

**LOGISTICS MANAGEMENT PRACTICES AND OPERATIONAL
PERFORMANCE OF FAST MOVING CONSUMER GOODS
MANUFACTURERS IN NAIROBI**

BY

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**A Research Project Presented In Partial Fulfillment of the Requirement for the
Award of the Degree of Master of Business Administration, School of Business**

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DECLARATION

I, the undersigned, declare that this research project is my original work and that it has not been presented in any other University or Institution for academic purposes.

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

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

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DEDICATION

I dedicate this project to my family

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ABBREVIATIONS AND ACRONYMS

CTC:	Cut, Tear and Curl
FMCGM:	Fast Moving Consumer Goods Manufacturers
KAM:	Kenya Association of Manufacturers
RBV:	Resource Based View Theory
SCA:	Sustainable competitive advantage
SPSS:	Statistical Package for the Social Sciences
UK:	United Kingdom

ABSTRACT

Logistics management is a part of retail logistics that has become an important issue for practitioners and researchers especially when focusing on the ‘last mile’ problem within an e-commerce context. The general objective of the study was to investigate the logistics management practices and operational performance of Fast Moving Consumer Goods Manufacturers in Kenya. Specific research objectives for this study was: to establish the logistics management practices employed by Fast moving manufacturing companies in Kenya, to determine the effect of logistics management practices on the operational performance of Fast moving manufacturing companies in Kenya and to establish the challenges logistics management practices employed by Fast moving manufacturing companies in Kenya. This study was guided by three theories which include the resource based view, institution theory, and Unified Theory of Logistics. In order to plainly study the topic of research, descriptive research design was used. This method of research was preferred because the researcher is able to collect data to answer questions concerning the status of the subject of study. The population of this study consisted of all Fast-Moving Consumer Goods Manufacturers in Kenya. This study adopted a stratified sampling technique. From the possible 766 target population, stratified random sampling was employed to select a total of 85 sample population. This study collected primary data using a self-administered questionnaire. The questionnaire included open and closed ended questions for ease of administration. The data collected was keyed in and analyzed with the aid of SPSS. For the first and the third objective, Descriptive statistics was used because they enable the researcher to meaningfully describe distribution of scores or measurements using few indices for the second objective, inferential data analysis was done using multiple regression analysis to establish the relationship between the variables.

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

Developing and maintaining a competitive advantage is becoming increasingly difficult for retail stores in today's hypercompetitive business and ever more complex global environment. As customers demand for more customized products and services offerings increases, stores are looking for new and innovative ways to differentiate themselves. An interesting opportunity is presented by the excellence in logistics operations (Yazdanparast, Manuj, & Swartz, 2010). In-store logistics operations include handling, ordering, arranging and processing of merchandise within the store. It focuses on all flow processes within outlets of store-based retailing (Kotzab & Teller, 2005). Kotzab (2000) characterized in-store logistics as consisting of point of destination (shelves), point of delivery, objects (single stock keeping units and related information) and tasks which involves transportation, inventory carrying and shelf management, and labeling and order management. The ultimate goal of in-store logistics is efficiency, which means to offer quantities of items as requested by end-users at lowest cost possible (Kotzab & Teller, 2005).

This study will be guided by three theories which include the resource based view, institution theory, and Unified Theory of Logistics. Resource based theory views the firm as a bundle of resources (Penrose, 1959), according to its principles, an organization must secure an efficient bundle and flow of the right type of resources from its environment in order to survive and improve its operational performance. The institutional theory is concerned with the processes by which structures, routines, rules and norms become established as the guidelines for acceptable behavior. Organizations act in a way that fulfills both customer and legal requirement. Pressures from these two parties influence the adoption of environmentally responsible behavior (Laosirihongthong, Adebajo, & Tan, 2013). Unified Theory of Logistics argues that competitive advantage goal of the firm is to continuously create customer value to satisfy end users. A review of the theories of the firm leads to the conclusion that the role of logistics is to provide the boundary-

spanning, demand and supply coordinating capabilities the firm needs to create customer value to satisfy customers.

Operational performance improvement has been achieved by organizations which are using logistics services to supply fast moving goods. Logistic management has become one of the major strategies that companies are adapting to remain competitive through supplying fast moving goods in the current dynamic environment. House and Stank (2001), third-party logistics provider can help a firm achieve substantial results in its operational performance. As per Muller, (1991), an improvement in the delivery process, resulting from the logistic management process, can also contribute towards competitive advantages, as contributed by the product. Logistics management resulted in operational performance improvement through; decreased operating costs, improved customer satisfaction, increased productivity, timely delivery of services to clients, reduced lead time and improved profits, faster response to customer's demands and use of modern technology in offering services (Mulama, 2012).

1.1.1. Logistics Management Practices

Adebayo (2012) defined logistics management practices as a set of activities undertaken in an organization to promote effective management of its logistics. Logistics management organizations are tasked with the responsibility of formulating and implementing strategies that if adopted will lead to achievement of a sustained competitive advantage. Logistics refers to the flow of resources between the point of origin and the point of consumption in order to meet requirements of customers or corporations (Vikipedia, 2005). The resources managed in logistics can include physical items such as food, materials, animals, equipment, and liquids; as well as abstract items, such as time and information. Logistics management is the part of supply chain management that plans, implements, and controls the efficient, effective forward, and reverses flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer's requirements. Logistics management plays a significant role in the success of any company's operations and has a direct impact on its bottom line.

More importantly, logistics processes play a big part in customer satisfaction, which is more important than low product costs. Logistics professionals should think of themselves as a customer-facing portion of the company and strive every day to add value for their customers. Logistics management practices involve the operations that manage the inventory flow from the store's receiving dock to the point of sale passing through the stock room (store warehouse). Logistics operations include handling, ordering, arranging and processing of merchandise within the store (Samli, 2005). It involves returns from the customers as well as end of season returns from the store to the Distribution Center (DC). Logistics operational activities can be grouped into two main categories: the inbound and outbound logistics.

Inbound logistics refers to the transport, storage and delivery of goods coming into a business. Outbound logistics refers to the transport, storage and delivery for goods going out of a business. Inbound and outbound logistics combine within the field of supply-chain management, as managers seek to maximize the reliability and efficiency of distribution networks while minimizing transport and storage costs (Qureshi, Dinesh & Pradeep, 2007). Understanding the differences and correlation between inbound and outbound logistics can provide insight for developing a comprehensive supply-chain management strategy. Companies work with different supply-chain partners on the inbound and outbound side of logistics. The inbound side concerns the relationship between companies and their suppliers, while the outbound side deals with how companies get products to their customers. Regardless of the source or destination, companies may work directly with third-party distributors on either side as well (Olfa, 2012).

1.1.2. Operational Performance

Operational Performance refers to the measurable aspects of the outcomes of an organization's process, such as reliability, production, cycle time, and inventory turns (Voss, Ahlstrom & Blackmon, 2013). Operational performance is used to assess the success of an organization. The operational performance systems used must be relevant and appropriate to the strategies and competitive environment of the organization

(Kennerly & Neely, 2003). Operational performance gets its importance from its involvement in recurring activities to establish organizational goals, monitor progress towards the goals, and make adjustments towards achieving those goals more effectively and efficiently. It affects business performance measures such as market share and customer satisfaction (Voss, Ahlstrom & Blackmon, 2013). Logistics management practices improve operations performance by cutting down logistics cost, thereby enabling them to offer their products and services at more competitive rates to beat the stiff competition (Qureshi, Dinesh & Pradeep, 2007). Logistics management practices are strategically selected to enable create product differentiation by providing flexibility, speed with minimal holding off in a logistical supply chain.

1.1.3. Fast Moving Consumer Goods Manufacturers in Kenya

Fast Moving Consumer Goods Manufacturers (FMCGM), are products that are sold quickly at relatively low cost. Though the absolute profit made on FMCGM products is relatively small, they generally sell in large quantities, so the cumulative profit on such products can be large. Fast Moving Consumer Goods Manufacturers include a wide range of frequently purchased consumer products such as toiletries, soap, cosmetics, teeth cleaning products, shaving products and detergents, as well as other nondurable such as glassware, light bulbs, batteries, paper products and plastic goods. The FMCGM distribution Chain is the interrelated collection of processes and associated resources. It includes suppliers, manufacturers, logistics service providers, warehouses, distributors, wholesalers and all other entities that lead up to delivery to the final customer. Followed in the market through sales force activity it can help gain a high level of distribution (Lee, 2014).

