by organizations in people will generate worthwhile returns. The theory is associated with the resource based view of strategy developed by Barney (1991), the theory proposes that sustainable competitive advantage is attained when the firm as a human resource pool that cannot be imitated or substituted by its rival. For the employer investments in training and developing people is a means of attracting and retaining people. These returns are expected to be improvements in performance, productivity, flexibility and the capacity to innovate that should results from enlarging the skills base and increasing levels of knowledge and competence.

From the theory, it can be concluded that having skilled employees, with high education levels and experience will lead to better supply chain management practices. This in turn will lead to supply optimization, reduced costs of operations leading to high profitability. Lack of skilled and qualified personnel will lead to inefficiencies in carrying out supply chain management function and hence reducing company's profitability. In conclusion, according to this theory, the objectives of supply chain management cannot be achieved without having the strong human capital.

2.2.2 Schumpeterian Theory

Schumpeter's (1934) theory has emphasized the role innovations and the seeking out of opportunities for novel supply and generating activities which would expand (and transform) the circular flow of income through risk taking, pro activity by the enterprise leadership and innovation which aims at fostering identification of innovative ways of managing innovations so as to maximize the potential corporate profit. Schumpeterian theory supposes that technological progress comes from innovations carried out by firms motivated by the pursuit of profit, and that it involves what Schumpeter called "creative destruction". That is, each innovation is aimed at creating some new process or product that gives its creator a competitive advantage over its business rivals; it does so by rendering obsolete some previous innovation; and it is in turn destined to be rendered obsolete by future innovations (Schumpeter, 1934).

Schumpeter identifies the single notion of innovation as paramount, so that changes based upon innovation are the cause of profit. The entrepreneur is for Schumpeter an innovator, who by virtue of his innovation is able to break from the competition, acquire a transitory monopoly in which he can accrue profits until his competitors catch up, but, before they do so, he is able to move on to further innovation in new fields. Schumpeter did not see the firm's ability to generate surplus supply but rather as a functional reward linked to firm's innovative ability. Schumpeter saw the model of perfect competition in which different companies sold similar goods at similar prices produced through similar techniques as immaterial to progress. According to this theory, supply chain management objectives cannot be achieved without firm innovating, incorporating technology in operations and coming up with better ways

of managing operations. Innovations lead to better ways of conducting business, leads to superior processes which leads to reduction in supply chain costs and hence leading to high profitability. The innovations include those relating to technology adoption to ensure efficient supply chain management.

2.2.3 Porter's Theory of Value Chain

The theory was proposed by Porter (1985). Value chain analysis describes the activities within and around an organization, and relates them to an analysis of the competitive strength of the organization. Therefore, it evaluates which value each particular activity adds to the organizations products or services. This idea was built upon the insight that an organization is more than a random compilation of machinery, equipment, people and money. Only if these things are arranged into systems and systematic activates it will become possible to produce something for which customers are willing to pay a price. Porter argues that the ability to perform particular activities and to manage the linkages between these activities is a source of competitive advantage. Porter distinguishes between primary activities and support activities. Primary activities are directly concerned with the creation or delivery of a product or service. They can be grouped into five main areas: inbound logistics, operations, outbound logistics, marketing and sales, and service. Each of these primary activities is linked to support activities which help to improve their effectiveness or efficiency.

The idea of the supply chain is based on the process view of organizations, the idea of seeing a manufacturing (or service) organisation as a system, made up of subsystems each with inputs, transformation processes and outputs. Inputs, transformation processes, and outputs involve the acquisition and consumption of resources; money,

labour, materials, equipment, buildings, land, administration and management. How supply chain activities are carried out determines costs and affects profits. In Porter's value chains, inbound logistics, outbound logistics, marketing and sales and service are categorized as primary activities. Secondary activities include procurement, human resource management, technological development and infrastructure; how well the value chains are managed determines the level of efficiency in operations management and determines company's profits (Porter 1985).

Often multinational enterprises like KenolKobil, have developed global supply chains, investing abroad and establishing affiliates that provides critical support to remaining activities at home. To enhance efficiency and to optimize profits, multinational enterprises must establish a department aimed at ensuring management and optimization of supply chain. According to Porter's theory management of supply chains and leads to increased profitability.

2.3 Empirical Review

Elijah (2013) studied profitability through effective management of materials in Nigeria. The study found that profitability could be achieved through effective management of materials with particular attention on sourcing, receiving, storing and issuing materials. Prudent management of materials was found to reduce depreciation, pilferage and wastages while ensuring availability of the materials as at when required. Further the study concluded that for firm to achieve profitability the goal of materials management should be properly carried out which goes a long way to affect the profitability of the firm. The study concluded that given the problem that arises as a result of the inefficiencies, breakdown and shut down of the plant, it becomes very necessary to re-organize the materials management department, establish good

relationship with suppliers of spare parts in order to minimize losses arising from frequent breakdown and improve profitability.

Adyang (2012) studied the procurement category management among fast moving consumer goods companies in Kenya. The study showed that all the organizations under study had adopted procurement category management; which is a part of operations management. The study also found out that the major benefit associated with category management was sustainable cost savings to the organization while category management had little effect in the use of technology and management information as well as improving the optimal procurement operating model. The cost savings implies increased firms' profitability. The greatest challenge of implementation the strategy was lack of qualified personnel and the high cost of implementation, costs which could cloud out the benefits of the savings. The study recommended the adoption of category management among companies, government and government agencies who had not implemented procurement category management. The study also suggested an investment in the right human resource, development of the correct change management process and appropriate communication mechanism as the levers to successful implementation of category management.

Rick (2004) studied the challenges of complexity in global manufacturing insights to effective supply chain management. The study analyzed the supply chain synchronization of nearly 600 manufacturers in every major industry segment across North America and Europe, representing 19 countries. Industries represented in the study included aerospace and defence, automotive, life sciences, manufactured consumer products, process and chemicals, high technology and telecommunications, as well as other general manufacturing segments such as metal fabrication, industrial

machinery and equipment. The study found that every manufacturer's supply chain, regardless of size, was the foundation for the company's planning, sourcing, production, sales, and financial success; its management was driver of firms' velocity and profitability. Poor management of the operations was found to erode profits, shrinking of shareholder supply and declining market position. Further, more than a third (38 percent) of the 600 respondents to the survey had slim (less than 5 percent) operating margins or losing money on an operating basis.

