

**LOGISTICS MANAGEMENT PRACTICES AND OPERATIONAL  
PERFORMANCE OF ONLINE RETAIL FIRMS IN NAIROBI,  
KENYA**

**BY**

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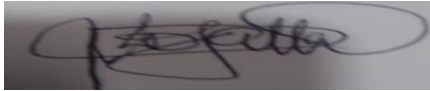
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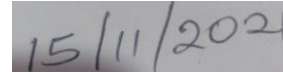
## DECLARATION

I, the undersigned, declare that this research project is my original work and has not been submitted to any other college, institution or university for academic credit.

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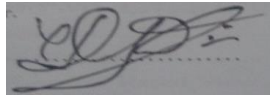


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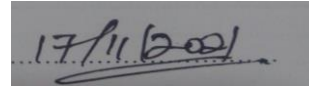
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## **ABBREVIATIONS AND ACRONYMS**

<b>BSC</b>	Balance Score Card
<b>CS</b>	Customer Satisfaction
<b>E-Commerce</b>	Electronic Commerce
<b>LMP</b>	Logistics Management Practices
<b>LSP</b>	Logistics Service Providers
<b>RBV</b>	Resource Based View
<b>OECD</b>	Organization for Economic Co-operation and Development
<b>SCOR</b>	Supply Chain Operations Reference Model
<b>TCA</b>	Transaction Cost Analysis
<b>TMTs</b>	Top Management Teams

## **ABSTRACT**

Logistics management practices have emerged as relatively new concept in the field of supply chain around the world. Sound logistic management practices have been associated with reduction in costs, improved quality, flexibility, effectiveness as well as efficiency within supply chains of organizations. In fact, proper logistics management has been recognized as a strategic asset that helps an organization have a competitive advantage. This is made possible by optimizing the measures that determine performance of the supply chain including reduction of costs. The study sought to determine the impact of practices in management of logistics on operational performance in online retail companies in Nairobi. A descriptive design was adopted in this research and a total of 30 online retail firms in Nairobi, Kenya were targeted. Census was used on all the 30 online retail firms. Collection of primary data was done by use of questionnaires with regression analysis, mean, and standard deviation employed in analysis. The findings indicated that the online retail firms have adopted order processing practices, transportation management practices, information flow management, warehousing practices and packaging are the key logistics management practices and they have a significant positive correlation with operational performance. Implementation of the logistics management practices has been affected by various challenges including insecurity in the firm's operation and lack of proper training. Recommendation of the study are that all online retail businesses in Nairobi, Kenya should improve on these logistics management practices. There is also need for organizations to have in place sufficient space for storage and access financial services from lending institutions so as to fully implement and operationalize logistics management practices.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the study

Logistics management practices have become an important subject within supply chains of organizations in the current competitive and dynamic business environment (Bing, Bloemhof, Ramos, Barbosa-Povoa, Wong & Vorst, 2016). Organizations around the world have realized the need and value of logistics management practices as they seek to improve on their operational performance through enhanced efficiency. Logistics management practices are a critical aspect of any supply chain management system in an organization. According to Grant, Trautrim and Wong (2017), the adoption of logistics management practices helps firms have an edge over competitors on any market. Logistics management practices has registered significant attention over the past decade especially in firms of the e-commerce sector.

Online business is a trade method that is growing very fast worldwide with an ever-expanding clientele. The World Wide Web allows business to engage with other businesses; companies or organization to trade with other organizations/companies and with customers. Customers can still have conversations with their counterparts in the same or even varied type of business by use of electronic media and internet. The online retail firms is a growing B2C trade, especially through an increase of mobile users and internet-based convenience trading platform. The online firms support the overall growth of an economy by supporting the trading and commerce sector . The industry is made up of manufacturers, the distributors as well as the retailers of online products (Vugigi, Thoithi, Ogaji & Onuonga, 2017).

The existing relationship between logistics management practices and operational performance is well expounded in the theory of resource-based view (RBV) and the theory of transaction cost



(TC). The RBV theory can be traced to scholars (Penrose, 1959; Barney, 1991; Rapert & Suter, 1996) which argued that firms leverage on their resources to gain competitive advantage. Such resources should be unique with no perfect substitutes for the firm to gain competitive advantage. In the same argument, implementation of logistics management practices in an organization require resources that are best explained by this RBV theory (Ding, Kam, Zhang & Jie, 2015). The TC theory can be traced to scholar Coase, 1937, who explained parties involved in any exchange are characterized by transaction costs. The theory is used to explain why online firms exist (reduction of logistics costs), how firms describe their borders as well as how the processes within are administered (Mangan, Lalwani & Lalwani, 2016).

### **1.1.1 Logistics Management Practices**

Logistics encompasses physical flow and movement of goods, information as well as finances which has been widely recognized to be a key determinant of a best performing supply chain in organizations (Touboulic & Walker, 2015). On the other hand, logistics management describes approaches that firms leverage on to gain the logistical objectives including reduction in costs, timely delivery, increased speed in the transportation as well as optimizing the use of resources in the firm (Mejías, Paz & Pardo, 2016). Logistics management practices are a set of activities that influence supply chain and operational performance in organizations (Dias & Braga-Junior, 2016). Logistics management practices refer to the firm's ability to plan and organize various undertakings that help in management of the flow of resources for better operational performance (Khor, Udin, Ramayah & Hazen, 2016).

Proper supply chain comprises of processes incorporated within the logistics function for the purpose of cost reduction and upgrading the competitive positioning of the firm. As earlier pointed out, logistics management practices cover a number of activities that collectively

determine operational performance of an organization. Some common logistics management practices embraced by organizations include management of the inventory; order processing, management of transportation, management of flow of information, warehousing activities and packaging (Zailani, SevaSubaramaniam, Iranmanesh & Shaharudin, 2015). Inventory management practices strive to minimize inventory related costs for instance ordering costs, carrying cost as well as stock out costs and replenishment costs. Order processing ensure that the organization deliver to customer at the right time. Transportation management practices create both time and place utilities. Warehousing practices create time utility by ensuring that the produced products are stored so that they get to final customers in the right form at the right time when demanded. Information flow speeds up coordination of activities involved from production to the time it gets to final consumers. Packaging practices help in safeguarding and protecting products against destruction in the course of transportation so that they reach to the end users when they are in their original form.

### **1.1.2 Operational performance**

Performance is a term used to explain attainment of goals and objectives by an organization within a definite period of time (Gopal and Thakkar, 2016). Operational performance is performance based on standards, prescribed efficiency measures, conservation of the environment for instance waste reduction, effectiveness, productivity, cycle time and regulatory compliance (Blazey, 2009). Blazey suggested that operational performance as a normal variable (dependent) is used in specific firms' evaluation comparing the firm in question with competitors. An example is where operational performance relies on a firm's factors like development of human resources, service to customers, reputation, management of contracts,

logistics, communication, corporate social responsibility, relationship with suppliers and survey of the market. An organizational management system effectively does operational performance.

Best practices, quality circles and balanced score card are some of the methods regularly used in operational performance measurement. The methods involve repeated tasks that are engaged in when establishing goals of the organization. In measuring the progress of a firm in line with its objectives and goals, the tasks are significantly useful (Mohanty, 2008). Operational performance indicators in relation to practices involved in management of logistics include flexibility, efficiency, compliance, quality products and services, procurement cycle times and product defects among others (Cho and Pucick, 2005). This study will adopt timely delivery, cost and flexibility as the operational performance measures. This is inspired with the need of the organization to make sure that products are timely offered to clients at a low cost and flexibility in order to make their products attractive, (Biber, Filipek, Ankan and Jammerneegg, 2018).

### **1.1.3 Online Retail Firms in Nairobi, Kenya**

Online retail firms are organizations that do most of their commercial activities on internet platforms, popularly used by academicians and those who online practitioners. By the term “most of its commercial activities” it should be understood that business is done purely online using created platforms but in addition makes use of physical logistic methods in delivery of services and goods (Schultz, 2009). The convenience of online firms’ transactions can be affirmed from the customer-centered value in terms of efficiency and effectiveness of transactions of products and services. Some of the products that tends to be traded on the online firms includes but not limited hotel space, food, clothes, cosmetics, shoes, electronics, airline tickets among others (Nielson Global, 2010).

The firms which will be studied consists of online retail firms using the business to consumer (B2C) electronic commerce simulations. It is assumed that small and medium sized enterprises form a majority of these online retail firms. The OECD report of 2016 reveals that over 95% to 99% of enterprises are small and medium sized but this depends with the country, in addition the report postulates that small and medium sized enterprises account for between 60% to 70% net job creation. The statistics tally with the findings of the Kenyan government done in 2018 where it was found out that 96% of enterprises are small and medium sized operators, employ 75% of workers and contribute a gross domestic product of 18% for the nation of Kenya.

In Kenya, online retail firms can be tracked from increased usage of internet services by approximately 95.63% in the year 2019, which shows a remarkable development in the use of technology fueled by large number of mobile cell phone users revealed by the 2018/2019 sector report of the communication commission of Kenya (CCK). The 2018/2019 second quarter report indicates that internet service users increased to 17.38 million by the month of December 2018 in comparison to 8.89 million internet service users in 2019. Firms are two times more profitable because of generating 60% or more of their leads online than those generating online leads that are less than 20% (Hinge, 2019). Most of firm's profitability in Kenya is determined by pricing, sales transactions and diversity of products. Nevertheless, online retail organizations are progressively launching into managing their logistic practices to meet and exceed the customers' demands, but, most online customers have complained of late delivery of the products they have ordered online, wrong delivery of the products, and sub-standard products (Consumer survey, 2020).