The Kenya's FMCGM has been experiencing faster growth in the last few decades. The growth of the industry has resulted in many companies, both local and foreign entering the industry to take a share of the market (Wasamba, 2008). Currently, there are many Fast-moving manufacturing companies in Kenya. The companies include Interconsumer Limited, Bidco Oil Refineries, Kapa Oil, Finlay, ARM, Kenya Seek Company, Kenya Nut Company, House of Dawda Group, Maisha Flour Mills, Melvin Marsh International,

Nestle Foods Kenya, Eveready East Africa, Premier Food Industries, Proctor & Allan (E.A), Coca-Cola, PepsiCo, Ramzco, and HACO Industries (K) among many others (Njambi&Katuse, 2013). These among other companies manufacture a variety of FMCGM that is sold both locally and internationally.

According to Perpetuity Research and Consultancy International (2014), Fast Moving Consumer Goods Manufacturers is used by those connected with retailing to describe price sensitive goods that are packaged and branded, consumables and for mass use. They often are convenience products that are typically purchased on a regular basis and have a short shelf life. Contribution of Fast Moving Consumer Goods Manufacturers sector in every economy is significant. Due to globalization, every economy is facing tough competition. Entries of Multi-National Corporations has made the market more competitive (Vikapia, 2005). Due to globalization, the market is highly saturated and highly competitive. As a result of this, there are more sellers and substitutes are coming up all the time. This means that the bargaining power is with the buyer. The buyer-seller linkage in this is driven by price, quality and timeliness. This is transactional or an arm's-length relationship wherein neither party is especially concerned with the well-being of the other. The main concern of the buyer is the price which is mostly determined by market prices.

The key issues in this sector are efficiency and effectiveness. This efficiency and effectiveness is determined by cost efficiency, quality, flexibility and timeliness. Cost is related to the quality of goods. High quality goods with high cost will tend to move faster in the market as compared to low quality goods at a lower cost. Time goes hand in hand with flexibility. An effective logistics system that guarantees a fast delivery contributes to customer satisfaction, which in turn contributes to loyal behavior. In addition to the speed of delivery, the logistics system should allow different ways of delivering products (Wasonga, 2012).

1.2 Research Problem

Logistics management is a part of retail logistics that has become an important issue for practitioners and researchers especially when focusing on the ‘last mile’ problem within an e-commerce context (Kopczak, 2001). The vast majority of retailers are losing up to 4 per cent sales annually from inefficient execution of critical day-to-day processes in the store emanating from stock out situations not being alerted on time, inconsistent and inefficient store execution from limited standardization of store processes, low visibility of products and processes in the store and back room as well as poor execution of promotions and new products introductions. Liebmann and Zentes (2014) observed that the analysis of the flow of goods within a self-service retail outlet from a supply chain perspective can be of two reasons quite ‘appealing’: that the availability of products in the shelves is an important key performance indicator for the purchasing transaction and that the inventory carrying and handling costs as well as costs for human resources are at that level of supply chain relatively intense.

A number of studies have been done in the area of logistic management practices and their influence on performance. Globally, Green, Whitten, and Inman (2008), established a positive relationship between logistics performance and organizational performance within the manufacturing sector. An interesting observation by Solakivi, Töyli, Engblom and Ojala, (2011); Logistics was being handled equally efficiently in the surveyed companies regardless of whether it had remained in-house or been outsourced. This finding suggests that the fit between the company context and its outsourcing decision might be more important an operational performance driver than outsourcing per se.

A study by Mulama (2012) on logistics outsourcing and performance of large manufacturing firms, found out that various benefits accrue to a firm as a result of outsourcing all or part of its logistics services to a third-party company through reduced operation costs which results in operational and organizational efficiency. Olfa et al. (2012) study on in-store logistics operations performance and customer outcomes found out that customers may derive a substantial share of their satisfaction from interactions with the in-store logistics operations with customer-perceived performance.

Ton and Harrow (2010) carried out a study on how the Spanish supermarket chain Mercadona fixes the retail's 'last 10 yards' problem and found out that the secret for retail stores to offer aggressive prices, and high-touch customer service lies in the in-store logistics operations the operations between loading dock and customer hands. Kopczak(2001), did a study on designing supply chains for the 'click-and-mortar' economy. He established that the vast majority of retailers are losing up to 4 per cent sales annually from inefficient execution of critical day-to-day processes in the store emanating from stock out situations not being alerted on time.

Locally, Wambui (2010) on logistics management practices in Kenya was a case study focused on an organization in the defense sector. Major research findings indicated that outsourcing of support services was mainly affected by availability of logistics service providers while outsourcing of ICT services was mainly affected by the secretive nature of the military service and budgetary allocations had a major effect on the outsourcing of ordinance. Bosire (2011) investigated logistics management practices and their effect on lead time and customer service. The finding of the study was that the outsourcing services adopted by the firms were importation management, warehouse management, material handling management, formation management and inventory management. Maingi, (2015) carried out a study on the effect of in-store logistics operations practices on customer satisfaction in supermarkets in Mombasa county. The study found out that supermarkets adopted a variety of in-store logistics operations practices in the areas of forward and reverse logistics, in-store activities, inventory management, multi-retail activities and data management and master store planning. The study also found out that customer satisfaction improved as a result of adopting in-store logistics operations practices. It was also established that the model had a moderate explanatory power of the relationship between in-store logistics operations practices and customer satisfaction.

Studies on how logistics management practices affect the performance of fast moving consumer goods manufacturers in Kenya are limited. This has created a knowledge gap that needs to be filled. This study was intended to fill the gap by answering the question:

what are the effects of logistics management practices on operational performance of Fast Moving Consumer Goods Manufacturers in Kenya?

1.3 Research Objectives

The general objective of the study was to investigate the logistics management practices and operational performance of Fast Moving Consumer Goods Manufacturers in Kenya.

Specific research objectives for this study include:

- i. To establish the logistics management practices employed by Fast-moving manufacturing companies in Kenya
- ii. To determine the effect of logistics management practices on the operational performance of Fast moving manufacturing companies in Kenya.
- iii. To establish the challenges faced logistics management practices employed by Fast moving manufacturing companies in Kenya

1.4 Value of the Study

The study offers valuable contribution to theory, policy and practice logistics. More importantly, the study offers value to the body of operations management discipline by determining the relationship between logistics Management practices and operational performance that will form the basis of further study by identifying the knowledge gap that arises from this study.

The study will be beneficial to the academicians in contribution to the existing literature as a useful source of reference in the field of logistics management and Fast-moving goods and also acts as an insight for further research to refine and extend the present study. Supply chain practitioners are expected to use the findings in policy formulation and implementation with respect to use of logistic practices in the supply of fast moving goods.

In practice, the findings of this study can benefit the retail store managers and in-store logistics operations staff by providing an insight into how their respective stores can

effectively manage their in-store logistics practices to create customer value as well as a competitive strategy in Kenya's increasingly complex and volatile retailing environment. This study offers an understanding on the importance of adopting logistics management practices and how they can be integrated within the supply chain to gain a competitive advantage.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature on the Logistics Management Practices. It also discusses the theories concerning logistics management practices and operational performance of Fast Moving Consumer Goods Manufacturers in Kenya.

2.2 Theoretical Framework

This section discusses the theoretical foundations in which this study is based which include Resource based view theory, institution theory and unified theory of logistics. The relationships of these theories with this study are elaborated at the end of description of each theory.

2.2.1 Resource View

Resource-based view has been developed in work by Barney (1986), for analyzing firm behavior and competitive strategy (Mowery, Oxley & Silverman, 1998). The RBV contends that the idiosyncratic resources and capabilities of firms are the key sources of sustained competitive advantage. This premise appears to be supported by logistics and Supply Chain Management research (Lynch et al., 2000). According to Barney (1991) resources can be classified into organizational capital resources, physical capital resources and human capital resources. Capabilities can be defined as the skills a firm needs to take full advantage of its assets. Capabilities are complex bundles of individual skills, assets and accumulated knowledge exercised through organizational processes that enable firms to co-ordinate activities and make use of their resources (Olavarrieta & Ellinger, 1997).

Tibben-Lembke (2002) describes the three generic strategies for competing in the marketplace as low-cost leadership, differentiation and focus. One avenue of creating a competitive advantage with differentiation is through building a brand reputation. An organization may choose to focus on implementing logistics management practices to expose the negative environmental performance of its competitors. In this way, the

organization can cut a niche for its products. Developing and implementing logistics management practices can only be achieved through creating environmentally responsible policies and investing in the necessary equipment and training. Creating a competitive advantage through implementing reverse logistics practices would lead to improved market share and consequently higher profit margins (Fortes, 2009).