Nikos (2007) studied the effect of operational performance and focus on profitability of the U.S. airline industry. The study found that both operational efficiency and quality affects profitability. The study also found the relationship between operational performance and profitability to be contingent on a company's operating model. "Focused" airlines showed a link between late arrivals and profitability, while full-service airlines do not. Also, capacity utilization is a stronger driver of profitability for full-service airlines than for focused airlines. The study recommended that in operations management research, the benefit is more when longitudinal methodology is used, which would enable rigorously testing of operation management theories.

2.4 Summary of Literature Review

Various theories have been reviewed as giving useful insights on operations management and profitability. The human capital theory advocates for investment in human capital through education and training so as to achieve operational efficiency. The theory argues that investment in education and training leads to an increase in human productivity, which in turn leads to a high firm's profitability and efficiency in carrying out firms operations. Schumpeterian theory highlights the role of innovations and the seeking out of opportunities for novel supply and generating activities so as to

maximize the potential corporate profit. Porter's theory of supply chain on the other hand describes the activities within and around an organization, and relates them to an analysis of the competitive strength of the organization.

The literature has primarily focused on either the link between productivity and profitability or the link between service quality and profitability. The overall impact of operational performance on profitability in service organizations has been largely neglected. Nikos (2007) found that both operational efficiency and quality affects profitability. Elijah (2013) studied profitability through effective management of materials in Nigeria and found that profitability could be achieved through effective management of materials with particular attention on sourcing, receiving, storing and issuing materials. Rick (2004) studied the challenges of complexity in global manufacturing insights to effective supply chain management. The study analyzed the supply chain synchronization of nearly 600 manufacturers in every major industry segment across North America and Europe, representing 19 countries. Adyang (2012) studied the procurement category management among fast moving consumer goods companies in Kenya. Prior literature has not studied operations management's impact on profitability been neglected in research irrespective of the importance of operations management on profitability as shown on the discussed studies.

2.5 Conceptual Framework

Mugenda (2008) defines conceptual framework as a concise description of the phenomenon under study accompanied by a graphical or visual depiction of the major variables of the study. It can also be seen as a diagrammatical representation that shows the relationship between dependent variable and independent variables. In this study, the conceptual model will look at the relationship between profitability and

operations management. The dependent variable will be profitability as measured by return on assets while the independent variables will be human capital, technology applied in supply chain management chain management practices.

2.5.1 Human Capital

Empirical research have emphasized that human capital is one of the key factor in explaining enterprise growth. Bruderl *et al.* (1992) argues that better human capital enhances the productivity of the firm by ensuring that supply chains are efficiently managed which results in higher profits. Moreover highly educated personnel may also leverage their knowledge and the social contacts generated through the education system to acquire required resources in terms of supply chains and new markets (Shane and Cable, 2003). In addition to education, specific human capital attributes of employees, such as capabilities that they can directly apply to the job in the firm, may be of special relevance in explaining enterprise profitability. The specific human capital can be attained through precise trainings and previous experience. More focused business training can provide employees with a specific knowledge, compared to a formal education. This kind of specific human capital also includes knowledge of how to manage operations. In particular, firms with great industry-specific and general business specific human capital are in an ideal position to seize neglected business opportunities and to take effective strategic decisions that are crucial for the success of the firm (Collombo & Grilli, 2005).

2.5.2 Technological Innovation

Innovation is essential ingredient in to generating long term stability, growth of share holder returns, sustainable performance and remains at the leading edge of the organizations' industry. Innovation is referred to very different kinds of “newness” regarding products, production methods and technologies, markets and organizational configurations (Varis & Littunen, 2010). Innovation is also defined as a new way of doing things that is commercialized, the newness being either technological or market related (Narvekar & Jain, 2006). Internally, firms should be supported by their strategy, structure, system and people. Competences and assets are the function of technological and market knowledge as innovation is the use of new technological and market knowledge to offer a new product or service that customers will want.

2.5.3 Supply Chain

In today's challenging business environment, when the cost of breaks in the supply chain can cascade across your business, active supply chain management is an enterprise performance management tool. Every firm's supply chain, regardless of size, is the foundation for the company's planning, sourcing, production, sales, and financial success. Firm proper management of supply chain reduces supply chain costs and drives profitability. Poor management of supply chain leads to lost firm resources, erodes profits, shareholder supply shrinks, and firms market position declines (Rick, 2004). Poor supply chain management for oil firms like KenolKobil will lead to product dry outs at the stations and lost sales. In addition, it leads to high supply chain costs as the company use more expensive supply chain methods. Lack of supply chain addition at every stage of operations will lead to reduced profitability.