## **1.2 Research Problem**

Logistics management practices have emerged as relatively new concept in the field of supply chain around the world (Fernandes, et al., 2017). Despite its relative newness, logistics management practices have gained attention among scholars and policy makers since it is widely recognized to be a trigger for improved operational performance in an organization (Rajagopal, Sundram, Pandiyan & Maniam-Naidu, 2015). Sound logistics management practices have been associated with reduction in costs, improved quality, flexibility, effectiveness as well as efficiency within the organizations. In fact, proper logistics management practices have been recognized as a strategic asset that helps an organization to gain competitive advantage through the measures of operational performance including cost reduction, timely delivery and quality products (Zailani, et al., 2015). Implementation of logistics management practices has become strengthened through operational performance by ensuring high level of efficiency and effectiveness, meeting the goals and objectives of the firm. At the same time it specifies the procedures, tasks and functions which should be improved in the organization (Qrunfleh & Tarafdar, 2015). There may be doubt as to whether logistics management practices lead to improved performance (Kaliani Sundram, Chandran & AwaisBhatti, 2016).

The online retail firms in Kenya are made of distributors, retailers as well as customers resulting into a supply chain. The online stores have a challenge of ensuring a stable and continuous supply of products to meet or exceed customer needs (Vugigi et al., 2017). A steady and continuous supply of products require timely access to real-time information on consumption pattern of consumers in the market and constant supply of these products from the manufacturers which is a major challenge among e-commerce stores (Mailu et al., 2018). Due to the current pandemic of the covid-19, there has been an increase of the number of customers on the online

retail firms, since customers were working from home and they had to purchase their products on an internet-based platform transactions. But, most online customers in Kenya have complained of late delivery of the products they have ordered online, wrong delivery of the products, and sub-standard products which has sparked debate on whether online retail firms have embraced effective logistics management practices (Odhon'g & Omolo, 2015).

Different research has been carried out on which directly links logistics management practices and operational performance and the findings have been contradictory and thus indicating major knowledge gaps. A positive relationship was observed by Wanke and Corrêa (2014), Petkovski (2017), Daniel, Roberto and Valdir (2018) and Zhang, Vonderembse, & Lim (2005). Other studies found non-significant relationship (Delfmann & Gehring (2003); & Vlachos, 2016) while (Lambert & Burduroglo, 2000; Esper, Fugate & Davis-Sramek, 2007), found mixed results (positive and negative) dependent upon the logistics variable dimensions. These inconsistent findings call for further research to resolve them.

Methodological gaps were also noted in some of the studies linking logistics management practices to performance. Fugate, Mentzer & Stank. (2010) used stratified sampling. Some studies used simple analytical method such as descriptive statistics only (Kanda & Iravo (2015)). Other studies used simple regression analysis (Karimi & Rafiee, 2014). This study intends to carry out a census. Further the contextual gaps were also noted in some studies which link practices in logistics management to performance. Many studies relating logistics management practices and performance have been done in United Kingdom, India, America, Russia (Kozuharov and Petkovski, 2017; Esper, Fugate & Davis-Sramek, 2007; Zhang, Vonderembse, & Lim (2005; Petkovski, 2017)). Studies done in Africa are scarce. They include Mukolwe and Wanyoike (2015), Mwangangi (2016), Kirui and Nondi (2017) and Mangala and Moronge

(2019). This presents a knowledge gap. Hence more studies linking practices in logistics management and operational performance contextualized within the region are called for to fill this gap.

From the preceding studies, it is evident that there are significant gaps that needs to be addressed. There isn't enough information to the best knowledge of researchers focusing specifically on Nairobi online retail firms' practices in logistics management and operational performance. The current study sought to respond to the following research queries in efforts to ensure that the research gap is filled; to what extent have logistics management practices been implemented by online retail firms in Nairobi, Kenya? What relationship exists between practices in logistics management and operational performance among online retail organizations in Nairobi? What are the challenges facing the implementation of logistics management practices among online retail companies in Nairobi?

### **1.3 Research Objectives**

The general objective of this research work was to investigate the relationship of practices in logistics management and operational performance of online retail organizations in Nairobi.

Specific objectives of this research work were:

- i. To establish the extent to which logistics management practices have been implemented by online retail firms in Nairobi, Kenya
- ii. To establish the relationships between logistics management practices and operational performance of online retail firms in Nairobi, Kenya
- iii. To investigate the challenges facing the implementation of logistics management practices by online retail firms in Nairobi, Kenya

#### **1.4 Value of the study**

This research study was meant to establish how best firms in the online retail sector can implement or improve on their logistics management practices and operational performance within the entire industry. This investigation will recommend the best logistics management practices which will aim at making companies improve on their operational performance. Company management will depend on findings of this research work for the purpose of making necessary and informed decision that pertains to logistics management practices and their contribution in improving operational performance.

This research study will be relevant to regulatory bodies like the SMEs Licensing Board, the management of all the online retail companies in Kenya and future scholars and academicians. For the regulatory body, the study proposed various ways of regulating online retail traders through putting in place regulation and policies that are effective that improve on companies' performance.

The finding of this study will be used by future scholars and academicians to do more studies with regard to how logistics management practices can be put in place to improve on operational performance. This will be achieved by looking at limitations of the study. The study will add more literature and theory to the existing one with regard to logistics management practices and how they help an organization improve on their operational performance.



## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter discusses the theoretical framework on which logistics management practices is based, literature on logistics management practices and operational performance. A review of empirical studies is also provided alongside a conceptual framework linking elements of logistics management practices to operational performance.

### **2.2 Theoretical Review**

It discusses the notions which are important to this study. This study was led by the following two (2) theories: the transaction cost theory and the resource-based view theory.

#### **2.2.1 Resource Based View**

The resource-based view theory is dated back in 1959 when Penrose put forth his sentiments which were echoed by Barney in 1991 and lastly Rapert and Suter in 1996. Previous researches show that the greatest opportunity of realizing outcomes rests inside the organization. The model postulated that greatest impact is realized when in-house resources are employed contrary to external ones. This theory goes further to expound that organizations have the ability to regulate their internal resources instead of external resources. Consequently, the theory supports the idea that organizations should focus more on the efficiency of their internal processes. This theory has the view that resources cannot be substituted and when they are appropriately utilized, they yield value to clients (Rungtusanatham, Salvador, Forza & Choi, 2003).

The theory clarifies that the company needs to exploit its resources to nurture its performance. Organizations make use of resources when they have competitive advantage over competitors (Pearce & Robison, 2007). Organizations which enjoy competitive advantage increase their

performance. Therefore, the theory recognizes resources as major contributors to the prosperity of organizations. In other words, organizations may have thoughts of growing efficiency but deprived of resources the plans cannot be supported (Hunt & Davis, 2012). The theory is important in this research as it indicates the implementation of logistics management practices requires resources as explained by this RBV theory. It is when an organization has leveraged on its resources to implement logistics management practices that its operational performance is enhanced.

### **2.2.2 The Theory of Transaction Cost**

This theory was originally coined by Coase (1937) and later expounded by Williamson (1975). According to the theory, parties involved in any exchange are usually characterized by transaction costs. According to the theory, governance structures that strive to ensure that transaction costs are economized are deemed to be optimal (Dyer & Chu, 2003). The transaction cost theory is mostly anchored in strategic management although it was recently applied in other areas including supply chain management (Zailani, Jeyaraman, Vengadasan, & Premkumar, 2012). The theory strives to provide answers as to why firms of the manufacturing concern exist (in order to bring down the costs involved in logistics), how the borders of the firms are described as well as how the processes within the business entity should be administered. Initially, the theory was established in facilitating the regulation of the level of efficiency within firms of the merchandising and manufacturing concern (Xu, Huo & Sun, 2014).

In the context of logistics management practices, the TC theory is relevant in describing the concept of total cost ownership which covers the purchase costs, costs of maintenance, costs incurred during warehousing, service as well as processing costs (Gyau & Spiller, 2008). Most firms of a merchandising concern will incur costs through shipment of products from one

destination all throughout the supply chain system (Brouthers, Brouthers & Werner, 2003). This therefore calls for the need of a thorough evaluation of these costs to determine the trade off if the firms are to enhance their operational performance (Barratt & Oke, 2007). The theory is essential in the study as emphasizes on the various activities within the supply chain that are effectively coordinated so as to minimize on costs and improve on operational performance.

### **2.3 Logistics Management Practices and Operational Performance**

Logistics management practices encompasses a set of actions that are deemed topnotch and most effective and theoretical ways of reaching the logistical goals. The practices characterize assets of useful outcomes for logistics and transportation arena especially logistical managers in each single manufacturing unit points for achievement of their logistics management roles (Timna, 2017). The concept of logistical practices is founded on systems methodology owing to the fact that there is transit of deliveries from suppliers to customers. This study focused on five scopes of practices in logistics management which include the order processing, transportation, information flow, warehousing practices and packaging which will be linked to operational performance.