2.2.2 Institutional Theory

The institutional theory is concerned with the processes by which structures, routines, rules and norms become established as the guidelines for acceptable behavior. Organizations act in a way that fulfills both customer and legal requirement. Pressures from these two parties influence the adoption of environmentally responsible behavior (Laosirihongthong et al., 2013). Organizations have institutionalized reverse logistics practices because of internal and external pressures. As Carter, Smeltzer and Narasimhan (2000) observed, companies institutionalize reverse logistics practices due to fear of loss of their market share to competitors and also awareness of the consequences of non-compliance with environmental imperatives. This is over and above growing demand of customers and environmental societies for more environmentally friendly products.

These challenges and pressures push firms to seriously considering environmental impacts while doing their business. Managerial decisions to adopt environmental management initiatives maybe influenced by three institutional mechanisms: normative, coercive and mimetic (Di Maggio & Powell, 1983). Due to normative pressures, such as customer requirements, organizations are forced to conform to be perceived as more legitimate. Several external stakeholders can also impose coercive pressures on companies, depending on their power. Government bodies may for instance affect the adoption of environmental practices by firms by means of stringent environmental regulation. Managers may also institute environmental practices as a strategy to mimic and outperform competition whose environmental responsibility has earned them a competitive edge (Zhu et al., 2007).

2.2.3 Unified Theory of Logistics

One of the propositions of a unified theory of logistics is that competitive advantage goal of the firm is to continuously create customer value to satisfy end users. A review of the theories of the firm leads to the conclusion that the role of logistics is to provide the boundary-spanning, demand and supply coordinating capabilities the firm needs to create customer value to satisfy customers. The logistics contribution to the firm's competitive advantage is significant in both efficiency (cost leadership) and effectiveness (customer service). Logistics capabilities for competitive advantage include demand-management interface capabilities (customer service and logistics quality), supply-management interface capabilities (low cost supply and distribution), and information management capabilities (information sharing via information technology and connectivity).

Logistics capabilities also play an important role in boundary-spanning interfaces between internal functional areas and between the focal firm and supply chain partners. Coordinated with the marketing function, logistics can differentiate product and/or service offerings to fulfill unique customer requirements (Mentzer et al., 2001). When joined with production, logistics offers cost and investment reductions while maintaining service levels. Logistics capabilities also help the firm cooperate with supply chain partners (i.e. suppliers, distributors, and other intermediaries) in coordinating supply and demand flows to deliver customer value and, in return, in sharing benefits. Thus, logistics is an integral part of the larger concept of supply chain management.

Retailer's logistics, particularly in-store logistics operations, determine for a large part the interaction between a customer and the retail servicescape (Samli et al., 2005) leading to a "cognitive evaluation of the service experience" (Sandstrom, Edvardsson, Kristensson, & Magnusson, 2008). Stores can differentiate their offerings by streamlining the shopping experience and making customer's use of the service more convenient and satisfactory (Sandstrom et al., 2008). When customers decide where to shop or whether to return to a retailer, the quality of logistics services was found to be an important factor (Rafiq & Jaafar, 2007) with timeliness, availability, and delivery conditions creating value for customers and functioning as criteria for customer evaluations of logistics

operations (Mentzer et al., 1999, 2001). Logistics can directly convey value to the customer in terms of convenience and time saving, through an effortless interaction with the retail services cape.

2.3 Logistics Management Practices

Logistics management practices comprised of the core practices and the support practices. The core practices are customer service, inventory management, transportation, and information flow. The related practices that support the core practices include, but not limited to warehousing, and packaging (Ballou, 2003).

2.3.1 Order Process Management

Order processing is the term used to identify the collective tasks associated with fulfilling an order for goods or services placed by a customer and it formed the basis for the information flow in a logistics system (Christopher, 2010). It had three principal functions that is create a flow of information that preceded the goods, accompanied them and followed them (Christopher, 2010). The importance of accurate information to achieving superior logistical performance had historically been underappreciated. While many aspects of information were critical to logistics operations, the processing of orders was of primary importance (Bowersox, et al., 2010). Failure to fully comprehend this importance resulted from not fully understanding how distortion and operational failures in order processing impact logistical operations (Bowersox, et al., 2010). Order processing is the term used to identify the collective tasks associated with fulfilling an order for goods or services placed by a customer (Stevenson, 2009).

2.3.2 Inventory Management Practices

Inventory management practices provide for the upstream and down inventory visibility in the logistics or supply chain system. The aim of inventory is to provide both internal and external customers with the required service level, ascertain the present and future requirement for all types of inventory, keep costs at minimum and provide for the (Lysons& Farrington, 2012). In the firm, all inventory policies must be of benefit by driving period operating expenses and working capital requirements. According to

Lysons and Farrington (2012), to measure the effective and efficient performance of inventory depends on to what extent the firm has the right quantity of inventory in the right place and at the right time. The indicators to measure such inventory are the lead time, the service time (safety stock), the rate of stock turn, stock outs in a given period and stock cover.

2.3.3 Transportation Practices

Transportation has the overriding objective that moves the cargo from point A to point B. Transportation is a vital strategic link between firms in a supply chain and must be managed effectively to meet customer due date and other shipping requirements at a reasonable cost (Wisner *et al*, 2011). In logistics it is transportation that provides the flow of materials, products and persons between productions facilities, warehouses, the distribution centers, the terminals and the customers. Transportation is the only activity that provides the time and place utilities through the outbound and inbound logistics. An inefficient transportation system may lead to the firm incurring high cost to deliver product to customer, and this may lead to loss to the firm; and the transport system must be able to address the major issues of the mode selection, route selection and fleet size because it is the vital force for competition for the firm (Goldsby *et. al.*, 2014).

2.3.4 Information Flow Practices

With the emergence of ICT, information flow provides a special advantage to link one activity with the others and make real-time data created in activity widely available, both within the firm and with outside suppliers, channels, and customers. For information flow to be effective and efficient; it must enhance the firm's logistics processes by planning, controlling, coordinating and monitoring the logistics process. According to Nowakowska and Grunt (2007) the effective functioning of logistics information system requires the use of hardware and technology transfer; and the information system must be customized to serve the logistics system effectively to enhance the line of communication (Wisner *et al.* 2007).

2.3.5 Warehousing Practices

Warehousing includes space determination, stock layout, configuration, and stock placement (Ballou, 2003). In logistics; delivering the right product in the right quantity relies on warehousing picking and dispatching accurately. Warehousing ensures that products are delivered to the right customer at the right place, on time. It also ensures cost efficient operation by delivering the product at the right price, and in perfect order and condition. Pienaar and Voght (2006) proposed that effective customer service depends on the firm warehousing operations. Warehouse has three operational functions of the firm; the function that receives and transfer customer orders, the information transfer function that ensure the use of technology for warehousing efficiency and the storage function that store product temporarily or permanently.

2.3.6 Packaging Practices

In logistics, packaging activities are responsible for designing, handling, storage and protection from loss and damage. Products are packaged to serve the marketing need of branding and promotional purposes, whereas protection from loss and damage requires the packaging to enable the product to reach its required destination in the right condition (Ballou, 2003). Packaging must be seen as a coordinated system that support logistics by preparing the product for secure, efficient and effective handling, transport, distribution, storage retailing, consumption and recovery, reuse or disposal to meet the customer value. Packaging supports logistics through protection, storage, transport, information and handling of the product and the correct design of the packaging can lead to the overall low logistics costs or supply or service delivery (Pfohl, 2004).

2.4 Operational Performance

Operational performance relates to the firm's capabilities to more efficiently produce and deliver products to customers. It refers to the strategic dimensions by which a company chooses to compete (Narasimhan, 2001). There seems to be a universal agreement in literature that quality, delivery, flexibility and cost are the core and most often mentioned operational performance areas.

With regard to cost, customers' support for product acquisition facilitates product return for recycling processes of manufacturers.

Quality refers to the ability of product or service to consistently meet or exceed customer expectations. Quality means getting what you pay for. In terms of quality, logistic management with customers led to product-based performance in the form of conformance to specifications and durability. Vachon and Klassen (2008) found that logistical management cooperation with customers is significantly and positively associated with greater quality improvement. If quality performance is manufacturing's primary strategic objective, then logistic management with customers can offer a further synergistic mechanism to achieve competitive quality gains (Vachon & Klassen, 2008).

With regard to flexibility and delivery, Vachon and Klassen further identified a positive relationship between logistic management with customers and flexibility, but environmental cooperation with customers becomes insignificant when upstream collaboration is introduced in their model.

Companies should integrate environmental aspects into both product and process design in order to respond to customer demand (Pagel, & Krause, 2002). Logistic management with customers helps firms to integrate technological organizational innovations, thus providing for simultaneous improvements in operational performance. Environmental cooperation with customers usually generates benefits in terms of cost, quality, flexibility and delivery/time (Klassen & Vachon, 2003).