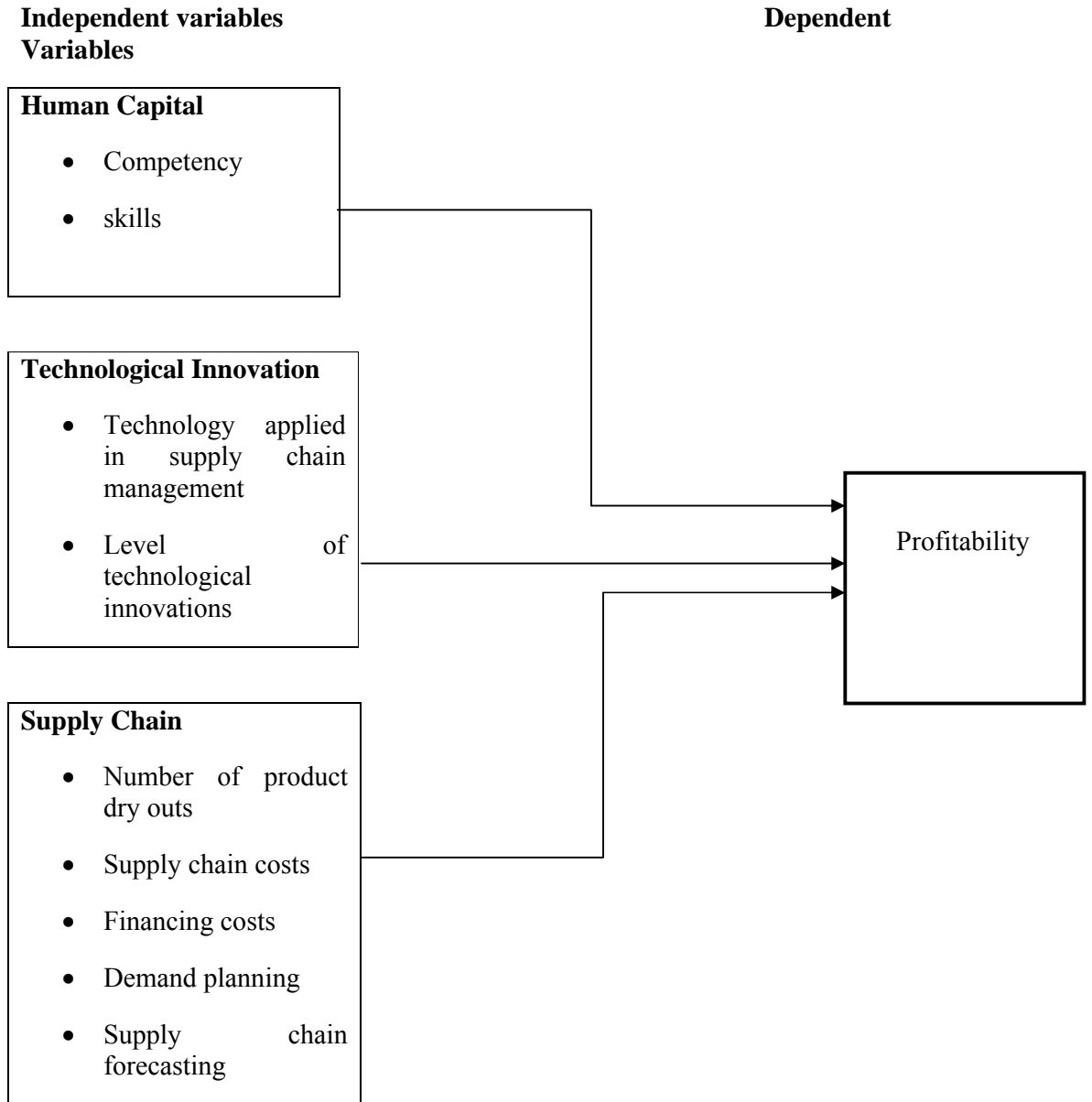


Figure 2.1: Conceptual Framework

Source: Researcher

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter discusses the research methodology that was adopted in this research with the aim of achieving the set objectives for effective interpretation of research findings. Specifically the following subsections are included; research design, target population, sample design, data collection and data analysis.

3.2 Research Design

This study used a descriptive research design. A descriptive design explains the way things are and is applied where a number of studies have been done in the area of study (Mugenda & Mugenda, 2008). A case study was also be adopted will attempts to describe or define a subject, often by creating a profile of a group of problems, people, or events, through the collection of data and tabulation of the frequencies on research variables or their interaction (Cooper and Schindler, 2008). This approach was appropriate for the study as it helped in describing the state of affairs as they exist without manipulation of variables which will be the aim of the study. Descriptive research method was employed in this study so as to bring the relationship between operations management and profitability.

3.3 Population

The study population was entire employees of KenolKobil ltd and all the retail stations run by KenolKobil. Kenolkobil has approximately 180 regular employees and 150 retail stations all which will form the study population. Mugenda and Mugenda (2003) define population as an entire group of individual or objects having common observable characteristic.

3.4 Sampling

Stratified random sampling was used to sample the retail stations to be involved in the study. Stratification was based on regions as categorised by Kenolkobil. Orodho (2003) states that stratified sampling are applicable if a population from which a sample is to be drawn does not constitute a homogeneous group. KenolKobil has 150 retail stations and 15 of them were sampled as per Kerlinger (1986) who indicated that a sample size of 10% of the target population is large enough so long as it allows for reliable data analysis and allows testing for significance of differences between estimates.

3.5 Data Collection

The study mainly used primary data collected through questionnaires. The questionnaire consisted of a list of structured questions, un-structured questions and Liekert rating scale relating to the field of inquiry with space provided for selection of choices and explanatory answers. The questionnaires were administered through drop and pick to identify respondents with a brief explanation on their purpose and importance. Data will also be obtained from secondary sources which mainly include the published financial statements for year 2009 to 2013 and other published relevant information.

3.6 Data Analysis

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was then be coded to enable the responses to be grouped into various categories. Descriptive statistics were used to summarize the data which included use of percentages and frequencies. All quantitative data was

measured in real values by normalizing. Multiple regressions were used to measure the quantitative data which was analysed using the Statistical Packages for Social Sciences (SPSS) version 21.

3.6.1 Analytical Model

Multiple regression analysis was used to determine the relationship between the dependent variables and independent variables. Profitability was measured by ROA and regressed against the various independent variables. Human capital employed was measured by employees' education and years of experience while technological innovations was measured by the technology applied in supply chains and how often the same is upgraded. Supply chain management was measured by the number of dry out days, amount of supply costs, financing costs, demand planning and forecasting put in place by the company. The regression model took the following format;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where,

Y = KenolKobil Profitability as measured by Return on assets

B_0 = Constant

B_i = Coefficient of the independent variables

X_1 = Human capital employed by the company that included personnel productivity, competency and skills

X_2 = Technological innovations as measured by the level of technological changes and technology applied by the company in supply chain management

X_3 = Supply chain management which includes dry out days, supply costs, financing costs, demand planning and forecasting put in place by the company

ε = Error term.