Order processing entails the number of activities that the firm engages in to ensure that any given order placed by the customers is fulfilled. Order fulfillment is the basis of information flow within the supply chain system of an organization. Customers are happy when an organization timely fulfills the order they have paced (Iman Niromand, 2016). Unexplained delays by an organization in fulfillment of the orders has adverse impact on the firm's supply chain performance. (Chen & Labadi, 2005). Order processing management is critical component of logistics management in the supply chain systems. Order processing management ensures that

internal as well as external customers are provided with the needed service levels, helps in cost minimization as well ensure timely replenishment of stock out items.

Transportation management involves supervision of dispensing any product from sellers to the the firm, storerooms or customer's point of collection. Transportation management is an enormous part of firm's production cost, therefore if firms need to have competitive advantage over others they must ensure that their cost of logistics or transportation of materials and products to customers' point of collection is minimized (Mathivathanan, Kannan & Haq, 2018). This is always achieved by use of different transport modes subject on such factors as points of delivery, transportation loads and distribution centers. A hauler creates assumption choices with regard to equipment used for conveyance and in some cases provisions are made to ensure operative decision capitalize on the profit from assets (Fredendall, Letmathe & Uebe-Emden, 2016).

The facts in a supply chain are categorized into: tactical or strategic; concerning customers; or logistical. Effective communication between organizations can be presented with regular, genuine and involvement of buying and selling personnel's personal contact. Lee and Whang (2000) discussed different kinds of mutual information and their latent paybacks. For instance, sharing order status can increase the quality of customer service, decrease payment rounds and cut on labor cost. Furthermore, sharing information on expected demand of products with high variability in demand is important in helping do away with cost related overstocking and stock outs whereas market knowledge information sharing can assist in improving advertisement. It is important to consider timeliness and level of benefit of information while sharing it; information that has been delayed in transmission increases the volatility effects distressing the supply chain upstream level. Some companies perhaps may not be free to share their data details with

partners, being scared that the data might leak to their competitors (Foerstl et al, 2010). Today, companies have integrated and made use of multiple methods to dispense statistics about client orders by electronic means which help to save on costs. For instance, information technology changed the way businesses interrelate with suppliers and clients (Gunasekaran & Ngai, 2004).

Warehousing refers to the actions that involve goods' storage on a large-scale in an organized and orderly way and making them accessible conveniently when wanted. Warehousing is one of the essential auxiliaries to trade. It generates time utility by bridging the time gap between goods' production and consumption. Saenz, Koufteros, Touboulic and Walker (2015) proposed that, they contribute to a host of the company's missions, like; realizing conveyance economies, attaining production economies, benefiting from quality procurements discounts and forward buys, supporting the firm's client service procedures, meeting fickle market environments and uncertainties, overcoming the time and space variances that exist between producers and customers, providing impermanent storage of material to be disposed or reprocessed (Raut, Narkhede & Gardas, 2017).

Packaging is an organized system of arranging goods for safe, secure, efficient and effective handling, transportation, delivery, storage, retailing, consumption and recovery, recycle or disposal combined with maximizing customer value, sales and hence proceeds (Saghir, 2002). It is an essential function of guarding, containing and conserving the product, the functions of packaging are assorted and complex and the description here can be related to three main classifications i.e. environment, marketing and logistics. Although packaging is known as having a substantial effect on the efficiency of logistical methods (Cooper, 2017) and undertakings such as manufacturing, dissemination, storage and handling all through the supply chain, many packaging linked costs in the logistical system are frequently disregarded by packaging

originators (Cooper, 2017). Packaging provisions directly impact on the time necessary for completing packaging tasks which eventually affects product lead time and due date performance to the client (Pålsson & Hellström, 2016). Packaging again affects operative effectiveness because it characterizes an interface between the supply chain and its main client: the consumer and enables the chain's primary assignment.

## 2.4: Empirical Review and Knowledge Gaps

**Table 2. 1 Summary of Past Studies and Knowledge Gaps**

Scholars	Study focus	Methodology	Major findings	Knowledge gap	How current study addresses gap
Wanke & Correa (2014)	Logistics convolution of manufacturing firms and their supply chain management relationship	Survey data analysis, sample of 108 big manufacturing enterprises in Brazil, by use of cluster analysis, factor analysis	Logistics complexity has a positive correlation with the supply chain management Substantial positive correlations between the variables.	The research work was specific on manufacturing firms in Brazil.	The study will focus on the E-Commerce stores in Nairobi, Kenya
Qureshi, Dinesh, & Pradeep, (2017)	To model the crucial variables of logistics subcontracting relationship between transporters and logistics service providers (LSPs)	A revelatory structural modeling-based approach was used to exemplify the variables of logistics subcontracting relationship	A number of enablers impact the hauler’s relationship with LSP that causes productivity improvement and competitiveness.	The variables were categorized as enablers; those which enhance the “relationship bond” between haulers and LSP	The study focused on the shippers’ company and the context of logistics was outsourcing logistics. .
Ristovska, Petkovski & Kozuharov (2017)	The study focused on practices in logistics management and how they affect company performance	Experimental research was done on a sample of 80 examinees from 80 different corporations in the Republic of Macedonia	The verification of the necessity of logistics managers to optimally manage all logistics events in order to gain better business efficiency, client satisfaction and competitiveness.	Investigation in other countries/ regions using different company sizes. Broader analysis using SEM. A study to explore interaction between the dimensions.	Study based on Kenyan firms.

Ghoumrassi and Tigu (2017)	To show the influence of practices in logistics management on customer satisfaction	The research focused on SMEs Algerian industrial companies based in Algiers studies. 22 managers from 12 companies interviewed.	Suppliers with fragile & leanness logistics solutions, skills & knowledge, green / reverse logistics solutions, sharing ICT, performance measurement systems, impacted on CS	A bigger Sample size preferred. In other African countries. A similar study in the service industry to compare ranking of variables used.	The research will concentrate on Kenyan E-Commerce stores
Mulinge (2014)	Study of logistics' outsourcing and banks' performance	. The study adopted a survey design that is descriptive and targeting fast moving consumer goods manufacturers. The population of the study targeted 85 firms through stratified sampling and the respondents were logistics workers in logistics management department	Sub-contracting logistics services to a firm with competitive advantages in terms of consistency, quality and cost was found out to be the key trigger of performance	The research concentrated on banking industry	The study will focus on the E-Commerce stores in Kenya and will focus on the 5 variables of LMPs
Wanyoike and Mukolwe (2015)	The influence of practices in logistics management on efficiency of operations at Mumias Sugar Company Limited	The target population for investigation included staff from some Mumias Sugar Company department, farmer representatives, Ministry of Agriculture officials and the Kenya Sugar board. Stratified sampling method was used to choose the set sample size of 92.	The study discovered that effective management of information stream increases the company's internal and external processes. Automation of warehousing activities momentarily enhances accuracy, speed of operations and reduces wastage	The study focused on Mumias Sugar Company	The study will focus on E-Commerce stores in Nairobi, Kenya. All 7 LMPs components used to help better ranking.



Gitonga (2017)	Practices in logistic management and operational performance of consumer goods that are fast-moving for manufacturers in Nairobi	The research embraced a descriptive survey design and targeting fast moving consumer goods manufacturers. The population of the study targeted 85 firms through stratified sampling	The study established that logistics management practices has an impact on the performance of operations of fast-moving manufacturers	The research work concentrated on fast-moving consumer merchandises manufacturers in Nairobi	The study will focus on E-Commerce stores in Kenya
Ndung'u, and Were (2018)	The factors affecting effective management of logistics in the manufacturing trade in Kenya; a case of Sameer Africa Limited	The study used a survey design that is descriptive and targeting, Sameer Africa Limited. The study population targeted 46 logistics employees working in the department of management of logistics.	The study revealed that technological change was the major factor impacting on effective management of logistics measured in terms of output	The study focused on a case of Sameer Africa Limited and productivity level as measure of performance	The study will focus on E-Commerce Stores in Kenya and other variables of operational performance

## **2.5 Challenges Facing the Implementation of Logistics Management Practices among Online Retail Firms**

Online retail firms' stores are faced with a number of challenges as they strive to implement logistics management practices. Most online firms normally are faced with a myriad of challenges like pressure from bigger opponents, the need to function autonomously, shortage of resources and several operating problems such as in areas of portfolio management and organizational capability. An example is where some online retail firms experience shortfalls in their performance because supply chain combination is multifaceted (Ebrahim, Taha and Ahmed, 2008). According to Abonyi (2005), some firms have a restricted size and seclusion hence they are prevented from achieving economies of scale in the acquisition of essential things such as tools, raw materials, money, and consultancy services. Consequently, some organizations are often incapable to detect prospective markets; and are unable to exploit current market chances that involve bulky volumes, trustworthy quality and reasonably high standards, and to ensure the consistent supply of their products to their clients (Udin, Khan and Zairi, 2006). Due to limited resources, organizations are often inept to benefit from the opportunities accessible through international value chains because of their small connectivity to global conveyance networks and their weak productive ability (Arvis, Mustra, Ojala, Panzer and Naula, 2017).