2.5 Empirical Literature Review

This section review what other researchers have done in the field of logistics management. The section considers the research arguments, their findings as well as their recommendations.

Waweru *et al.* (2015) opined that to gain superior performance, the logistics management or supply chain management must have the ability to meet customer satisfaction, response to customer complaints, deliver on timely basis, have a fill rate, stock-out probability and accuracy. The Japan Institute of Logistics System (2011) argued that, logistics management is an enhancement of corporate superior performance; and for

management, logistics as a management strategy is required to contribute to gain profits. Chan (2003) opined that the quality performance of a firm logistics management or the supply chain management are determined by qualitative factors of customer complaints, customer response time, on time delivery, lead time, fill rate and accuracy.

Logistics affects many procedures and activities in a business, bad logistics management leads to increasing operational costs and decreased customer service. Logistics interferes with many business areas and, thus it is suggested to identify and determine service cost trade-offs in order to provide positive benefits to the logistics system as a whole (Rushton *et al.* 2006). A study done by Bailey *et al.* (2005), suggest that increasing global competition is changing the environment facing most companies today. For them, as trade barriers fall and transaction costs decline, new global competitors are entering previously more isolated domestic markets. In response to this intensified competitive pressure, local companies are pushed to enhance their performance by innovating and adopting process and product improvements (Panjehsouladgaran *et al.*, 2010 and Ian, 2005).

However, Olavarrieta and Ellinger (2004) argued that in a turbulent and dynamic environment, firms must have agility in the market place to survive and succeed, and logistics has become an increasing area of strategic concern for firm performance, and important source of sustainable competitive advantage (SCA). Their finding was that a firm must combine its logistical resources (Input, Assets and Capabilities, its strategic resources) and organizational learning (information acquisition, information distribution, information interpretation and knowledge storage) to gain a relative superior performance. Wisner *et al.* (2011) posit that for the supply chain or the logistics system to stay performing, costs management and containment must be an ongoing concern while also customers must be satisfied with the products and services they are purchasing.

In recent years, logistic management has evolved as the intra and inter-firm management of the upstream and downstream supply chain, which has the capability to cut the overall environmental impact of both the forward and reverse flows (Klassen & Johnson, 2004).

Suppliers, manufacturers, customers and disposal companies must be incorporated in implementing logistic management practices (Thun & Müller, 2010). Previous studies exploring ecological initiatives have focused primarily on selected functional areas (Rao & Holt, 2005). The incomplete and developing conceptualizations have generated unconvincing results about the relationship between logistic management practices and firm performance (Zailani et al., 2012).

To explore the conceptualizations of logistic management practices and its impact on performance, there is a need to investigate how individual dimensions of logistic management are related to selected dimensions of operational performance. In order to fully understand logistic management, it is important to focus logistic management study on the totality of the supply chain from both upstream and downstream sides and internal processes (Rao & Holt, 2005). Cross-functional integration within a firm and integration with suppliers and/or customers on implementing environmental management practices is required to achieve sustainable firm performance (Vachon & Klassen, 2006).

Many organizations the world over have been forced to adopt reverse logistics practices in order to conform to set environmental regulations. Recently however, several voluntary reverse logistics programs have been adopted by organizations in order to reduce the pressure for new or expanded legislation. Many organizations have tried to improve their own performance and others by having their industry association impose more stringent requirements on its entire membership. This is all in a bid to avoid the consequences of non-compliance which include heavy financial penalties and / or withdrawal of licenses (Eltayeb, Zailani & Ramayan, 2011).

2.6 Challenges

Like any other field of study, logistics and logistics management practices are also affected by challenges that see firms experiencing difficulties while providing products and services to end customers. While some of these challenges have a long service effect on the performance of the firm and need overtime strategic efforts to deal with them;

there are other challenges that the firm will require a rapid approach to address them. Logistics management is a customer focus management; that is logistics efforts must lead to customer satisfaction and it is this customer satisfaction that remains a high challenge for firms. According to Wisner *et al.* (2011) customer satisfaction is determined by the level of customer service; and the challenges is the focus on how to avoid a misstep in providing the right product, in the right quantity, in the right condition, at the right place, at the right time, for the right customer and at the right cost. The World Bank Group (2005) and World Bank Group (2014) reported that improving logistics performing in low income countries mean reforming custom agencies and making investment in logistical infrastructures.

Vogt and Pienaar (2006) posit that many firms are faced with the challenge of how logistics interface with the production and marketing functions to achieve the firm objectives. Marketing means selling and production means making something, and it is logistics activities that must take place between the point and times of production or purchase and the points and times of demand, and they affect the efficiency and effectiveness of the two functions. For example, different operating objectives between marketing and production/operations in the form of maximizing revenue versus minimizing cost may lead to fragmented interest that may subsequently lead to lower customer service or higher total logistics costs. Costs trade-off (place decision, price decision, product decision and promotion decision) between the marketing and logistics functions are other challenges that firms must address. For example, a firm will not be profitable and grow if there is a waste in the logistics system that results to the high price of product, since the costs of product cover the relevant costs of production, marketing, distribution and general administration.

2.7 Summary

The Literature review introduces the reader to logistics management practices as a strategic tool. Several approaches have been suggested by different researchers on logistics management practices as a means of strategy to outperform their rivals. These studies took broad view of strategy and viewing specific practices of logistics

management practices that firms can be built on to outperform but did not focus on the logistics management practices as an integrated whole that must be managed to become superior performer. Most of the studies did not also focus on logistic management practices and operational performance of Fast Moving Consumer Goods Manufacturers in Kenya.

2.9 Conceptual Framework

In order to study the relation between logistics management practices and operational performance of Fast Moving Consumer Goods Manufacturers in Kenya, a conceptual framework is necessary to develop on how the relation is correlated and the direction between the pairs.

Figure 2.1: Conceptual Model

Independent variable

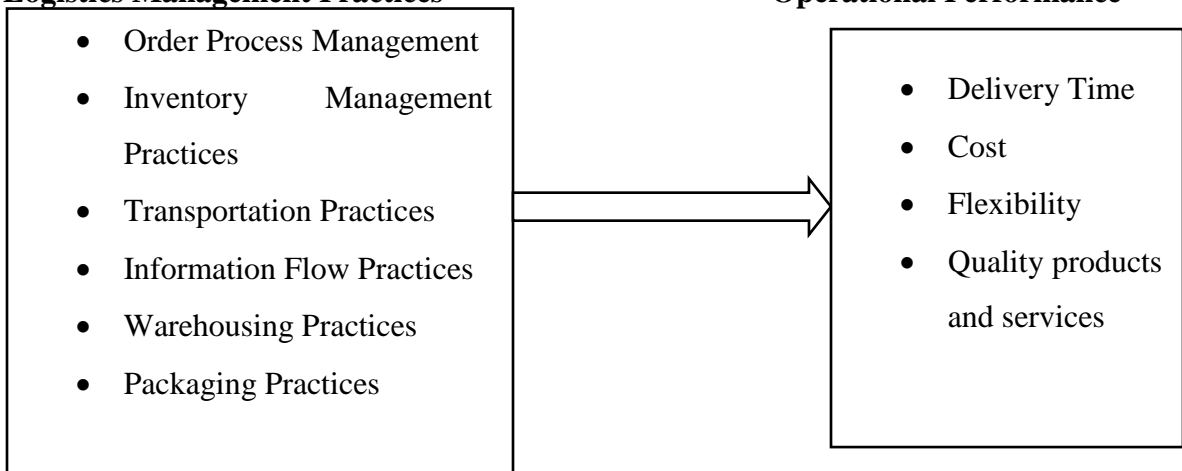
Logistics Management Practices

- Order Process Management
- Inventory Management Practices
- Transportation Practices
- Information Flow Practices
- Warehousing Practices
- Packaging Practices

Dependent variable

Operational Performance

- Delivery Time
- Cost
- Flexibility
- Quality products and services



Source: (Author, 2016)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that will be applied in conducting the study. It covers the research design, the target population, the sampling design, the

sample, data collection instruments, techniques and the data analysis techniques that were used in the study.

3.2 Research Design

Descriptive research design was used. This method of research is preferred because the researcher is able to collect data to answer questions concerning the status of the subject of study. Descriptive research determines and reports the way things are done and also helps a researcher to describe a phenomenon in terms of attitude, values and characteristics (Mugenda & Mugenda, 1999). A descriptive research design also allows for in-depth analysis of variables and elements of the population to be studied and as well as collection of large amounts of data in a highly economical way. It enables generation of factual information about the study. This is so because the descriptive design relies much on secondary data which helps in developing the case basing on facts, sustained by statistics and descriptive interpretations from archival materials and data.