3.6.2 Test of Significance

The accuracy and significance of the model was determined by using coefficient of determination, the z-test and t-test. The tests were done at a significance level of 5%. A correlation analysis was used to establish the relationship between profitability and independent variables. Non parametric test such as analysis of variance (ANOVA) was also be used to test the significance of the overall model at 95% level of significance.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

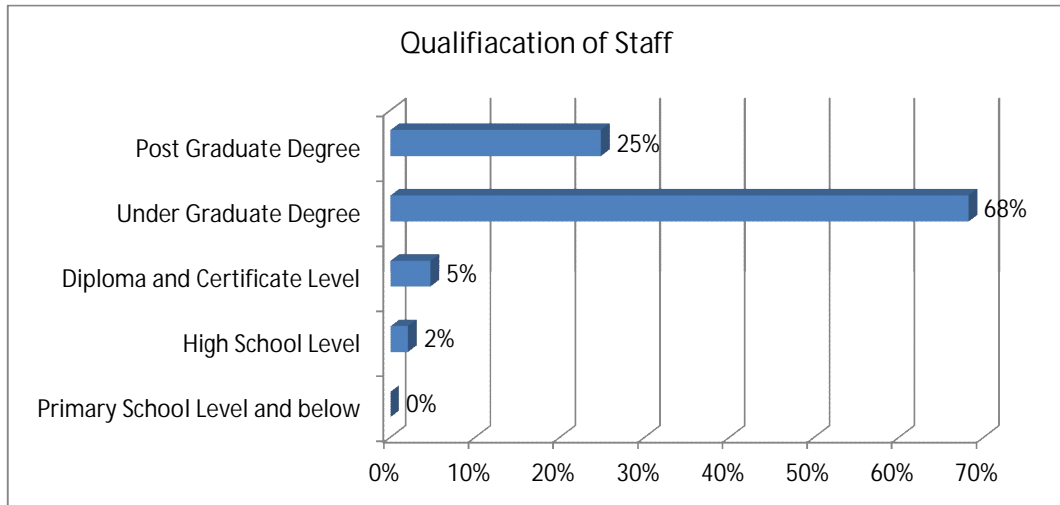
This chapter presents the analysis of data, findings and discussion of the findings. It has section 4.2 that presents descriptive; section 4.3 presents analytical model from the study while section 4.4 presents discussion of the findings. Data analysis was done in line with general objective which was to determine the relationship between supply chain management practices and profitability at KenolKobil Limited.

4.2 Descriptive Statistics

4.2.1 Employees Competency and Skills

As shown in figure 4.1 below, majority of Kenolkobil staff are undergraduate holders at 68%, 25% are post graduate holders, 5% diploma and certificate level holders, 2% are high school level holders and 0% primary school level and below. In terms of education of the employees, majority of Kenolkobil employees are much qualified and hence competent.

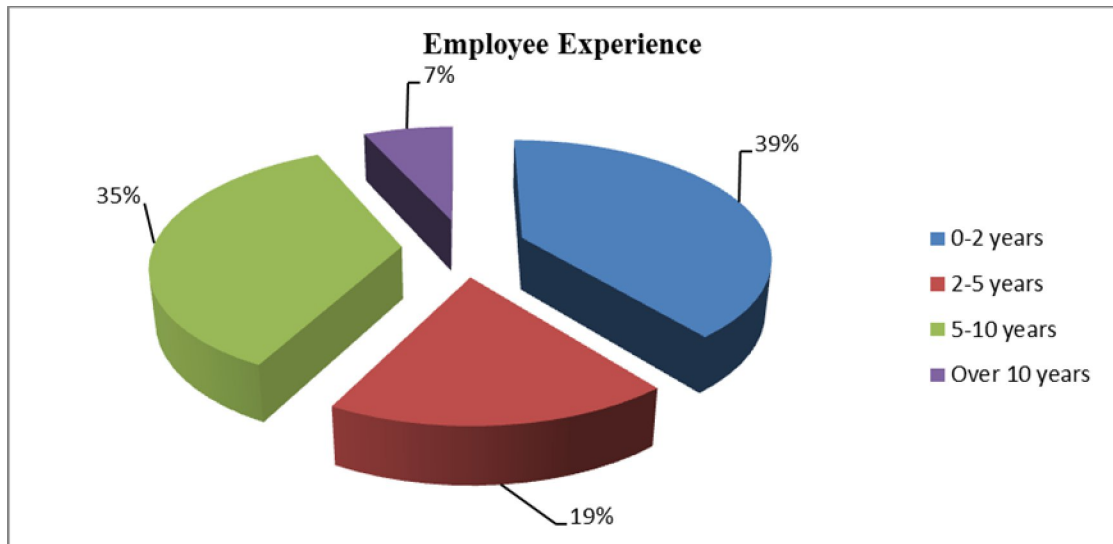
Figure 4.1: Qualification of Employees



Source: Research Findings

Another measure of employee competency and skills was level of experience of the employees. As shown in figure 4.2 below, majority of employees at 39% had 0-2 years experience job experience, 35% had 5-10 years experience, 19% had 2-5 years experience while 7% had over 10 years experience.

Figure 4.2: Employees Experience



Source: Research Findings

The respondents indicated that the company had an in house and on job training program where new employee are oriented and trained by their respective managers. To ensure continued growth and development of the staffs, the study found that employees are exposed to all levels of the business and given higher positions when they arise without recruiting from outside. Departmental movements were also observed to be encouraged. Staff productivity was promoted through having annual appraisals, having job objectives to be appraised annually and communication system that allowed smooth flow of information and offer the required information. Overall, employee productivity was rated average.

4.2.2 Technology Applied in Supply Chain Management

Supply chain operations were found to be semi-automated with automation process only relating to stocks movement. The software used by the company was found to be hardly updated. This implies that application of information technology to reduce logistical and supply chain costs remains low and the company not benefiting much from the same.

4.2.3 Company Supply Chain Efficiency

As shown in table 4.1, frequency of product dry out was found to increase from 2009 to 2013. In 2009 and 2010, respondents indicated that products dry outs hardly occurred. In 2011, product dry outs occasionally occurred, often occurred in 2012 and very often occurred in 2013.