Logistics management practices demand that organizations broaden the range of business undertakings, which can become more challenging as product life-cycles reduce, product diversity increases, and technological innovation proceeds at an exponential frequency and there is an increase in demand for customer contentment (Bozarth, Donald & Barbara, 2007). Additionally, organizations have a shortage in technical manpower, research and development, finance and learning, which are dynamics that normally drive several organizations into

unrelenting negative course (Cocca and Alberti, 2010). As a crucial trigger of economic development, online retail firms need to grow themselves strategically to be more competitive to meet local, international and globalization encounters and to offer good product/service mix and performance (Raymond & Croteau, 2006).

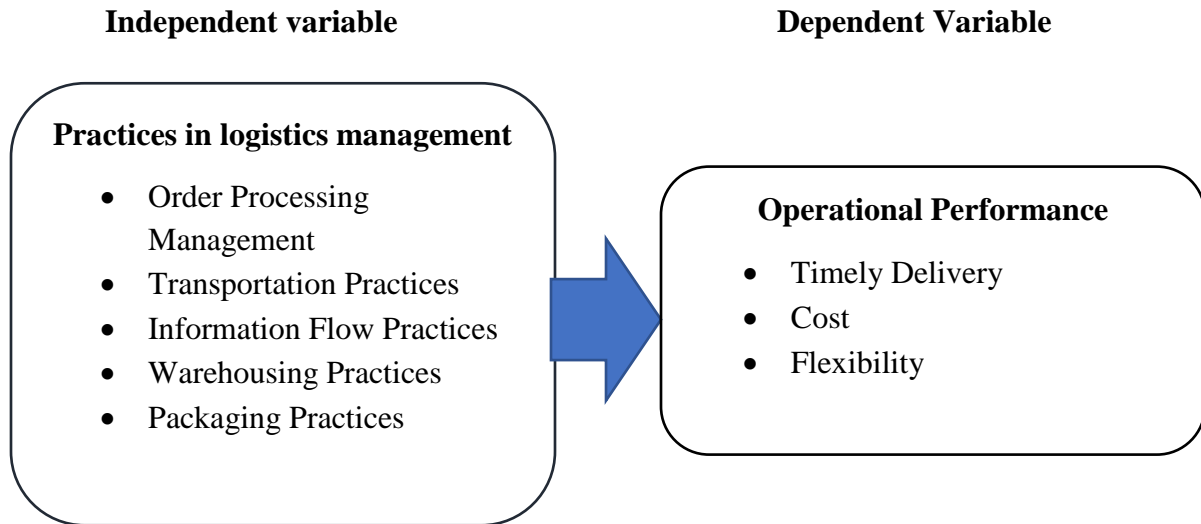
The implementation logistics management practices within online retail firms is in most cases activated by pressure from clients or by huge enterprises whose attention is on the assumption of a pull approach somewhat than the customary push approach (Gelinas and Bigras, 2004). Consequently, organizations are forced to expand the vision of their logistics chain approach to refocus activities on elementary skills. Because of these swelling necessities in implementing logistics approaches, firms may experience more setbacks in executing their logistics plan in order to contest effectively (Thakkar, Desmukh and Kanda, 2008). To be prosperous, organizations must recognize the significance of logistics tactic implementation, be watchful and fine-tune to the necessities of their clients to reserve their market segments and to assure their development (Hong and Jeong, 2006). Nevertheless, the necessity for objectivity and autonomy by organizations, together with a small tendency to delegate and consult, may be hindrances to the introduction of achievement influences such as hands-on management and the use of decision support.

## **2.6 The conceptual framework**

Logistics management practices are the independent variables which include order processing, transportation, information flow, warehousing practices and packaging. Operational performance is the dependent variable for this study is measured using three constructs namely timely delivery, cost and flexibility. It is hypothesized that implementation of logistics management practices will lead to better operational performance.

This relationship is depicted diagrammatically in conceptual framework below

**Figure 2.1: The conceptual model**



**Source: Researcher (2021)**

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter outlined the methodology that was used in the study. It revealed the research design, the target population, methods of data collection, data analysis and presentation of the findings.

### **3.2 Research design**

The study adopted a descriptive research design. Descriptive research assisted in the collection of data through recording, observation, description, analyzing and reporting the prevailing operating circumstances from a population (Cooper & Schindler, 2006). Usage of descriptive research design was reasonable because it helps the investigator to describe the logistics management practices currently among online retail firms and how they influenced operational performance.

### **3.3 Population of study**

The study targeted 30 registered online retail firms in Nairobi, Kenya which according to Euromonitor online retailing report (2020) are thirty in number as indicated in the appendices section. A census survey was conducted because of the relatively low population size.

### **3.4 Data collection**

Primary data collected using questionnaires was used; the questionnaires were administered through emails, because of the Covid-19 pandemic. Respondents of the research were logistics supervisors, procurement managers, operations managers or their equivalent. Each questionnaire had four sections; general information was in section A, the first objective in section B, which was to establish the scope to which practices in logistics management have been employed by

online retail firms in Nairobi, section C had queries on the correlation between logistics management practices and operational performance of online retail firms in Nairobi and section D sought to determine the challenges facing the implementation of logistics management practices of online retail firms in Nairobi.

### **3.5 Data Analysis**

Data was gathered, completed questionnaires assessed for accuracy and completeness, the questionnaires were edited and later coded for easier analysis. Data for objective one which was to establish the scope to which practices in logistics management have been employed by online retail organizations in Nairobi and data on the third objective that was meant to identify the setbacks facing the implementation of practices in logistics management of online retail firms in Nairobi, which was analyzed using the descriptive measurements. The second objective's data on the correlation between practices in logistics management and performance of operations of online retail organizations in Nairobi were analyzed using correlation and regression analysis. The multivariable regressions model was;

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

Where

Y = Operational performance as measured by:

X<sub>1</sub> = Order processing Management

X<sub>2</sub> = Transportation Practices

X<sub>3</sub> = Information Flow Practices

X<sub>4</sub> = Warehousing Practices

X<sub>5</sub> = Packaging Practices

$\epsilon$  = Error term

$\beta_0$  is the constant or intercept of the regression,

$\beta_1$ ,  $\beta_2$ ,  $\beta_3$ , and  $\beta_4$  and  $\beta_5$  are parameters that are unknown i.e. the coefficients of regression, were determined

The research findings were presented by using tables for interpretation to be easy

**Table 3. 1 Data collection and analysis methods' summary**

Objectives	Questionnaires'	Analysis of data
<b>General Information</b>	Section A	Descriptive Statistics
To establish the scope to which practices in logistics management have been employed by online retail organizations in Nairobi	Section B	Descriptive statistics
To determine the correlation between practices in logistics management and operational performance of online retail firms in Nairobi, Kenya	Section C	Correlation and regression analyses
To investigate the setbacks facing the implementation of practices in logistics management of online retail firms in Nairobi	Section D	Descriptive analyses

**Source: Researcher (2021)**

## CHAPTER FOUR: RESEARCH FINDING AND DISCUSSION

### 4.1 Introduction

This chapter covers analysis findings from the primary data that was collected using questionnaires. The analysis of findings was done using means, standard deviations as well as regression analysis that formed part of the inferential statistics.

### 4.2 Response rate

In total, there were 30 questionnaires which were distributed to supply chain managers or their equivalents from the online retail firms in Nairobi, Kenya. Out of the 30 questionnaires 23 were dully fully filled up and returned to the researcher. This account for a 77% response rate which was in line with Sekaran and Bougie (2016) who said that sufficient response rates should be at least 70%. The table below give the response rate.

**Table 4.1 Response rate**

<b>Response</b>	<b>Frequency</b>	<b>%</b>
Responsive	23	77
Non-Responsive	7	23
<b>Total</b>	<b>30</b>	<b>100</b>

**Source: Research Data (2021)**

### 4.3 Respondents' Background Information

In order to carry out this research effectively the investigator pursued to know the contextual information of the respondents that were included in the research. This was done to establish their reliability to provide satisfactory data as requisite, a data that explains the true feelings on the ground.



### 4.3.1 Firm Ownership

The study determined whether the firms are local, Foreign or Both local and foreign owned. The findings are shown in the table below:

**Table 4. 1 Firm Ownership**

	<b>Frequency</b>	<b>Percent</b>
Local	17	73.9%
Foreign	2	8.7%
Local and Foreign	4	17.4%
<b>Total</b>	<b>23</b>	<b>100.0</b>

**Source: Research Data (2021)**

The finding show that 73.9% of the organizations are locally owned, 17.4% are both locally and Foreign owned and 8.7% are foreign owned. This result is in tandem with the fact that most of organization are locally owned and others acquire funds from investors outside which gives them both regional and foreign outlook. This implies that the firms had the operations in the local environment, thus understands the logistics management practices within the region.

### 4.3.2 Number of years in operation

The research sought to determine total number of years the companies have been in operation. The findings are in the following table:

**Table 4. 2 Number of Years in Operation**

<b>Years</b>	<b>Frequency</b>	<b>Percent</b>
0 – 5	14	60.9%
6-10	3	13.0%
11-15	4	17.4%
Over 20	2	8.7%
<b>Total</b>	<b>23</b>	<b>100.0</b>

**Source; Research Data (2021)**

Most of the respondents specified that their firm was in operation for the last between 0 – 5 years with 60.9%, followed by 11-15 Years with 17.4%, 6-10 years with 13% and over 20years with

8.7%. Challenges and experience are subject to the number of years the organization was in operation and involved with other organizations. This implies that majority of the firms had a considerable number of years involved in operation, these increases their knowledge on the organization and change processes of an organization to manage logistics management practices.