3.3The Target Population

The population of this study consisted of all FMCG manufacturing firms in Nairobi. The target population was all Fast-Moving Consumer Goods Manufacturers in Nairobi which are members of Kenya Association of Manufacturers (KAM). According to the Kenya manufacturers and exporters 2016 directory there are 766 Fast moving manufacturing companies operating in Kenya.

3.4 Sample Design

This study adopted stratified sampling technique because it enabled generalization of a larger population with a margin of error that is statistically determinable and also gives employees equal opportunity to participate (Mugenda & Mugenda 2003). From the possible 766 target population, stratified random sampling was employed to select a total of 85 sample population. Due to the large size of the target population and limited availability of time and resources to survey the whole target population, a sample size was used to give results that reflected the target population as precisely as needed using the Kothari, (2004) formula

$$n = \frac{Z^2 pqn}{e^2}$$

$$e^2(N-1) + Z^2pq$$

Where:

n: is the sample size for a finite population

N: size of population

p: population reliability (or frequency estimated for a sample of size n), where p is 0.5 which is taken for all population and p + q = 1

e: margin of error considered is 10% for this study.

$Z_{\alpha/2}$: normal reduced variable at 0.05 level of significance z is 1.96

According to the above formula, the sample size for this study is:

$$\begin{aligned} n &= \frac{(1.96)^2 \times 0.5 \times 0.5 \times 766}{(0.1)^2(766-1) + (1.96)^2 \times 0.5 \times 0.5} \\ &= \frac{735.6664}{7.65 + 0.9604} \\ &= \frac{735.6664}{8.6104} \\ &= 85.43 \end{aligned}$$

Therefore, the sample size was 85 respondents

3.5 Data Collection

This study collected primary data using a self-administered questionnaire. The questionnaire included open and closed ended questions for ease of administration. To enhance quality of data, Likert type questions were provided whereby respondents were required to indicate the extent to which the statements representing variables apply to their organizations. A five-point Likert scale was used. The structured questions were used in an effort to facilitate easier analysis. The questionnaire was administered in person to avoid discussion among respondents from the various state corporations which may have jeopardized the whole study. The questionnaire consisted of four parts. Part A

collected biographic data, part B the Logistics Management Practices in the Firm, part C the Effect logistics management practices and operational performance and part D will covered The Challenges of Logistics Management Practices in the Firm

3.6 Data Analysis

The data collected was keyed in and analyzed with the aid of SPSS. For the first and the third objective, Descriptive statistics were used because they enable the researcher to meaningfully describe distribution of scores or measurements using few indices (Mugenda & Mugenda, 2003). The qualitative data from the open-ended questions will be analyzed using conceptual content analysis. The information was presented inform of frequency tables and graphs for easy understanding and interpretation of the results.

For the second objective, multiple regression analysis was used to establish the relationship between the variables. The regression equation used was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \epsilon$$

Whereby

Y = Operational Performance

X₁ = Order Process management

X₂ = Inventory management practices

X₃ = Transportation practices

X₄ = Information flow Practices

X₅ = Warehousing practices

X₆ = Packaging practices and β_0 β_1 β_2 β_3 β_4 β_5 and β_6 were the regression equation coefficients for each of the variables discussed.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of the primary data collected from the administered questionnaires. The collected data was edited and cleaned for completeness and consistency in preparation for coding. Once coded, the data was keyed into the Statistical Package for Social Sciences (SPSS) for analysis. Descriptive statistics such as means and standard deviations were used to analyze the data. The study also used inferential statistics to discuss the findings. Regression analysis was used to test the relationship between the variables under study in relation to the objectives of the study. Analysis of variance (ANOVA) was also done to confirm the findings of regression analysis.

4.2 Response Rate

A total of 85 questionnaires were administered. The questionnaires contained questions that addressed the objectives of the study. The objectives of the study were: To establish the logistics management practices employed by fast moving manufacturing companies in Kenya, to determine the effect of logistics management practices on the operational performance of fast moving manufacturing companies in Kenya and to establish the challenges faced logistics management practices employed by Fast moving manufacturing companies in Kenya. The study managed to obtain 70 completed questionnaires representing 82.3% response rate. This response was adequate to allow the researcher to continue with the analysis.

4.3 General Demographics

This section covers the general demographics of the respondents" and the Fast-moving manufacturing companies that they are working for. The demographics discussed are firm ownership, years of operation in Kenya and outside Kenya and the job positions held by the respondents" in their respective Fast-moving manufacturing companies.

4.3.1 Firm Ownership

The study sought to know whether the Fast-moving manufacturing companies were foreign owned or locally owned. The results of the study are as shown in the Table 4.1

Table 4.1: Firm Ownership

Ownership	Frequency	Percent
Local	49	70
Foreign	14	20
Both local and foreign owned	7	10
Total	70	100.0

Source: Research Data.

From the research findings, the study revealed that most of the firm a as shown by 70% were locally owned whereas 30% of the firms engaged were foreign owned, this implies that most of the companies were locally owned.

4.3.2 Years of Operation in Kenya

The study further sought to establish the number of years the Fast-moving manufacturing companies had been operating in Kenya. The results of the study are as shown in Table 4.2

Table 4.2: Years of Operation in Kenya

Years of Operation	Frequency	Percent
5-10 years	21	30
11-20 years	42	60
Over 20 years	7	10
Total	70	100.0

Source: Research Data.

The study established that 60% of the Fast-moving manufacturing companies had been operating in Kenya for 11-20 years followed by those operating for 5-10 years at 30%. Those operations of above 20 years accounted for 10% only. This indicates that the researchers obtained data from firms with many years of experience in the logistics management.

4.3.3 Operations outside Kenya

In this section, the study sought to know the number of Fast moving manufacturing companies with operations outside Kenya. The results of the study are as shown in Table 4.3

Table 4.3: Operations outside Kenya

Operations outside Kenya	Frequency	Percent
Yes	49	70
No	21	30
Total	70	100.0

Source: Research Data.

4.3.4 Job Position

The study sought to know the various job positions held by the respondents. The results of the study are as shown in the Table 4.4

Table 4.4: Job Position

Job Position	Frequency	Percent
Operations Manager	56	80.0
Logistics Manager	7	10.0
Business Development Manager	7	10.0
Total	70	100

Source: Research Data.

The study found out that 80% of the respondents were Operations manager followed by Logistics 10%. Business Development Managers also accounted for 10%. This indicates

that the respondents by virtue of their job titles were in a position to understand the logistics management issues sought by the researcher.

4.4 Logistics Management Practices

One of the objectives of the study was to determine the extent to which the Fast-moving manufacturing companies had been practicing logistics management and this section discusses the result. The analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent

4.4.1 Order Process management

On the extent to which order process management is practiced by the Fast-moving manufacturing companies, the results of the study are as shown in Table 4.5

Table 4.5: Order Process management

Order Process management	Mean	Std. Deviation
The firm uses Electronic Order Processing	4.70	0.48
Orders are processed in a timely manner	4.30	0.67
The firm uses a database to track its orders and inventory	4.30	0.82
The firm has vendors that can deliver parts or stock to customers when inventory runs low	4.30	0.95
The firm has country wide branches that it uses to ensure orders are processed at the branch level	4.20	0.03
The firm has a system where customers can track their orders	3.97	0.56
Overall	4.36	0.59

Source: Research Data.

From the table above an overall mean of ($M= 4.36, SD= 0.59$) was registered indicating that majority of the respondents agreed that order process management is practiced by Fast moving manufacturing companies to a large extent. The statement that the firm uses electronic order processing was the most rated with a mean of ($M= 4.70, SD= 0.48$)

indicating it was practiced to a very large extent. It is followed by the statement the firm uses a database to track its orders and inventory with a mean of ($M= 4.30, SD= 0.82$) and orders are processed in a timely manner with a mean of ($M= 4.30, SD= 0.67$) indicating they were practiced to a large extent. The least rated statement was that the firm has a system where customers can track their orders ($M= 3.97, SD= 0.59$) implies that it was rated to a large extent.

This implies that order process management is practiced by Fast moving manufacturing companies to a large extent. In line with the study findings, Bowersox, et al., (2010) observed that the importance of accurate information to achieving superior logistical performance had historically been underappreciated. While many aspects of information were critical to logistics operations, the processing of orders was of primary importance. Failure to fully comprehend this importance resulted from not fully understanding how distortion and operational failures in order processing impact logistical operations (Bowersox, et al., 2010).

4.4.2 Inventory Management Practices

The results of the study on the extent to which Inventory Management is practiced by Fast moving manufacturing companies in Kenya are as shown in Table 4.6.