Table 4.1: Frequency of Product Dry Outs at Retail Stations

Year	Frequency of Product Dry Outs
2009	Hardly
2010	Hardly
2011	Occasionally
2012	Often
2013	Very Often

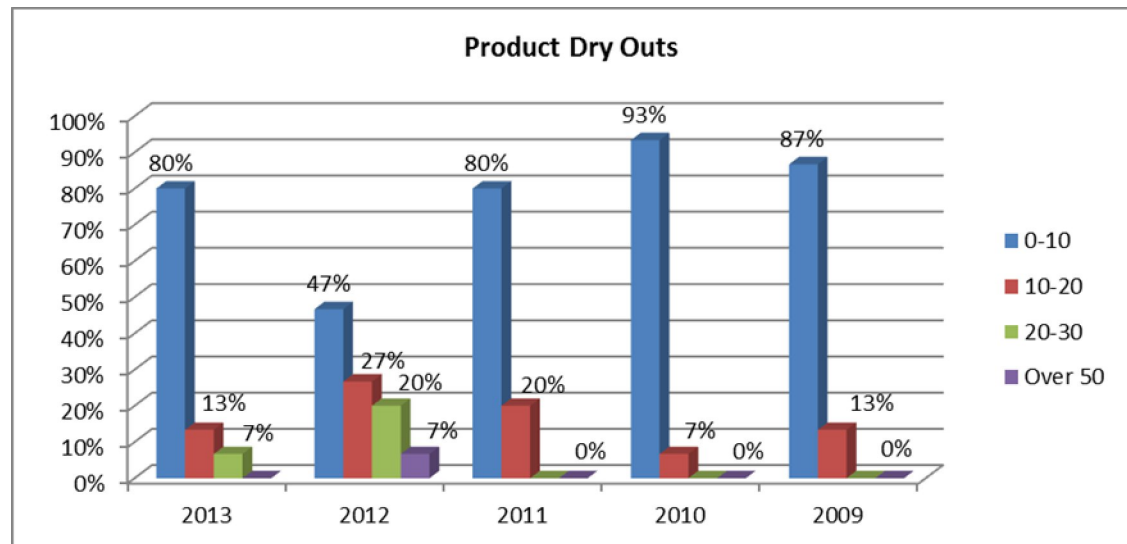
Source: Research Findings

On demand planning, the study found that supply and trading department analyzes the previous sales figures, compares the international oil prices and plan what will be ordered and supplied. This process was found to use market intelligence and much analysis of information obtained.

4.2.4 Product Dry Outs at Retail Stations

The number of product dry outs was found to increase in year 2012 with 47% of the stations having 0-10 days product dry outs, 27% 10-20 days product dry outs, 20% having 20-30 days and 7% having over 50 days.

Figure 4.3: Product Dry Outs Days at Retail Stations

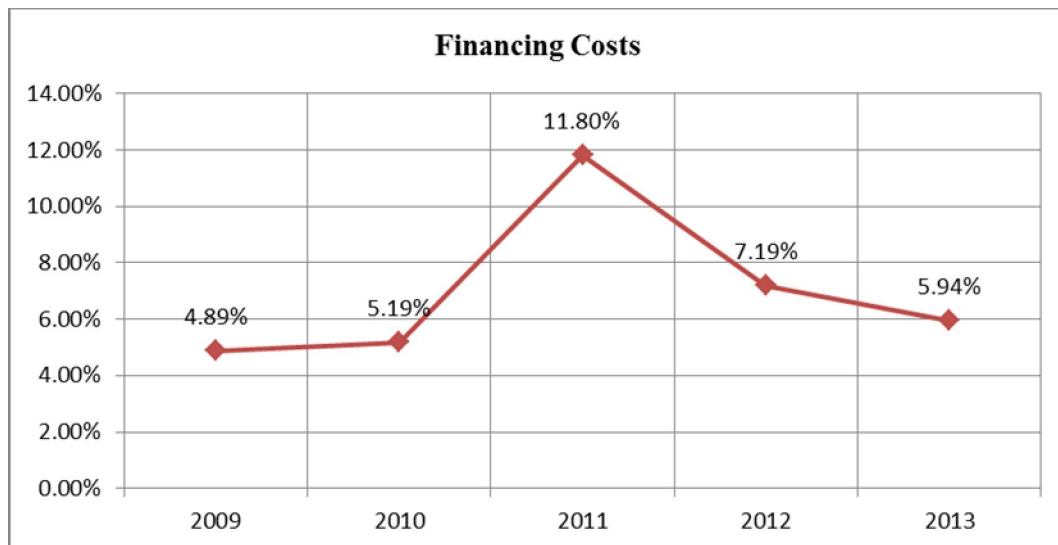


Source: Research Findings

4.2.5 Finance Costs Trend Analysis

As shown in figure 4.4 below, KenolKobil financing costs have been fluctuating since 2009. In 2009, financing costs were 4.89% of total assets increasing to 5.19% in 2010 and hitting to the highest in 2011 at 11.8% of total assets. In 2012, financing costs reduced in 2012 to 7.19% and further reduced to 5.94% in 2013. Notably, product dry out days increased in 2012 as the company was trying to reduce financing costs. The increase in product dry outs could be out of the need for the company to reduce financing costs and hence not able to supply products as and when required.

Figure 4.4: Financing Costs Trend Analysis

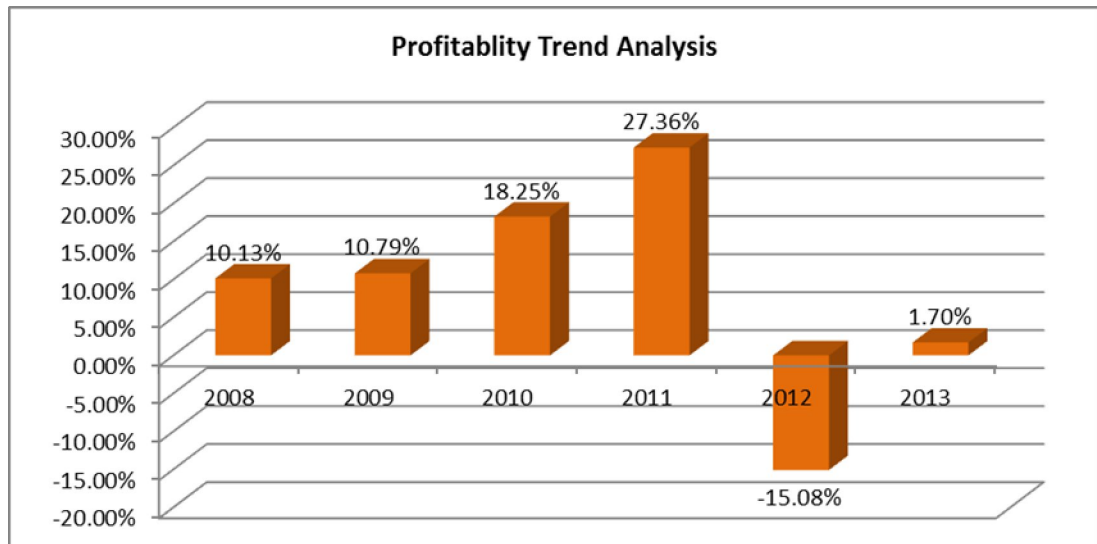


Source: Research Findings

4.2.6 Profitability Trend Analysis

As shown in figure 4.5 below, the company was profitable for the period of the study except in year 2012. In 2009, return on assets was 10.79%, increased to 18.25% in 2010, to 27.36%. The profits reduced by 155% in 2012 to -15.08%. In attempt to improve company profitability, the management developed strategies to reducing financing cost through supply chain management and the profits increased to 1.7% with financing costs reducing by 17%.