### 4.3.3 Respondents' positions

The investigation sought to determine the positions that the respondents held especially those who were part of the study. The findings were tabulated below

**Table 4. 3: Position Held by Respondents**

	<b>Frequency</b>	<b>%</b>
Top level Management	19	82.6%
Middle level Management	3	13.0%
Operation/Support Staff level	1	4.4%
<b>Total</b>	<b>23</b>	<b>100.0</b>

**Source; Research Data (2021)**

From the findings, 82.6% held top level management positions, 13% were middle level management, and 4.4% occupied the operations/support staff level. This implies respondents were knowledgeable and could comprehend the questionnaires distributed to them. Data collection was therefore dependable to represent the accurate effect that was on the ground. It was also clear that the respondents occupied diverse positions and thus diversity was heightened in the research.

### 4.3.4 Number of years in the current position

The research sought to investigate how long the participants have been involved in the organization. The outcomes are recorded in table 4.5

**Table 4. 4: Work Experience**

<b>Years</b>	<b>Frequency</b>	<b>%</b>
Less than 1 year	1	4.3%
1-3 years	1	4.3%
4-6 years	18	78.4%
7- 8 years	2	8.7%
More than 10 years	1	4.3%
<b>Total</b>	<b>23</b>	<b>100</b>

**Research Data (2021)**

Most of the respondents have been functioning in the business for between 4-6 years with 78.4%, then 7-8 years with 8.7%, between 1-3 years, more than 10 years and below 1 year with all of them at 4.3%. The research results show that respondents would have worked in the organization for long enough to be informed with the variations in practices in logistics management that have an influence in operational performance of the firm.

**4.4 Implementation of Logistics Management Practices**

This section presents the findings on the respective objectives and their effect on performance of operations. The results are recorded in the subsequent section;

**Table 4.6: Logistics Management Practices**

<b>Logistics Management Practices</b>	<b>Mean</b>	<b>Std. Dev</b>
Transport Management Practices	3.85	0.8425
Order Processing Management	3.84	0.9075
Packaging Practices	3.84	0.8124
Warehousing Management	3.84	0.7475

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**Research Data (2021)**

The research determine how Transport Management Practices has affected the operational performance. The investigation thus expressed several statements on the same and the respondents were needed to show the degree of their acceptance with the statement using a 5-point Likert scale. The respondents agreed that transportation management practices affect the operational performance (M=3.85, SD=0.8425). The research findings show that respondent showed that the organization used up a minimum cost to in carrying products to customers. The outcome is in consensus with Dubois, (2007) who said that management of fleet helps in ensuring proper flow of material, production facilities as well as goods from one point to another in the supply chain. Respondents stated that through transport management practices, products were made available to the desired location of the customers. The results were in agreement with Christopher (2016) who established that practices in the management of transport offers both time as well as place utility within the supply chain. An efficient transportation system helps the firm to significantly reduce the overall cost.

The study determine how Order Processing Management has influenced the operational performance. The research consequently articulated numerous statements and the respondents were obligated to specify the level of their agreement with the statement by means of a 5-point Likert measure. The respondents agreed that order processing management affects the operational performance (M=3.84, SD=0.9075). The research participants established that firms used electronic order processing for all the products. This finding is supported by Iman Niromand (2016) who stated that Order fulfillment is the basis of information flow within the chain of supply of any organization, which enables customers to make transaction through an

online platform. Customers are happy when an organization timely fulfills the order they have placed. The respondents stated that the firm has a system where customers can track their orders on transit and awaiting to be processed. This finding is concurrent with Chen and Labadi (2005) who stated that unexplained delays by an organization in fulfillment of the orders had an adverse effect on performance of operations of the firm.

The study determine how packaging practices has affected the operational performance. The research work therefore articulated numerous statements on the same and the respondents were needed to indicate the degree of their consent with the statement by use of a 5-point Likert scale. The respondents agreed that packaging practices affects the operational performance ( $M=3.85$ ,  $SD=0.8124$ ). The findings reveal that respondent indicated that the firm are using special packaging materials for customized and special products during transportation and storage. This finding is in line with Dubois, 2007) who stated that packaging practices helps in ensuring proper storage and transportation of the products from the firm to the customers. The respondents stated that the firm packages are as per the customer's requirements in terms of usage and storage capacity. This finding is in line with Christopher (2016) who established that packaging practices are supposed to be at the preference of the customers in order to fulfill their demand. An efficient packaging practices system helps the firm to significantly reduce the overall cost and hence storage and transportation of the products.

The study determine how warehousing management has an impact on operational performance. The research thus articulated a number of statements on the same and the respondents were obligated to show the level of their consent with the statement using a 5-point Likert scale. The respondents agreed that warehousing management affects the operational performance ( $M=3.84$ ,  $SD=0.7475$ ). According to the results, the respondents specified that their workforce effectively

foresaw the future demands of the stocks. This research result is in line with Baker, Croucher & Rushton (2017) who argued that warehousing covers actions engaged in to ensure that goods and chattels are stored in a way that is systematic and that they can be made available as and when required. Warehousing results into time utility where the gap between production as well as consumption of the goods is created. The respondents indicated that their organization holds sufficient levels of stocks of finished goods and supplies. This finding is supported by Githui (2012) who said that once goods have been shipped, they need to be stored waiting for customers to place orders. Warehousing entails determination of the space, layout for stock as well as placement of stock.

The study determines how information flow management has affected the operational performance. The research therefore articulated quite a lot of statements on the same and the respondents were required to specify the level of their consent with the statement using a 5-point Likert scale. The respondents agreed that information flow management affects the operational performance ( $M=3.71$ ,  $SD=0.8125$ ). The research concluded that significant costs were avoided due to information structures in my business. This finding is in line with Waithaka and Waiganjo (2015) who indicates that the key drivers of sharing of information within the supply chain are internet and the EDI by facilitating real time flow of data and information between entities and thus cost reduction. The respondents established that logistics management processes were monitored using information technology. This finding is concurrent with Dabholkar and Overby (2012) who stated that management of flow of information ensured products were at the correct place at the right time, with the precise quality and at the correct cost. The implementation comprises physical design and transportation of the products and supplies, and measurement comprises the totaling of products, resources and activities.

#### 4.4.6 Operational Performance

The study determine how operational performance was affected by the logistics management practices. The investigation therefore articulated many statements on the subject and the respondents were supposed to write down the level of their acceptance with the statement by use of a 5-point Likert scale.

**Table 4.7: Operational Performance**

<b>Statements</b>	<b>Average</b>	<b>Std. Dev</b>
Improved flexibility in the operations	4.01	0.82
Operational cost reduction	3.87	0.87
There is increased timely delivery of products	3.77	0.96

#### **Research Data (2021)**

The study established that the firm increased flexibility in the operations ( $M=4.01$ ,  $SD=0.82$ ). This finding is in line with Tatoglu et al., (2016) who stated that the performance of the supply chain can be measured using a number of different indicators and measures like effectiveness and efficiency, responsiveness, flexibility as well as timeliness. It also covers the quality concerns and cost issues incurred within the supply chain. The respondent indicated that the organization reduced the costs of operations ( $M=3.87$ ,  $SD=0.87$ ). This result tallies with the argument of Estampe, Lamouri, Paris and Brahim-Djelloul (2013); they noted that due to the adoption of the logistics management practices, there is a high reduction of cost of operations in the firms because of the reduced uncertainties and increased flexibility due to the comprehension of the clients' needs and preferences. The performance of the supply chain helps buying firms to respond to varying demand uncertainties and customer requirements in an effective and efficient manner. The respondent indicated that there was increased timely delivery of products ( $M=3.77$ ,  $SD=0.96$ ). The findings were supported by Kwamboka (2017)

argument that established physical distribution has a positive, significant impact on the performance.

#### **4.5 Relationship between Logistics Management Practices with Flexibility as Measure of Performance of operations**

The investigation checked the relationship between logistics management practices with flexibility as measure of operational performance. The research made use of multiple regression on performance operation measures as indicated in the figure below:



**Table 4. 8 Coefficients on Flexibility**

Model	Unstandardized Coefficients		Standardized Coefficients	t (Value)	Sig. (P Value)
	B	Std. Error	Beta		
(Constant)	1.203	0.932		1.291	0.243
<b>Order Processing Management (X<sub>1</sub>)</b>	0.125	0.124	0.106	1.008	0.363
<b>Transportation Practices(X<sub>2</sub>)</b>	0.178	0.089	0.227	2.000	0.037
<b>Information flow Practices (X<sub>3</sub>)</b>	0.461	0.124	0.473	3.718	0.001
<b>Warehousing Practices (X<sub>4</sub>)</b>	0.381	0.093	0.465	4.097	0.000
<b>Packaging Practices(X<sub>5</sub>)</b>	0.137	0.112	0.132	1.223	0.253

**Research Data (2021)**

- a. Dependent variable: Flexibility
- b. Predictor: Order Processing management, transportation practices, information flow practices, Warehousing Practices, Packaging Practices

$$Y=1.203+0.125X_1+0.178X_2+0.461X_3+0.381X_4+0.137X_5$$

From the table 4.8, the information there shows that order Processing, management and flexibility are insignificantly and positively correlated. (t=1.291, p=0.243). This shows that an escalation in the level of acceptance of logistics management by one entity, results to associated increase in the elasticity offered by 0.125. Moreover, Order management of processing had p=0.363 value showing that it is statistically insignificant at 0.05 critical value as it is greater than 0.05.