Table 4.6: Inventory Management Practices

Inventory Management Practices	Mean	Std. Deviation
The firm uses Enterprise Resource Planning system(Barcode) to track its inventory	4.60	0.70
The inventory management practices enable the firm to avoid inventory bottleneck in production	4.40	0.97
The firm provide external customer with the required inventory level with its inventory management practices	4.30	0.48
The inventory management practices keep cost at a minimum cost	4.30	0.67
The firm uses the right inventory management technique (JIT, Kaizen, ABC analysis etc.) to manage it inventory.	4.20	0.92
Overall	4.36	0.75

Source: Research Data.

The study sought to determine the level at which the above inventory management services were exercised in the firm. The study established that inventory management in the Fast-moving manufacturing companies is done to a large extent as evidenced by the overall mean of ($M=4.36$, $SD= 0.75$). The most rated statement was that the firm uses enterprise resource planning system (Barcode) to track its inventory with a mean of ($M= 4.60$, $SD=0.70$), followed by the statement the inventory management practices enable the firm to avoid inventory bottleneck in production a mean of ($M= 4.40$, $SD= 0.97$) indicating that it was practiced to a large extent.

The firm provide external customers with the required inventory level with its inventory management practices and the inventory management practices keep cost at a minimum cost were practiced to a large extent with the mean of ($M=4.30$, $SD= 0.48$) and ($M=4.30$, $SD= 0.67$) respectfully. The least rated statement was that the firm uses the right inventory management technique (JIT, Kaizen, ABC analysis etc.) to manage it inventory with a mean of ($M=4.20$, $SD= 0.97$). The respondents had varying opinions as evidenced in by the registered standard deviations. The statement the firm uses the right inventory

management technique (JIT, Kaizen, ABC analysis etc.) to manage its inventory had the largest standard deviation (0.97) while the statement the firm provides external customer with the required inventory level with its inventory management practices registered the lowest standard deviation of (0.92). The findings above concur with the study findings of Lysons and Farrington (2012) who found out that the main aim of the firm inventory management is to keep costs at minimum.

4.4.3 Transportation Practices

The findings of the study on the extent to which transportation is practiced in the Fast-moving manufacturing companies in Kenya are as shown in Table 4.7.

Table 4.7: Transportation Practices

Transportation Practices	Mean	Std. Deviation
The transportation management practices enable timely delivery of products and services to customers	4.20	0.63
Through transportation management products are made available to the customer desire location	4.20	0.79
The firm products and services are delivered using the right mode of transportation	4.20	0.79
The firm spend at a minimum cost to transport product to customer	4.10	0.88
The firms use electronic system to track all product that are transported to customer	4.00	0.94
Overall	4.14	0.81

Source: Research Data.

From the table above the study established that transportation management is practiced by the firms to a large extent as evidenced by an overall mean of ($M=4.14$, $SD= 0.81$). The statements the transportation management practices enable timely delivery of products and services to customers was practiced to a large extent with the mean of the ($M=4.20$, $SD=0.63$). The statements through transportation management products are made available to the customer desire location and the firm spend at a minimum cost to

transport product to customer registered a mean of ($M= 4.20SD= 0.79$), indicating it was also done at a large extent in each case. The firms using electronic system to track all products that are transported to customer was practiced to a large extent with a mean of ($M= 4.10, SD= 0.88$), and the firm products and services are delivered using the right mode of transportation was practiced to a large extent with a mean of ($M=4.00, SD=0.94$).

The respondents differed the least on the statement that the firm products are delivered using the right mode of transportation as shown by the least standard deviation of (0.63) while they differed more on the statement that the firms use electronic system to track all product that are transported to customer with a standard deviation of (0.94). The practice of transportation by Fast moving manufacturing companies to a large extent concur with the arguments of Wisner *et al* (2011) that transportation is a vital link between firms in a supply chain and that it must be managed effectively to meet customer due dates.

4.4.4 Information Flow Practices

The study further sought to know the extent to which information flow is practiced by the Fast-moving manufacturing companies in Kenya. The findings of the study are as shown in Table 4.8.

Table 4.8: Information Flow Practices

Information Flow Practices	Mean	Std. Deviation
The information flow through ICT practice is used to plan logistics processes	4.40	0.70
Logistics management process is monitored using information flow through ICT	4.30	0.90
The firm information flow through ICT is used to control the logistics process	4.30	0.90
The information flow through ICT is used to coordinate	4.20	0.80
The firm information flow through ICT is used to communicate	4.10	0.70
Overall	4.26	0.80

Source: Research Data.

The study found that information flow was practiced in the Fast-moving manufacturing companies to a large extent as evidenced by the overall mean of ($M= 4.26, SD= 0.80$). Majority of the respondents agreed to a large extent that the information flow through ICT is used to communicate as shown by a mean of ($M=4.40, SD=0.70$).The information flow through ICT is used to coordinate the logistics process, and logistics management process is monitored using information flow through ICT was practiced to a large extent as shown by a mean of 4.30 in each case, followed by the information flow through ICT practice is used to plan logistics processes as shown by a mean of ($M=4.20, SD=0.80$), and that the firm information flow through ICT is used to control the logistics process as shown by a mean of ($M=4.10, SD=0.70$).

The finding of the study is in line with the findings of Azevedo *et al* (2007) that for information flow to be effective and efficient; it must enhance the firm’s logistics processes by planning, controlling, coordinating and monitoring the logistics process.

4.4.5 Warehousing Practices

The findings of the study on the extent to which warehousing is practiced by the Fast-moving manufacturing companies in Kenya are as shown in Table 4.9.

Table 4.9: Warehousing Practices

Warehousing Practices	Mean	Std. Deviation
Products are delivered in the right quantity to the customer	4.70	0.48
The firm label and load the right product to the right vehicle	4.50	0.53
Products leaves the warehouse clean and damage free for customer	4.50	0.53
The firm warehouse is close to the proximity of the customer	4.40	0.52
The firm stores it products using its facility	4.40	0.52
Overall	4.50	0.52

Source: Research Data.

The study established that warehousing practices is employed by the Fast-moving manufacturing companies in Kenya to a large extent as evidenced by the overall mean of (M= 4.50, SD= 0.52). The most rated statement was the firm warehouse is close to the proximity of the customer with a mean of (M= 4.70, SD= 0.48). The products are delivered in the right quantity to the customer, the firm label and load the right product to the right vehicle are practiced to a large extent with a mean of (M= 4.50, SD= 0.53) in each case, followed by the products leaves the warehouse clean and damage free for customer and the firm stores its products using its facility were also practiced to a large extent with the mean of (M=4.40, SD= 0.52) in each case.

The findings concur with Richard (2011) that warehousing ensures the cost efficient operations by delivering the right product to the right customer at the right price, and in the perfect order and condition.

4.4.6 Packaging Practices

The findings of the study on the extent to which packaging is practiced by the Fast-moving manufacturing companies in Kenya are as shown in Table 4.10.

Table 4.10: Packaging Practices

Packaging Practices	Mean	Std. Deviation
The firm products are packaged in a way to protect it from damages	4.80	0.49
The firm products are designed in a way to protect it from losses	4.70	0.47
The firm product is easily identified from other competitor's product	4.70	0.48
The products can be transferred from different locations to different locations without damage	4.60	0.52
The firm product information is easily identified according to their value and purpose	4.50	0.53
Overall	4.66	0.50

Source: Research Data.

The study sought to determine the level at which the above packaging practices were exercised in the firm. The study established that packaging practices in the Fast-moving manufacturing companies was done to a very large extent as evidenced by the overall

mean of ($M= 4.66, SD= 0.50$). The most packaging practiced aspect was that the firm product is easily identified from other competitors product was practiced at a very large extent with a mean of ($M= 4.80, SD= 0.49$). The firm products being designed in a way to protect it from losses and the products can be transferred from different locations without damage were also done to a very large extent as supported by a mean of ($M= 4.70, SD= 0.47$ and $M= 4.70, SD= 0.48$) respectively.

The firm products are packaged in a way to protect it from damages was also practiced to a very large extent as shown by the mean of ($M= 4.60, SD= 0.52$). The firm product information is easily identified according to their value and purpose was the least rate statement as evidence by a mean of ($M= 4.50, SD= 0.53$). However, it was still practiced to a large extent. The study findings reflect the findings of Ballou (2003) that products are packaged to serve the marketing needs of branding and promotional purposes, and it also protect the product from loss and damage as it is reached to its required destination in the right condition.