Figure 4.5: Profitability Trend Analysis



Source: Study Findings

4.3 Effect of Supply Chain Management Practices on Profitability

This part to achieve the general objective of this study which was to obtain the relationship between supply chain management practices on profitability of Kenolkobil ltd.

4.3.1 Correlation Analysis

As shown in table 4.2 below, Kenolkobil supply management practice is strongly related to profitability as shown by coefficient of correlation of 0.8403. The relationship is also significant since the two tailed p value obtained is 0.0233 which is less than 0.05. This implies that by having a good supply chain management practices leads to increase on profitability

Further, Kenolkobil human resource practices are also positively related to profitability with coefficient of correlation of 0.8851. The relationship is also significant since p value of 0.0459 which was less than 0.05. A high human resource score was given where in the years the company had more experienced and skilled

personnel. This implies that having more qualified staff leads to higher profitability as well as better supply chain management. Technology applied in supply chain management was found to be positively with profitability with coefficient of correlation of 0.4755. However, the relationship was not statistically significance as shown by p value of 0.9040 which was higher than 0.05.

Table 4.2: Correlation Analysis

		ROA	Supply Management Practices	Human Resource Score
ROA	Pearson Correlation	1	0.3840	0.8851
	Sig. (2-tailed)		0.5233	0.0459
Supply Management Practices	Pearson Correlation	0.8403	1	0.0468
	Sig. (2-tailed)	0.0233		0.9405
Human Resource Score	Pearson Correlation	0.8851	0.0468	1
	Sig. (2-tailed)	0.0459	0.9405	
Technological Score	Pearson Correlation	0.4755	0.3403	(0.2638)
	Sig. (2-tailed)	0.9040	0.5752	0.6680

Source: Research Findings

4.3.2 Model Test of Fitness

As shown in table 4.3 below, the model developed was could explain 94.5% of changes in profitability as shown by the coefficient of determination of 0.9450. The relationship between the independent and dependent variables was strong and positive as shown by coefficient of correlation of 0.9721.

Table 4.3: Model Test of Fitness

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.9721	0.9450	0.7799	0.0763

Source: Study Findings

4.3.3 Model Analysis of Variance

Table 4.4 below shows the developed model test of fitness. As shown in the table, the model developed was significant at 95% confidence level since the p value obtained was 0.003 which was less than 0.05. This implies that the model could be relied upon for prediction.

Table 4.4: Model ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.100	3	0.033	5.724	0.003
Residual	0.006	1	0.006		
Total	0.106	4			

Source: Study Findings

4.3.4 Estimated Analytical Model

The coefficients for the model the estimated model are shown in table 4.5 below. As shown in the table, supply chain management practices has the highest coefficients of 1.5 implying that out of the variables analysed, it has the highest effect on profitability.

Table 4.5: Estimated Analytical Model

	Unstandardized Coefficients	Std. Error	Beta	T	Sig.
Constant	-1.1130	0.4681		(2.3780)	0.0025
Supply Management Practices	1.5010	1.4514	0.2610	1.0341	0.0049
Human Resource Score	1.0247	0.2697	0.9345	3.7986	0.0016
Technological Score	0.4241	0.4752	0.2332	0.8924	0.5362

Source: Study Findings

From the coefficients obtained, the model developed was $Y = -1.1130 + 1.501X_1 + 1.0247X_2 + 0.4241X_3$; where, Y is KenolKobil Profitability as measured by Return on assets, X_1 is human capital employed by the company that includes personnel productivity, competency and skills, X_2 is Technological innovations as measured by the level of technological changes and technology applied by the company in supply chain management and X_3 is supply chain management which includes dry out days, supply costs, financing costs, demand planning and forecasting put in place by the company.

4.4 Discussion

The general objective of this study was to determine the relationship between supply chain management practices and profitability at KenolKobil Limited with specific objectives of evaluate the effect personnel skills and competency on profitability, examining the relationship between technology adopted in supply chain function and profitability and determining the relationship between supply chain activity management and profitability. The study found that Kenolkobil's supply chain management practices were strongly related to profitability as shown by coefficient of correlation of 0.8403 where adoption of superior practices led to increased

profitability. The relationship was also significant with a p value of 0.0233. This implied that by having a excellent supply chain management practices lead to increase on profitability.

The findings are in agreement with those of Elijah (2013) who found that profitability could be achieved through effective management of materials with particular attention on sourcing, receiving, storing and issuing materials. Also the findings agree with those of Nikos (2007) who found that supply chain management practices affect profitability. Further, Rick (2004) found that every manufacturer's supply chain, regardless of size, was the foundation for the company's planning, sourcing, production, sales, and financial success; its management was driver of firms' velocity and profitability. Poor management of the operations was found to erode profits, shrinking of shareholder supply and declining market position. Further, more than a third (38 percent) of the 600 respondents to the survey had slim (less than 5 percent) operating margins or losing money on an operating basis.

Further, Kenolkobil human resource practices were found to be positively related to profitability with coefficient of correlation of 0.8851. The relationship was also significant since p value of 0.0459 was less than 0.05. A high human resource score was given where in the years the company had more experienced and skilled personnel. This implies that having more qualified staff leads to higher profitability as well as better supply chain management. Technology applied in supply chain management was found to be positively with profitability with coefficient of correlation of 0.4755. However, the relationship was not statistically significance as shown by p value of 0.9040 which was higher than 0.05.