Transportation Practices and flexibility are statistically significant and positively related (t=2.000, p=0.037) that shows an increase in the execution of logistics management practices by one unit, results in a related gain in flexibility by 0.178; other factors held constant. In addition, p= 0.037 is lower than 0.05, therefore it is statistically irrelevant.

Information flow Practices and flexibility are statistically and positively significant, ( $t=3.718$ ,  $p=0.001$ ) that shows implementation of Information flow Practices results in an advancement in the flexibility of operations by 0.461. The p-value linked to information flow practices is 0.001 showing information flow as a practice in logistics management is statistically significant because it is less than the critical p value 0.05 at 95% confidence level.

Warehousing Practices and flexibility are significantly and positively correlated, ( $t=4.097$ ,  $p=0.000$ ) meaning that an entity increase in the implementation of warehousing practices results in a related increase in the flexibility of operations by 0.381, and the related p-value of 0.000 which is an indication that warehousing practices as a logistics Management practice is statistically significant because it is under 0.05 at 95% confidence level. Therefore, employment of warehousing practices improved flexibility of operations in the firms.

Packaging Practices and flexibility are insignificantly and positively correlated, ( $t=1.223$ ,  $p=0.253$ ) meaning a unit increase in packaging practices brings about a related upward move in the flexibility of operations by 0.138, and the associated p-value is 0.253 which means packaging practices as a logistics management practice is trivial as it is higher than 0.05 at 95% level of confidence.

**Table 4. 9 Flexibility Model Summary**

<b>Model summary</b>					
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted Square</b>	<b>R</b>	<b>Std. Error of the Estimate</b>
<b>1</b>	.763 <sup>a</sup>	0.582	0.52		0.617

**Research Data (2021)**

- a. Dependent Variable: Flexibility
- b. Predictors: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices, Packaging Practices

The findings in table 4.9 indicates a correlation coefficient value of 0.763, R squared value is 58% meaning that 58.2% of variation in flexibility is explicated by the disparity in the independent variables: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices and Packaging Practices. This is a satisfactory prediction model. Unexplained variations is 42.7%. This is due to variables not included in the model also pure chance factors.

**Table 4. 10 ANOVA Table on Flexibility**

<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>p-value</b>
<b>Regression</b>	9.0254	5	1.805080	4.7339419	.000 <sup>b</sup>
<b>Residual</b>	6.4822	17	0.3813059		
<b>Total</b>	15.5076	22			

**Research Data (2021)**

- a. Dependent variable: Flexibility
- b. Predictors: management of Order Processing, Transportation Practices, Information flow Practices, Warehousing Practices, Packaging Practices.

The results in table 4.10 indicates that the general model is statistically significant as the p-value=0 is below 5%. Additionally, for  $\alpha=5\%$  numerator,  $df = 5$  and denominator  $df=17$ , critical F value is 2.81. Since the calculated  $F= 4.73$ , this also supports the numerical significance of the concept. This result implies that the model is a suitable predictor of operational performance as measured by flexibility.

**4.6 Effect of Logistic Management Practices with Cost as a Measure of Operational Performance**

The second objective of this research was to define the impacts of implementation of logistic management practices on cost as an operational performance measure in online retail firms in

Nairobi. The research made use of multiple regression on logistics management practices measures. The findings on cost are as specified in table 4.11 below:

**Table 4. 11 Cost Coefficients of Regression**

Model	Unstandardized Coefficients		Standardized Coefficients	t (Value)	Sig. (P Value)
	B	Std. Error	Beta		
<b>Constant</b>	1.825	0.925		1.973	0.047
<b>Order Processing Management (X<sub>1</sub>)</b>	0.013	0.132	0.009	0.098	0.937
<b>Transportation Practices(X<sub>2</sub>)</b>	0.062	0.097	0.075	0.639	0.477
<b>Information Flow Practices(X<sub>3</sub>)</b>	0.425	0.134	0.436	3.172	0.001
<b>Warehousing Practices(X<sub>4</sub>)</b>	0.379	0.097	0.464	3.907	0.000
<b>Packaging Practices(X<sub>5</sub>)</b>	0.0456	0.217	0.043	0.210	0.699

**Research Data (2021)**

a. Dependent Variable: Cost

b. Predictors: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices, Packaging Practices

$$Y=1.825+0.013X_1+0.062X_2+0.425X_3+0.379X_4+0.0456X_5$$

From the table 4.11, this means, order management of processing and cost are positively and statistically insignificant. (t=0.098, p=0.937). This means order processing management increase by one unit, brings about related growth in the cost of products and services offered by 0.013. Order Processing Management was p=0.937 value showing that it is statistically insignificant at 0.05 critical value since it is more than 0.05.

Transportation practices and cost reduction are positively and insignificantly related (t=0.639, p=0.477) meaning that an increase in the execution of transportation practices by one unit, results in a related lessening in cost by 0.062 all other factors held constant. Besides, p= 0.477 is greater than 0.05 and hence it is statistically insignificant.

Information flow practices and cost are positively and statistically significant, ( $t=3.172$ ,  $p=0.001$ ) which shows implementation of information flow practices leads to reduction in cost of operations by 0.425. The p-value associated with information flow was 0.001 which is an indication that information flow as a logistics management practice is statistically significant since it is less than the critical p value of 0.05 at 95% confidence level.

Warehousing Practices and cost are positively and statistically significant, ( $t=3.907$ ,  $p=0.000$ ) an indication that a unit increase in the implementation of warehousing practices results in a related reduction in cost of operations by 0.384, and the related p-value is 0.000 which is an indication that warehousing practices as a logistics management practice is statistically significant since it is below 0.05 at 95% confidence level. Hence implementation of logistics management practice has reduced the cost of operations in online retail firms in Nairobi, Kenya.

Packaging Practices and cost are positively, insignificantly related, ( $t=0.210$ ,  $p=0.699$ ) an indication that a unit increase in the implementation of packaging practices results in a related reduction in cost of operations by 0.046, and the related p-value is 0.699 which is an indication that packaging as a logistics management practice is insignificant since it is higher than 0.05 at 95% confidence level.

**Table 4.12 Model Summary on Cost**

<b>Model Summary</b>				
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
<b>1</b>	.771 <sup>a</sup>	0.594	0.533	0.650

**Research Data (2021)**

- a. Dependent Variable: Cost
- b. Predictors: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices, Packaging Practices

The findings in table 4.12 indicates a correlation coefficient value of 0.771, R squared value is 59.4% meaning that 59.4% of the variation in cost is explained by the variation in the independent variables: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices and Packaging Practices. This is a satisfactory prediction model. Unexplained variations is 42.4%. This is due to variables not included in the model also pure chance factors.

**Table 4. 13 ANOVA Table on Cost**

<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Regression</b>	10.524	5	2.1048	4.9747105	.000 <sup>b</sup>
<b>Residual</b>	7.193	17	0.4231		
<b>Total</b>	17.717	22			

**Research Data (2021)**

- a. Dependent Variable: Cost
- b. Predictors: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices, Packaging Practices

The results in table 4.13 indicates that the overall model is statistically significant since the p-value=0 is less than 5%. Further for  $\alpha=5\%$  numerator,  $df=5$  and denominator  $df=17$ , critical F value is 2.81. Since the calculated  $F= 4.97$ , this also supports the statistical significance of the model. This result implies that the model is a suitable predictor of operational performance as measured by Cost.

**4.7 Effect of Logistics Management Practices with timely Delivery as an Operational Performance measure**

The objective that was second in the research was to define the effect of execution of logistics management practices on timely delivery as a measure of operational performance in online

retail firms in Nairobi. The research employed multiple regression on all the measures of operational performance. The results on timely delivery are as shown in the table below:

**Table 4. 14 Timely Delivery Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t (Value)	Sig. (P Value)
	B	Std. Error	Beta		
(Constant)	3.349	1.341		2.498	0.017
Order Processing Management (X <sub>1</sub> )	0.548	0.184	0.004	2.978	0.004
Transportation Practices (X <sub>2</sub> )	0.057	0.417	0.064	0.137	0.65
Information Flow Practices (X <sub>3</sub> )	0.027	0.231	0.018	0.117	0.894
Warehousing Practices (X <sub>4</sub> )	0.384	0.184	0.303	2.087	0.042
Packaging Practices (X <sub>5</sub> )	0.393	0.181	0.596	2.171	0.001

**Source: Research Data (2021).**

a. Dependent Variable: Timely Delivery

b. Predictors: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices, Packaging Practices

$$Y=3.349+0.0548X_1+0.57X_2+0.027X_3+0.384X_4+0.393X_5$$

From table 4.14 it can be seen, Order Processing Management and timely delivery are positive and statistically significant. (t=4.869, p=0.004). This shows that implementation of order processing management increase by one unit, marks an associated increase in the timely delivery of offered products and services by 0.548. Moreover, order processing management had p=0.004 value an indication that it is statistically significant at 0.05 critical value since it is less than 0.05.