4.5 Operational performance

In this section, the study sought to know how the respondents rated the operational performance of the fast-moving manufacturing companies they worked for. Different parameters were used to measure the operational performance of the firm. The performance parameters. The means recorded were interpreted as follows: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The results of the study are as shown in Table 4.11;

Table 4.11: Operational performance

	Mean	Std. Deviation
Products and services are delivered to customers on time thus meeting the customer requirements	4.23	0.65
Decrease in customer complaints	4.35	0.56
Adoption of up-to-date technology	4.63	0.32
Improved the utilization of the firm's storage capacity across its network	4.02	0.26
The firm meets shareholders requirement	4.30	0.46
Increased efficiency	4.20	0.32
Customer Satisfaction	4.75	0.24
Continuous Improvement of Product quality	4.12	0.59
Reduction in operational cost	4.23	0.25
Reduction in lead time	4.65	0.34
Timely Delivery of orders	4.06	0.07
Overall	4.32	0.37

Source: Research Data.

The study established that the Fast-moving manufacturing companies in Kenya were performing well to a large extent as evidenced by the overall mean of (M= 4.32, SD= 0.37). Respondents indicated to a very large extent that sources of a firm's superior operational performance are customer satisfaction (mean=4.75), reduction in lead time (mean=4.65) and adoption of up-to-date technology (mean=4.63).

In addition that indicated to a large extent that sources of a firm's superior operational performance are decrease in customer complaints (mean=4.35), the firm meets shareholders requirement (mean=4.30), reduction in operational cost (mean=4.23), products and services are delivered to customers on time thus meeting the customer requirements (mean=4.23), increased efficiency (mean=4.20), continuous improvement of product quality (mean=4.12), timely delivery of orders (mean=4.06) as well as the

improved the utilization of the firm's storage capacity across its network (mean=4.02). The above finding reflects the findings of Keebler and Durtsche (2001) that a firm can achieve a superior performance with its logistics practices by aligning its key logistics practices with its business strategy and measured against predetermined performance objectives. This has been confirmed by the findings of this study.

4.6 Challenges of Logistics Management Practices in the Firm

The study sought to know the extent to which the fast-moving manufacturing companies faced challenges when implementing logistics management practices. The means recorded were interpreted as follows: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The results of the study are as shown in Table 4.12

Table 4.12: Challenges of Logistics Management Practices

Challenges	Mean	Std. Deviation
The risk of discontinuity in the service delivery	4.63	0.95
Outsourcing critical components to suppliers may open up opportunities for competitors	4.26	0.79
There is inadequate storage capacity to manage customer future demand across the firm's service network	4.32	0.88
High levels of insecurity impede a 24-hour service to customers	4.06	0.56
Bad road condition for the movement of product	4.42	0.56
The cost of transporting product is high across the country	4.62	0.65
Increased competition due to information leaks	3.89	0.59
Lack of efficient communication techniques	4.23	0.12
Loss of control e.g. interferences with a firm's data privacy	4.15	0.23
There is limited holding capacity for FMCGMs at Mombasa port	4.51	0.32
Compromised product and service quality	3.92	0.23
There is slow custom clearance process at the Mombasa port	4.09	0.63
Overall	4.26	0.54

Source: Research Data.

The study established that the Fast-moving manufacturing companies are faced with challenges when implementing logistics management practices to a large extent as evidenced by the overall mean score of (M=4.26, SD=0.54). Respondents indicated to a very large extent that the challenges fast moving manufacturing companies faced when implementing logistics management practices to be: the risk of discontinuity in the service delivery (mean=4.63), the cost of transporting product is high across the country (mean=4.62) and there is limited holding capacity for FMCGMs at Mombasa port (mean=4.51).

In addition, the study revealed to a large extent that the challenges fast moving manufacturing companies faced when implementing logistics management practices to be: bad road condition for the movement of product (mean=4.42), There is inadequate storage capacity to manage customer future demand across the firm's service network (mean=4.32), outsourcing critical components to suppliers may open up opportunities for competitors (mean=4.26), lack of efficient communication techniques (mean=4.23), loss of control e.g. interferences with a firm's data privacy (mean=4.15), there is slow custom clearance process at the Mombasa port (mean=4.09), high levels of insecurity impede a 24-hour service to customers (mean=4.06), compromised product and service quality (mean=3.92), as well as the increased competition due to information leaks (mean=3.89). The study findings are consistent with the findings of Wisner *et al* (2011) that customer satisfaction is determined by the level of customer service; and the challenges is the focus on how to avoid a misstep in providing the right product, in the right quantity, in the right condition, at the right place, at the right time, for the right customer and at the right cost.

4.7 Relationship of Logistics Management to the Operational performance

The study sought to establish the relationship between logistics management practices and operational performance. The scores of the variables to be regressed were computed through factor analysis and then saved as dummy variables. The researcher then conducted a regression analysis to explain this relationship using SPSS version 21. The results obtained are presented and discussed below;

Table 4.13: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.919	0.844	0.796	.223

Source: Research Data.

The study sought to establish the impact of logistics management practices on the operational performance of Fast moving manufacturing companies in Kenya. The

research findings indicate that there is a strong relationship ($R^2 = 0.844$) between logistics management practices and the operational performance of Fast moving manufacturing companies.

The result of the study also indicates that the value of adjusted R-squared is 0.796. This implies that 79.6% of the variance in Fast moving manufacturing companies' operational performance can be accounted for by logistics management practices. The remaining 20.4% can be explained by other variables which were not included in the model and the chance of variations.

Table 4.14: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	119.682	6	19.947	21.896	0.001 ^b
1	Residual	57.393	63	.911		
	Total	177.075	69			

a. Dependent Variable: Operational performance

b. Predictors: (Constant), Packaging Practices, Information Flow Practices, Warehousing Practices, Inventory Management Practices, Order Process management, Transportation Practices

Source: Research Data.

From the ANOVA statistics, the study established that the regression model had a significance level of 0.1% which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value of the dependent variable was greater than the critical value ($21.896 > 3.86$); this indicates that all logistics management practices identified have a statically significant impact on the operational performance of the fast-moving

manufacturing companies firm in Kenya. The significance value was less than 0.05 indicating that the model was significant and good fit for the data collected.

Table 4.15: Coefficients of Determination

Model	Unstandardized		Standardized T	Sig.
	Coefficients			
	B	Std. Error	Beta	
(Constant)	1.543	.633	2.438	1.543
Order Process management	.481	.108	.329	4.454 .000
Inventory Management Practices	.479	.113	.334	4.239 .001
Transportation Practices	.428	.106	.314	4.038 .011
Information Flow Practices	.483	.113	.323	4.274 .003
Warehousing Practices	.471	.107	.327	4.402 .000
Packaging Practices	.456	.110	.321	4.145 .001

a. Dependent Variable: Operational performance

Source: Research Data.

From the table 4.13 above it is evident that at 95% confidence level, all the predictors have positive relationship on the operational performance and are statically significant. The predictors in the study also registered high values above the critical value of 3.182; this implies that the predictors have a positive and statistical significant relationship on the operational performance. Positive effect was reported for all the independent variables with Order Process management (t= 4.454, p= 0.000), inventory management practices (t= 4.239, p= 0.001) transportation practices (t= 3.566, p = 0.038), information flow practices (t = 4.274, p= 0.001), warehousing practices (t=4.402, p=0.000) and packaging practices (t=4.145, p=0.001) produced statistically significant values for this study of (high t-values, $p \leq 0.05$). The constant value (1.543) shows that if the logistics

management practices identified were all rated zero, the operational performance of Fast moving manufacturing companies in Kenya would be reduce by 1.543. In this study, stochastic error term was assumed to be zero since the study captured the key logistics management practices.

The study further revealed that: a unit increase in Order Process management would lead to improvement in operational performance by 0.481, a unit increase in inventory management practices would lead to increase in operational performance by 0.479, a unit increase in transportation practices would lead to increase in the operational performance by 0.428, a unit increase in information flow practices would lead to a change in the operational performance by 0.483, a unit increase in warehousing practices of 0.471 while an increase in the packaging practices would lead to a change in the operational performance of 0.456.

The above findings are consistent with the findings of Sandberg and Abrahamson (2011) and Aron (1999) that for most firms, a groundswell of activity has surged around logistics practices, encompassing a broad sweep of corporate supply-demand strategies that stretch from the raw materials to the ultimate customer and productivity-boosting tools.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings of the study as well as the conclusions, limitations of the study, and recommendations for further research.

5.2 Summary of Findings

The main intent of this research was to establish the effects of logistics management practices on operational performance of fast moving manufacturing companies in Kenya. On the question of whether the firms had adopted various forms of logistics management practices, all the respondents answered to the affirmative meaning that all the firms sampled had recognized the importance of logistics management practices as a catalyst to improving the operational performance of the firms.