The model developed by the study could explain 94.5% of changes in profitability as shown by the coefficient of determination of 0.9450. The relationship between the independent and dependent variables was strong and positive as shown by coefficient of correlation of 0.9721. The model developed was significant at 95% confidence level with p value obtained of 0.003 which was less than 0.05. This implies that the model could be relied upon for prediction. From the coefficients obtained, the model developed was $Y = -1.1130 + 1.501X_1 + 1.0247X_2 + 0.4241X_3$; where, Y is KenolKobil Profitability as measured by Return on assets, X_1 is human capital employed by the company that includes personnel productivity, competency and skills, X_2 is Technological innovations as measured by the level of technological changes and technology applied by the company in supply chain management and X_3 is supply chain management which includes dry out days, supply costs, financing costs, demand planning and forecasting put in place by the company.

Majority of Kenolkobil staff were found to be undergraduate holders at 68%, 25% are post graduate holders, 5% diploma and certificate level holders, 2% are high school level holders and 0% primary school level and below. Another measure of employee competency and skills was level of experience of the employees. Majority of employees at 39% had 0-2 years job experience, 35% had 5-10 years' experience, 19% had 2-5 years' experience while 7% had over 10 years' experience. The respondents indicated that the company had an in house and on job training program where new employee are oriented and trained by their respective managers. To ensure continued growth and development of the staffs, the study found that employees are exposed to all levels of the business and given higher positions when they arise

without recruiting from outside. Departmental movements were also observed to be encouraged. Staff productivity was promoted through having annual appraisals, having job objectives to be appraised annually and communication system that allowed smooth flow of information and offer the required information. Overall, employee productivity was rated average.

Supply chain operations were found to be semi-automated with automation process only relating to stocks movement. The software used by the company was found to be hardly updated. This implies that application of information technology to reduce logistical and supply chain costs remains low and the company not benefiting much from the same. Frequency of product dry out was found to increase from 2009 to 2013. In 2009 and 2010, respondents indicated that products dry outs hardly occurred. In 2011, product dry outs occasionally occurred, often occurred in 2012 and very often occurred in 2013. On demand planning, the study found that supply and trading department analyses the previous sales figures, compares the international oil prices and plan what will be ordered and supplied. This process was found to use market intelligence and much analysis of information obtained.

The number of product dry outs was found to increase in year 2012 with 47% of the stations having 0-10 days product dry outs, 27% 10-20 days product dry outs, 20% having 20-30 days and 7% having over 50 days. KenolKobil financing costs were found to been fluctuating since 2009. In 2009, financing costs were 4.89% of total assets increasing to 5.19% in 2010 and hitting to the highest in 2011 at 11.8% of total assets. In 2012, financing costs reduced in 2012 to 7.19% and further reduced to 5.94% in 2013. Notably, product dry out days increased in 2012 as the company was

trying to reduce financing costs. The increase in product dry outs could be out of the need for the company to reduce financing costs and hence not able to supply products as and when required. The company was found to be profitable for the period of the study except in year 2012. In 2009, return on assets was 10.79%, increased to 18.25% in 2010, to 27.36%. The profits reduced by 155% in 2012 to -15.08%. In attempt to improve company profitability, the management developed strategies to reducing financing cost through supply chain management and the profits increased to 1.7% with financing costs reducing by 17%.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter presents the summary, conclusions and the recommendations made from the study findings. The chapter consists of sections 5.2 on summary of findings, section 5.3 presents the conclusions made from the study findings while 5.4 presents recommendations made after considering the study findings, section 5.5 presents the limitations faced by the study while section 5.6 presents suggestions for any further studies.

5.2 Summary of the Study

The study sought to determine the relationship between supply chain management practices and profitability at KenolKobil Limited using descriptive research design based on case study approach. The study found that Kenolkobil's supply chain management practices were strongly related to profitability with coefficient of correlation of 0.8403 where adoption of superior practices led to increased profitability. The relationship was significant with a p value of 0.0233.

Further, Kenolkobil human resource practices were found to be positively related to profitability with coefficient of correlation of 0.8851. The relationship was significant with p value of 0.0459. This implied that having more qualified staff led to higher profitability as well as better supply chain management. Technology applied in supply chain management was found to be positively with profitability with coefficient of correlation of 0.4755. However, the relationship was not statistically significance as shown by p value of 0.9040 which was higher than 0.05. Kenolkobil's supply chain

operations were found to be semi-automated with automation process only relating to stocks movement. The software used by the company was found to be hardly updated. This implies that application of information technology to reduce logistical and supply chain costs remains low and the company not benefiting much from the same.

The analytical model developed by the study could explain 94.5% of changes in profitability as indicated by coefficient of determination of 0.9450. The relationship between the independent and dependent variables was strong and positive as shown by coefficient of correlation of 0.9721. The model developed was significant at 95% confidence level with p value obtained of 0.003. The model developed was $Y = -1.1130 + 1.501X_1 + 1.0247X_2 + 0.4241X_3$; where, Y is KenolKobil Profitability as measured by Return on assets, X_1 is human capital employed by the company that includes personnel productivity, competency and skills, X_2 is Technological innovations as measured by the level of technological changes and technology applied by the company in supply chain management and X_3 is supply chain management which includes dry out days, supply costs, financing costs, demand planning and forecasting put in place by the company.

Kenolkobil's stations product dry out days were found to increase in 2012 as the company was trying to reduce financing costs. The increase in product dry outs could be out of the need for the company to reduce financing costs and hence not able to supply products as and when required. The company was found to be profitable for the period of the study except in year 2012. In 2009, return on assets was 10.79%, increased to 18.25% in 2010, to 27.36%. The profits reduced by 155% in 2012 to -15.08%. In attempt to improve company profitability, the management developed

strategies to reducing financing cost through supply chain management and the profits increased to 1.7% with financing costs reducing by 17%.

5.3 Conclusion

Based on findings, the study concludes that supply chain management practices are strongly related to profitability where adoption of superior practices leads to increased profitability. This is due to the fact that disruption in the supply chain in terms of delivery of products to the customers due to supply chain disruptions would have potential downstream implications for brand reputation, regulatory compliance, product safety, and other risks. Further, efficient supply chain management reduces financing costs and saves company distribution costs hence increasing profitability.