Transportation practices and timely delivery are insignificantly and positively correlated (t=0.137, p=0.650 meaning an increase in the execution of Transportation Practices by one unit, results in a related increase in reliability by 0.057 all other factors remaining constant. besides, p= 0.650 is greater than 0.05 and hence it is statically insignificant.

Information flow practices and timely delivery are positively and insignificantly related, ( $t=0.117$ ,  $p=0.894$ ) meaning implementation of information flow practices leads to an improvement of timely delivery of goods and services by 0.027. The p-value associated with information flow practices was 0.894 which is an indication that information flow as a logistic management practice is statistically insignificant because it is more than the critical p value of 0.05 at 95% confidence level.

Warehousing practices and timely delivery are significantly and positively correlated, ( $t=2.087$ ,  $p=0.042$ ) meaning a unit increase in the execution of warehousing practices causes an associated increase in timely delivery of goods and services by 0.384, and the related p-value is 0.042 meaning Warehousing practices as a logistics management practice is significant as it is below 0.05 at 95% confidence level. Therefore, execution of logistics management has improved the timely delivery of online retail firms in Nairobi.

Packaging practices and timely delivery are positively and statistically significant, ( $t=2.171$ ,  $p=0.001$ ) meaning a unit increase in the implementation of packaging practices results in a related increase in timely delivery of goods and services by 0.393 and the related p-value is 0.001 meaning packaging practices as a logistics management practice is significant since it is lower than 0.05 at 95% confidence level.

**Table 4. 15 Model Summary on Timely delivery**

<b>Model Summary</b>						
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		
<b>1</b>	.773 <sup>a</sup>	0.598	0.537	0.603		

**Source: Research Data (2021)**

a. Dependent Variable: Timely Delivery



- b. Predictors: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices, Packaging Practices

The findings in table 4.15 indicates a correlation coefficient value of 0.773, R squared value is 59.8% meaning 59.8% of the variation in timely delivery revealed by the variation in the independent variables: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices and Packaging Practices. This is a satisfactory prediction model. Unexplained variations is 42.2%. This is due to variables not included in the model also pure chance factors.

**Table 4. 16 ANOVA Table on Timely Delivery**

<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Regression</b>	9.184	5	1.8368	5.057269	.000 <sup>b</sup>
<b>Residual</b>	6.174	17	0.3632		
<b>Total</b>	15.358	22			

**Source: Research Data (2021)**

- a. Dependent Variable: Timely delivery
- b. Predictors: Order Processing Management, Transportation Practices, Information flow Practices, Warehousing Practices, Packaging Practices

The results in table 4.16 indicates that the overall model is statistically significant since the p-value=0 is less than 5%. Further for  $\alpha=5\%$  numerator,  $df=5$  and denominator  $df=17$ , critical F value is 2.81. Since the calculated  $F= 5.057$ , this also supports the significance statistic of the model. This result implies the concept is a suitable predictor of operational performance as measured by timely delivery.

#### **4.8 Discussion of Findings**

The findings indicates that warehousing management impacts performance operations positively. This finding conquers with Baker, Croucher & Rushton, 2017) who stated that Warehousing covers the undertakings involved in making sure that goods are stored in a

systematic manner. Such goods can be made available as and when required. Warehousing results into time utility where the gap between production as well as consumption of the goods is created.

The findings indicates that order processing management impacts positively on operational performance. These findings are consistent with Iman Niromand (2016) who stated that order fulfillment is the basis of information flow within the supply chain system of an organization. Customers are happy when an organization timely fulfills the order they have placed.

The findings indicates that transportation management practices impact positively on operational performance. The outcome tallies the argument of Christopher (2016) that established that transportation management practices offers both time as well as place utility within the supply chain. An efficient transportation system helps the firm to significantly reduce the overall cost.

The findings indicates that packaging practices impacts positively on operational performance. This finding is in line with García-Arca, González-Portela Garrido, & Prado-Prado. (2016) who established that packaging practices enables the organization to protect the products and to ensure the standard of the products in terms of quality and quantity are maintained hence improving the customers.

#### **4.9 Challenges of Logistics Management Practices Implementation**

The findings on the challenges of logistic management practices implementation are indicated in Table 4.17.

**Table 4.17: Challenges of Logistics Management Practices Implementation**

<b>Statement</b>	<b>Mean</b>	<b>Std. Dev</b>
There is high level of insecurity in the firm's operation especially through electronic based information flow	3.72	0.879
There is lack of proper training regarding logistic management practices of the staff in the organization	3.69	0.933
There is inadequate storage space in the organization	3.62	1.034
There's financial constraint regarding implementation of logistics practices in the organization	3.59	0.776
There is lack of efficient communication channels in the organization due to the logistics structures	3.49	0.837

**Source: Research Data (2021)**

Table 4.17 indicates that various challenges are encountered in the efforts to implement logistic management practices in the firms. These challenges include high level of insecurity in the firm's operation especially through electronic based information flow (M=3.72), lack of proper training regarding logistic management practices of the staff (M=3.69), inadequate storage space (M=3.62), and financial constraint regarding implementation of logistics practices (M=3.59) and lack of efficient communication channels in the organization due to the logistics structures (M=3.49). The study finding were in line with (Arvis, Mustra, Panzer, Ojala & Naula, 2007) who indicated that with unlimited resources the firms were unable to benefits from the global value chains because of low connectivity in terms of communication channels and productive capacity. The study findings were in line with (Abonyi, 2005), who indicated that firms with limited sizes and isolation are unable to attain economies of scale due to inadequate storage space in the firm.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

The chapter presents a summary of findings of the research from the analysis basing on objectives of the study. The conclusion was informed by study findings and objectives well presented. The recommendations of the investigation and areas for further research are also considered.

### **5.2 Summary of Findings**

The main objective was determining effect of practices in logistics management and operational performance of online firms in Nairobi. The research work was guided by the ensuing specific objectives; to establish the extent of logistics management practices in online firms in Nairobi, Kenya; to find out impacts of practices in logistics management on operational performance in online firms in Nairobi; to establish the challenges facing practices in logistics management in online firms in Nairobi.

The research finds out that information flow management has a significant, positive effect on operational performance. The organization significant costs were avoided due to information systems in the organization. The logistics management processes are monitored by use of information technology. The organization interacted with their clients through ICT communication platforms. The information control had caused improved expertise in their organization. Managerial work-load had reduced due to assimilation of communication platform. The information communication channels had helped the organizations to gain competitive edge. The flow of information through ICT practices was used to plan distribution processes.

The research showed warehousing management had a significant, positive effect on operations performance. Procurement staff of the organization anticipated the future increase in demands. The organization hold sufficient levels of stocks of finished goods and supplies. Management of the inventory in the organization cuts on ordering costs dependable with objectives set by management. Management of inventory get to guide when and how to order goods in the organizations. Inventory management in the organization involved recording and observing the levels of the catalogue. The organization had a vigorous structure that accurately tracks the levels of the register in the organization. The management of inventory in their business maintains stock levels that reduces the holding costs.

Order processing management has a positive, significant impact on performance operations. The organization used electronic order processing. The firm has a system where customers can track their orders. Orders in the organization were processed in a timely manner. The organization was continuously committed towards refinement of processes of managing inventories and orders. The firm used a database to track its orders and inventory.

The research established that transportation management has a significant, positive effect on performance operations. The firm also spent a minimum cost to transport products to customers. Fleet management allowed products to be availed to the desired location of the customers. The organization had apt distribution of products and services to customers. The firm used electronic method to track all the products on transit. The right mode of transport was used to deliver services and products.

The study established that packaging practices has a positive, significant effect on operation performance. The products are distributed in the correct quantity using the correct packaging materials to the customers. The firm's packages are as per the customer's requirements in terms

of usage and storage capacity. The firms use special packaging materials for customized and special products during transportation and storage. The organization label and load correct products to the right vehicle that is branded.

### **5.3 Conclusion**

The research study concluded that, information flow management has a significant, positive impact on performance of operations. Most of the online retails' firms have embraced the information flow management especially all the orders of the firm are made through information communication channels as it was used to plan for distribution processes which has led to increased customer satisfaction, reduced cost and ensured timely delivery of the products.

The research concludes that warehousing management had a positive, significant impact on operation performance. The warehousing management had led to the optimal levels of stocks in the organization by determining how much to order, when to order and to track the online customers' products, hence the organization has reduced the cost associated with the inventories, increased customer satisfaction and timely delivery of the products to the customers.

The research work concludes that management of order processing has a positive, significant impact on operation performance. The order processing management has ensured customers can track their orders through a database, which has led to increased customer satisfaction, reduced customer complaint since the customer can easily track down their orders hence it has also led to timely delivery of the customers products and increased customer satisfaction.

The investigation accomplishes that transport management has a positive, significant effect on operation performance. Through transport management practices the firms are able to use the electronic system to track the product on transit and to ensure the products are at the desired

location at the right time. The transport management practices have led to increase in customer satisfaction, reduced cost and timely delivery of the products to the customers.