From the findings the study established that fast moving manufacturing companies uses electronic order processing, others agreed that the companies uses a database to track its orders and inventory, orders are processed in a timely manner and that the companies has a system where customers can track their orders. On application of inventory management services, the study found that the Fast-moving manufacturing companies use enterprise resource planning system (Barcode) to track its inventory, and also enable the firm to avoid inventory bottleneck in production. The study further established that inventory management practices provide for the upstream and down inventory visibility in the logistics or supply chain system.

On transport practices, the study revealed that the transportation management practices enable timely delivery of products and services to customers through transportation management products are made available to the customer desire location. Relating to information flow in the firm, the study found that information flow through ICT is used by the Fast-moving manufacturing companies to coordinate their operations. It was also found that warehouses were located close to the proximity of the customer and the products are delivered in the right quantity to the customer. Relating to Packaging practices, the study established that firm products are packaged in a way to protect it from

damages and the firm product is easily identified from other competitors' product through their packaging process. On operational performance parameters, the study found that effective and efficient logistics management practices have improved the utilization of the firm's storage capacity across its network.

5.3 Conclusions

The study established that Fast moving manufacturing companies Kenya employed logistics management practices including transportation management practices which enabled timely delivery of products and services to customers, inventory management practices which enable the firm to avoid inventory bottleneck in production. In addition, the study found that warehouse management practices facilitated products delivery at the right quantity to the customers and packaging practices.

Based on the regression analysis the study established positive beta coefficients with all study variables, order process management inventory management practices transportation practices information flow practices warehousing practices, and packaging practices. In that vein the study concludes that any change made is expected to positively impact logistical effectiveness and efficiencies.

The study also noted that the challenges fast moving manufacturing companies faced when implementing logistics management practices to be: the risk of discontinuity in the service delivery, the cost of transporting product is high across the country and there is limited holding capacity for FMCGMs at Mombasa port. In addition, the study revealed to a large extent that the challenges fast moving manufacturing companies faced when implementing logistics management practices to be: bad road condition for the movement of product, there is inadequate storage capacity to manage customer future demand across the firm's service network.

5.4 Recommendations

Based on the study findings the researcher recommends the following measures to ensure continued improvement in operational performance of fast moving manufacturing companies in Kenya. The main challenge faced by the firms is there is limited holding

capacity for product at the Mombasa port. The management of Kenya Ports Authority should move in quickly to expand the product storage capacity at the Mombasa port as a way of improving the operational performance of the Fast-moving manufacturing companies.

The study further established that a high level of insecurity impedes a 24-hour service to customers which hinders the Fast-moving manufacturing companies in Kenya to operate optimally. The researcher recommends that the state officers in charge of security apparatus should move in quickly to secure the routes used by the Fast-moving manufacturing companies when transporting products to their customers. This will ensure that the firms don't make losses hence improving their operational performance.

Fast moving manufacturing companies in Kenya needs to adopt an integrated ICT controlled system; this will enable clear monitoring and administration of logistical operations and therefore enhancing the overall efficiency of the firm.

5.5 Limitations of the Study

Most of the respondents approached were reluctant in giving information since firm information is proprietary and confidential. The researcher tackled the problem by assuring the respondents that the data will be used for academic purpose only and would be treated with utmost confidentiality.

Another limitation faced was that the researcher had no control of the accuracy of the data provided. The researcher used the data as provided but made calls to clarify any ambiguous answers provided by the respondents.

The respondents from the fast-moving manufacturing companies firm were senior managers with busy working schedules which delayed the data collection process. The researchers used drop-and-pick-later method so as to give the respondents adequate time to fill in the questionnaires.

5.6 Areas for Further Research

A research into the other factors influencing the operational performance of fast moving manufacturing companies should be researched on since the logistics management practices used in this study could not account for 20.4% of the changes in firm operational performance.

Further, the study only focused on the manufacturing industry, particularly the fast-moving companies sector. The findings of this study cannot be adequately extrapolated to generalize the state of logistics management in the other industries. A similar research should be done focusing on other industries.

Lastly, this study only looked at the challenges facing the implementation of logistics management practices by fast moving manufacturing companies but never looked at the possible solutions. A future research focusing on this will serve to enlighten the management of Fast moving manufacturing companies on how to tackle the challenges that undermine efficient operational performance of the firms.

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APPENDIX I: RESEARCH QUESTIONNAIRE

This questionnaire has been designed to assist the researcher collect data on the research topic: “The logistics management practices and operational performance of Fast Moving Consumer Goods Manufacturers in Kenya”. You have been identified as one of the respondents in the study to provide information that will be used only for the purpose of the study. You are requested to complete the following questionnaire. The information you will provide will be held confidentially and in no way will your name or answer be revealed. Please answer all the questions to the best of your knowledge.

Section A: General Information

1. Is the firm

- a) Locally owned..... ()
- b) Foreign owned..... ()
- c) Both local and foreign owned..... ()

2. How long has the firm been in operations in Kenya?

- a) Below 5 years..... ()
- b) 5-10 Years..... ()
- c) 11 – 20 Years..... ()
- d) Over 20 Years..... ()

3. Does the firm have operations outside Kenya?

Yes ()

No ()

4. What job position do you hold?

Operation Manager ()

Logistics Manager ()

Other ()

Please specify ()

SECTION B: Logistics Management Practices in the Firm

5. To what extent does your firm practice the following logistics practices? Tick as appropriate using the following Likert scale of 1-5 where: The means recorded were interpreted as follows: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent.

Logistics Management Practices	1	2	3	4	5
Order Process management					
The firm uses Electronic Order Processing					
Orders are processed in a timely manner					
The firm uses a database to track its orders and inventory					
The firm has vendors that can deliver parts or stock to customers when inventory runs low					
The firm has country wide branches that it uses to ensure orders are processed at the branch level					
The firm has a system where customers can track their orders					
Inventory Management Practices					
The firm uses Enterprise Resource Planning system (Barcode) to track its inventory					

The firm provide external customer with the required inventory level with its inventory management practices					
The inventory management practices enable the firm to avoid inventory bottleneck in production					
The inventory management practices keep cost at a minimum					
The firm uses the right inventory management technique (JIT, Kaizan, ABC analysis etc) to manage it inventory					
Transportation Practices					
The transportation management practices enables timely delivery of products and services to customers					
Through transportation management products are made available to the customer desire location					
The firm products and services are delivered using the right mode of transportation					
The firm spend at a minimum cost to transport product to customer					
The firms uses electronic system to track all product that are transported to customer					
Information flow Practices					
The information flow through ICT practice is used to					

plan logistics processes					
Logistics management process is monitored using information flow through ICT					
The firm information flow through ICT is used to control the logistics process					
The information flow through ICT is used to coordinate					
The firm information flow through ICT is used to communicate					
Customers Warehousing Practices					
Products are delivered in the right quantity to the customer					
The firm label and load the right product to the right vehicle					
Products leaves the warehouse clean and damage free for customer					
The firm warehouse is close to the proximity of the customer					
The firm stores it products using its facility					
Packaging Practices					
The firm products are packaged in a way to protect it from damages					
The firm products are designed in a way to protect it					

from losses					
The firm product is easily identified from other competitors product					
The products can be transferred from different locations to different locations without damage					
The firm product information are easily identified according to their value and purpose					

6. What other logistics management practices does your firm practice?

.....

SECTION C: Operational performance

7. The following are some of the sources of a firm's superior performance. Please indicate the extent the below applies in the firm. Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Large Extent; 5=Very Large Extent.

	1	2	3	4	5
Products and services are delivered to customers on time thus meeting the customer requirements					
Decrease in customer complaints					
Adoption of up-to-date technology					
Improved the utilization of the firm's storage capacity across its network					

The firm meets shareholders requirement					
Increased efficiency					
Customer Satisfaction					
Continuous Improvement of Product quality					
Reduction in operational cost					
Reduction in lead time					
Timely Delivery of orders					

Section D: The Challenges of Logistics Management Practices in the Firm

8. The following are some of the challenges of logistics management practices in the firm. Please indicate the extent to which the below challenges affect the firm. Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Large Extent; 5=Very Large Extent

	1	2	3	4	5
The risk of discontinuity in the service delivery					
Outsourcing critical components to suppliers may open up opportunities for competitors					
There is inadequate storage capacity to manage customer future demand across the firm's service network					
High levels of insecurity impede a 24-hour service to customers					

Bad road condition for the movement of product					
The cost of transporting product is high across the country					
Increased competition due to information leaks					
Lack of efficient communication techniques					
Loss of control e.g. interferences with a firm's data privacy					
There is limited holding capacity for FMCGMs at Mombasa port					
Compromised product and service quality					
There is slow custom clearance process at the Mombasa port					

9. Indicate any other challenges which in your opinion that the firm must address in order to enhance the logistics management practices

.....