The study also concludes that having competent and more qualified staff leads to increase in profitability as well as streamlining supply chain. Therefore investment in employees through education and training leads better supply chain management practices and further increases profitability. Competent, experienced employees and systems to ensure continued staff growth lead to increase in human productivity, which in turn leads to a high firm's profitability. This further ensures excellent and efficient supply chain management practices.

The study also concludes that automation of supply chain management and adoption of innovative strategies has positive effect on profitability. Even though the relationship was found to be minimal and statistically insignificant, companies in low margins industries cannot afford to miss out any opportunities that may lead to increase in profitability. The positive effect of automation of supply chain

management on profitability is due to the elimination of inefficiencies in supply chain in addition to ensure that the products reach consumers on timely basis.

Finally, the study concludes that supply chain management practices adopted by the firm, human resource competency, skills and technology adopted accounts for a large highly affects company profitability. This is because all company's operations are conducted by employees and organization cannot exist without people. Having competent and skilled employees lead to superior decisions and savings coming from efficiency in supply chains which translates to profitability.

5.4 Policy Recommendations

Supply chain management practices are strongly related to profitability where adoption of superior practices leads to increased profitability. Therefore, the study recommends that the management to continuously improve their supply chain management practices, benchmark the same and ensure that the practices remain relevant. By maximizing the benefits of efficient supply chain, the company can save on financing costs in addition to achieving competitive advantage over the competitors.

The study also recommends the standards of the company in recruiting and retaining qualified staff. This is based on the finding that having competent and qualified staff leads to increase in profitability as well as streamlining supply chain. Therefore investment in employees through education and training leads should always be management main concern since an organization cannot exist without people.

Competent, experienced employees and systems ensure continued staff growth leading to high firm's profitability.

Finally, the study recommends adoption of innovative technology in management of supply chains to ensure that the systems are optimized and product dry out will be avoided. On the same note, kenolkobil deals with expensive product that requires huge cash flow and dry outs cannot be eliminated without adequate cash flows to finance the products. Therefore, the study recommends measures to ensure that the company is not out of cash flows to finance the products. Without resources to acquire the required products, supply chains cannot be optimized.

5.5 Limitations of the Study

The study adopted a case study approach where only Kenolkobil ltd was studied. This limits the study in that the results obtained cannot be generalized. In addition, Kenolkobil cannot be representative of the energy sector or oil marketing industry and hence the findings cannot relate to other firms nor can conclusions be related to the industry practices. Specific factors within the firm like cash flow challenges and size of the market affects profitability in addition to the supply chain management practices adopted.

The study was also limited by time. Whereas it was very easy to obtain information to assess the supply chain management at the time of the study, it was not easy to obtain qualitative measures of supply chain for previous years. Some of the information relating to previous years depended on the respondents' memory which could lead to inaccurate data. To resolve this, the researcher had to obtain information from various sources and compare the same to ensure that there were no inconsistencies.

Data collection was also limited by the busy schedules of the respondents most of whom were senior managers. It took a lot of follow ups to ensure that the filled questionnaires were returned. The researcher had to thoroughly explain the use of information provided and why the respondents should participate in the study. Some of the stations sampled were also not maintaining records to indicate the specific days the stations were dry.

5.6 Recommendation for Further Research

Based on the limitations of the study and the researcher's experience when conducting the study, recommendations for further study were developed. First, the study was limited by the case design adopted. As a result, the study recommends a similar study to be done but not using case study design. All oil marketing companies should be studied. This will enable conclusions that could be generalized as relating to all oil marketing companies. The research can also be done on sampled firms from different industries using a large sample capable of being representative.

Further research is also recommended to be done using longitudinal design where sampled firms will be identified and studied over time. Data should be collected on annual basis from the firms on annual basis. The financial data should be adjusted for differences in accounting policies among firms and any other differences that should make the firms' financial information not to be representative. The station managers should also be trained and provided with recording materials to record the days when the stations are dry.

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APPENDIX I: QUESTIONNAIRE

This purpose of this questionnaire is to collect data for purely academic purposes.

Please read the instructions given and answer the questions as appropriately as possible.

SECTOR A: HUMAN CAPITAL *(To be filled by the human resource Manager)*

1. How many employees does KenolKobil has?
2. Out of the total employees, please specify the number of employees in each category of education and years of experience

i. Education

Primary School Level and below []

High School Level []

Diploma and Certificate Level []

Under Graduate Degree []

Post Graduate Degree []

ii. Years of Experience

0-2 years []

2-5 years []

5-10 years []

Over 10 years []

3. Do you usually have training programs for your staffs?

Yes []

No []

4. If No, how do you ensure continued staff development and growth?

i.....

ii.....

iii.....

iv.....

5. How do you ensure employee productivity in your organization?

Through constant appraisals []

Motivating of the staffs []

Having clear objectives well communicated to staffs []

6. How do you rate the overall productivity of your employees?

Excellent []

Good []

Average []

Below Average []

**SECTION B: TECHNOLOGY APPLIED IN SUPPLY CHAIN
MANAGEMENT (To be filled by the IT manager)**

7. How can you rate the automation of company operations?

Fully automated []

Semi automated []

Not adequately automated []

8. How frequently do you update the software that the company use in managing the company operations?

Very often []

Often []

Occasionally []

Hardly []

9. On average, how much does the company spend monthly on IT and IT related issues? Ksh.....

SECTION C: SUPPLY CHAIN MANAGEMENT

(To be filled by supply and trading manager)

10. For the last five years, please indicate the frequency of product dry outs at the retail stations

Year	2013	2012	2011	2010	2009
Very often	[]	[]	[]	[]	[]
Often	[]	[]	[]	[]	[]
Occasionally	[]	[]	[]	[]	[]
Hardly	[]	[]	[]	[]	[]

11. What are the measures put in place to ensure accurate demand planning and forecasting?

.....
.....
.....

12. Please the following table indicating the costs incurred by the company for the last five years?

Year	2013	2012	2011	2010	2009
Financing Costs (Sh.'Millions)					
Supply Costs (Sh. Millions)					

SECTION D: PRODUCT DRY OUTS

(To be filled by the stations managers)

13. Please indicate the number of days your station was faced by product dry outs for the last five years

Year	2013	2012	2011	2010	2009
Days of product dry outs per year (Sum of all products dry days)					

End

Thank you for your time