The study concludes that packaging practices had a positive, significant impact on operation performance. The firms use special packaging materials for customized and special products during transportation and storage, which has increased customer satisfaction, since the customer can easily get their products in the right quantity and quality.

#### **5.4 Recommendation of the Study**

The research recommends management of online retail firms need to adopt information flow management techniques to improve on timeliness, cost reduction and flexibility. It was determined that information flow management are used by the firms to manage customers, suppliers and internal processes.

The study also commends that management of online retail organizations should regard fully implementing the warehousing functional areas of logistics in order for the organization to hold sufficient levels of the stocks in the firms, to minimize the costs involved in the holding of the stocks and to ensure there is effective demand of the stocks in the organizations which will lead to flexibility of operations and reduction of costs.

The study found that order processing management was adopted by the online retail firms. The order processing management techniques led to increased flexibility of operations, reduced cost and increased timely delivery. Therefore, the study recommends the need to fully adopt and implement order processing management technique so as to improve operational performance even further and therefore have a competitive advantage over other firms.

## **5.5 Study Limitations**

The research was restricted to primary data whose collection was done with the aid of online questionnaires which was sent through e-mails. The limitation that was faced by the study in collection of primary data is that respondents in first place may have had fear that information provided was to be utilized to scare them. To defeat this limitation, assurance was provided to respondents that data collected was confidential, used for academic work only. To reinforce this assurance, a letter from the University was used, having information about the purpose of the study as academic.

During data collection, most of the respondents were so busy with their day to day operations. It was therefore not possible to collect data from the busy respondents in a single day or in person. To ensure that adequate data had been collected and improve on the response rate, the study adopted a drop and pick later method while distributing questionnaires through e-mails. The contact details of the respondents were noted and follows ups were done to remind respondents of the need to fill in the questionnaires.

## **5.6 Suggestions for Further Research**

The concentration of the current research was on logistics management practices and its impact on operational performance of online retail firms in Nairobi, Kenya. More specifically, the research focus was on order processing management, transportation practices, and management of information flow, storage practices, packaging practices and how they influence operational performance. Regression results indicated the value of R square as 0.58; meaning 58% change in operational performance describes practices in logistics management. Thus, it can be deduced that other than from practices in logistics management, there are other influences impelling performance of operational where future studies may deal with. The focus of the current study



was on online retail firms in Nairobi, Kenya. Future studies may also be conducted among other firms outside the realm of online retail firms. The study also suggests that future studies on the same variables may be conducted on a longitudinal relatively to cross-sectional design as it would correct variations in the data in relation to the time component.

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## APPENDICES

### Appendix I: Questionnaire

#### Introduction

This questionnaire is intended for use in collecting data in pursuit of the objectives of the study titled “Logistics Management Practices and Operational Performance of online retail firms in Nairobi, Kenya”. It has four sections each containing questions on general survey participant information, logistics management practices, operational performance and challenges in the implementation of logistics management practices. Kindly complete the questionnaire as per the instructions. Your participation is highly appreciated.

#### SECTION A: GENERAL INFORMATION

1. Kindly indicate your gender: Male [  ]                      Female [  ]
2. Is the firm:    Locally Owned [  ]      Foreign owned [  ] Both Locally and Foreign owned [  ]
3. How long has the firm been in operations? (Tick where appropriate)  
    0 – 5 Years                      [  ]      11 - 15 Years                      [  ]  
    6 - 10 years                      [  ]      Over 15 years                      [  ]
4. How many years have you worked in your organization?  
    Less than one year    [  ]      1-3 years                      [  ]  
    4-6 years                      [  ]      7- 10 years                      [  ]  
    More than 10 years    [  ]
5. What position level do you hold in your organization?  
    Logistics Manager                      [  ]  
    Procurement Manager                      [  ]  
    Operations Manager                      [  ]  
    Others? Specify.....

**SECTION B: EXTENT OF IMPLEMENTATION OF LOGISTICS MANAGEMENT PRACTICES (Tick where appropriately)**

**INFORMATION FLOW MANAGEMENT**

On the scale provided below, rate each statement that describes information flow practices in your organization that could have an effect on operational performance. Using the Likert scale of 1-5 where 1= strongly disagree, 2= disagree, 3= moderately agree, 4= agree, and 5= strongly agree.

<b>Statement</b>	1	2	3	4	5
The information flow through ICT practices is used to plan distribution processes					
Logistics management processes is monitored using information technology					
Considerable costs are saved due to information systems platforms in my firm					
All the orders of the firm are made through information communication channels					

**WAREHOUSING MANAGEMENT**

On the scale provided below, rate each statement that describes warehousing management practices in your firm that could have influenced on operational performance. Using the Likert scale of 1-5 where 1= strongly disagree, 2= disagree, 3= moderately agree, 4= agree, and 5= strongly agree.

<b>Statement</b>	1	2	3	4	5
My organization holds sufficient levels of stocks of finished goods and supplies					
Inventory management in my firm maintains stock levels that minimizes the handling costs					
Inventory management in my firm involves recording and monitoring the levels of the inventory usually on a daily basis					
Our staff effectively anticipate the future demands of the stocks depending on					

the trend of the sales					
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### ORDER PROCESSING MANAGEMENT

On the scale provided below, rate each statement that describes order processing management practices in your firm that could have influenced operational performance. Using the Likert scale of 1-5 where 1= strongly disagree, 2= disagree, 3= moderately agree, 4= agree, and 5= strongly agree.

Statement	1	2	3	4	5
The firm uses electronic order processing for all the products					
Order are processed in a timely manner in order to meet the demand of the customers					
The firm uses a database to track its orders and inventory of the customers					
The firm has a system where customers can track their orders on transit and awaiting to be processed					

### TRANSPORTATION MANAGEMENT PRACTICES

On the scale provided below, rate each statement that describes the transport management practices in your firm that could have influenced operational performance. Using the Likert scale of 1-5 where 1= strongly disagree, 2= disagree, 3= moderately agree, 4= agree, and 5= strongly agree.

Statement	1	2	3	4	5
We have a transport system that ensure timely delivery of products and services to our customers					
Through transport management system products are made available to the desired location of the customers					
The products and services are delivered using the right mode of transportation depending on the customer's order					
The firm spend a minimum cost to transport products to customers in the desired location at the right time					



## PACKAGING PRACTICES

On the scale provided below, rate each statement that describes packaging practices in your firm that could have an effect on operational performance. Using the Likert scale of 1-5 where 1= strongly disagree, 2= disagree, 3= moderately agree, 4= agree, and 5= strongly agree.

Statement	1	2	3	4	5
The firm's products are delivered in the right quantity using the right packaging materials to the customers					
The firm label and load the right products to the right branded vehicle					
The firm packages are as per the customer's requirements in terms of usage and storage capacity					
The firms uses special packaging materials for customized and special products during transportation and storage					

## SECTION C: RELATIONSHIP BETWEEN LOGISTICS MANAGEMENT PRACTICES AND OPERATIONAL PERFORMANCE (Tick where appropriately)

Below are several effects of logistics management practices on the operational performance of the E-Commerce stores. Kindly indicate how logistics management practices have affected the operational performance of your organization. Using the Likert scale of 1-5 where 1= strongly disagree, 2= disagree, 3= moderately agree, 4= agree, and 5= strongly agree.

Statement	1	2	3	4	5
There is reduction in costs of operations					
Increased flexibility in our operations					
There is increased timely delivery of products					

**SECTION D: CHALLENGES OF LOGISTICS MANAGEMENT PRACTICES IMPLEMENTATION IN THE ONLINE RETAIL FIRMS**

On the scale provided below, rate each statement that describes challenges of logistics management practices in your firm. Using the Likert scale of 1-5 where 1= strongly disagree, 2= disagree, 3= moderately agree, 4= agree, and 5= strongly agree.

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
There is financial constraint regarding implementation of logistics practices in the organization					
There is inadequate storage space in the organization					
There is lack of proper training regarding logistics management practices of the staff in the organization					
There is high level of insecurity in the firm’s operation especially through electronic based information flow					
There is lack of efficient communication channels in the organization due to the logistics structures					

Any other challenge? Kindly indicate

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**THANK YOU FOR TAKING PART IN THE STUDY**

## **Appendix II: List of E-Commerce stores in Nairobi, Kenya**

1. Naivas Online
2. Masoko
3. Cheki Kenya
4. Sky Garden
5. Avechi
6. Jiji Kenya
7. Kilimall
8. Jumia
9. Jamboshop
10. Quick Mart
11. Shopit
12. Hotpoint
13. Ramtons
14. LG Brand Shop
15. Phones Tablets Kenya
16. Mr. Price Clothing
17. Jade Collection
18. Just Brands Kenya
19. Standard Clothing Store
20. Fashion 254
21. Style Connection
22. Think Organic Kenya
23. Foodplus
24. Greenspoon
25. Mydawa
26. Western Cosmetics
27. ePharmacy
28. PharmaShop
29. PharmacyDirect
30. Kenya Auto Bazaar.

**Source:** <https://www.gadgetskenya.com/top-100-online-shopping-websites-in-kenya/2021>