**ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE**

# CHALLENGE OF LOGISTICS MANAGEMENT AND ITS EFFECT ON OPERATIONAL PERFORMANCE IN THE CASE OF UNILEVER MANUFACTURING PLC

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**In Partial Fulfillment of the Requirements for the Award of Master of Arts Degree in Logistics and Supply Chain Management**

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**MAY, 2019**

**Addis Ababa, Ethiopia**

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

**Challenges of Logistics Management and its effect on operational performance: Case of Unilever Manufacturing PLC**

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# DECLARATION

I, the undersigned, hereby declare that the work which is being presented in this thesis entitled Challenges of Logistics Management and its impact on operational performance: Case of Unilever Manufacturing PLC is original work of my own, has not been presented in any of other university and that all sources of material used for the thesis have been duly acknowledged.

Name: Selamawit Mulugeta Signature: _____Date:_____

This is to certify that the above declaration made by the candidate is correct to the best of my knowledge.

Confirmed by: Teklegiorgis Assefa Signature: _____Date _____
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# ACKNOWLEDGEMENTS

I am gratified to the God for giving me the courage to finish this study. I would like to show my gratitude for my thesis advisor Asst. Professor Teklegiorgis Assefa of the Addis Ababa University, School of Commerce for his advices and supports to finalize this research thesis& also to Miss Abeba Habte for her encouragement. My gratitude also goes to all those who gave me the required data for sample determination and support in the collection of data. Finally, I also thank my parents for their outmost encouragement and support.

## *ABSTRACT*

*Logistics management is that part of supply chain management that plans, implements, and controls the effective flow and storage of goods, services and information between point of origin and the point of consumption. Outbound logistics is a logistics that is concerned with the movement of finished goods and necessary related information from the firm to the customer. The general objective of the study was to examine the challenges of logistics management and its impact on operational performance of Unilever Manufacturing PLC. The specific objectives for study were: to establish logistics management activities employed in Unilever Manufacturing, to examine the challenges of logistics management in Unilever Manufacturing and to determine the effects of logistics management on the operational performance of Unilever Manufacturing. The study adopted both descriptive and explanatory research designs. Descriptive research design was used to describe various variables & explanatory research design has been used to establish the magnitude, direction and effect that logistics management activities have on the operational performance of the company. The population of this study consisted of all of the 115 clerical employees of Unilever Manufacturing based at the head office and factory at Dukem eastern industrial zone & no sampling technique was used. The questionnaire included open and closed ended questions for ease of administration. The data collected was inputted in and analyzed with the aid of SPSS version 23.Descriptive statistics was used for the first and second objectives as it enable the researcher to meaningfully describe the distribution of scores. For the third objective, inferential data analysis was done using multiple regression analysis to show the effect of the independent variable on the dependent variable. The research findings has shown that Unilever Manufacturing faces challenges on the its practiced outbound logistics management activities of order processing management, inventory management, transportation management, information flow, warehousing and packaging. Finding also revealed that logistics management activities have an impact on operational performance which is in a positive trend. The study recommended that company must optimally manage all of its logistics activities in order to gain increased flexibility, quality of product and service, reduce its cost and also gain shortest delivery time.*



*Key Words: Logistics Management Activities, Operational Performance*

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## Abbreviations

**ULET-**Unilever Ethiopia

**KD-** Key Distributors

**3PL-** Third party logistics

**JIT-** Just in time

**MRP-** Material requirement planning

**RFID-** Radio frequency identification

**LIS-** Logistics information system

**TMS-** Transport management system

**IMS-** Inventory management system

**WMS-** Warehouse management system

**SKU-** Stock-keeping unit

**EIZ-** Eastern Industrial Zone

**SAP-** Systems, applications and products

**EDI-** Electronic data interchange

# CHAPTER ONE
# INTRODUCTION

## 1.1. Background of the study

Logistics can be defined as the flow of materials, information, and money between consumers and suppliers (Frazelle, 2002).

Logistics management is that part of supply chain management that plans, implements, and controls the effective flow and storage of goods, services and information between point of origin and the point of consumption with the view of providing satisfaction to the customer. It plays a significant role in the success of any company's operations and has a straight impact on its end result. It implies arranging the right product, at the right place, in right time, and in right condition. Logistics processes play a big part in customer satisfaction, which is a more important than low product cost. Logistics management has become one of the major strategies that companies are adopting to remain competitive through supplying goods in a dynamic environment (Sank, 2001).

Logistics Management activities are activities that involve operations that manage inventory flow from store's receiving dock to the point of sale passing through the stock room (warehouse). The concept of logistics is based on a total system view of the mass functions in movement of goods from supply source to users. Thus this forces the management of a given business to think in terms of managing the total system; rather than just one part of it.

Logistics activities can be classified into two categories as inbound logistics and outbound logistics. Inbound logistics is the smooth inflow of materials and inputs needed for manufacturing process from the supplier to the plant. It requires continuous interface with the supplier. Outbound logistics is a logistics that is concerned with the movement of finished goods and necessary related information from the firm to the customer. It requires a continuous interface with transport operators and distribution stations. Despite the origin or destination of goods companies may work with third party distributors directly or indirectly (Olaf,2012). There should be an understanding of both in order to develop a comprehensive management strategy. Managers both under inbound and outbound logistics try to increase efficiency and reliability

while minimizing the main costs which are costs of transport and storage (Dinesh, Qureshi & Pradeep, 2007).

Logistics play a key role in easing trade and ensuring the success of business operations. But, changing consumer demands, complex business models and rising client demands are some of the top factors that position a challenge in logistics management, (Nashiya Salim,2017).

In logistics management, risky decisions create issues like failure or late deliveries which bring buyers dissatisfaction. Carless transportation of goods leading to damage is also one of a potential issue in logistics management. Poor logistics planning gradually increases expenses, and issues may arise from the implementation of ineffective logistics software. Most of these problems occur due to improper decisions related to outsourcing, such as selecting the wrong vendor or carrying out delivery tasks without sufficient resources. To resolve these issues, organizations should implement best logistic management practices. Though 3PL firms have an economy of scale in logistical support in regards to cost saving and capability they also have down sides. One of the downsides of using 3PL services is that the client businesses have no direct control over their operation. They are relying on the 3PL company to consistently come through in delivering the promised services. Beyond the possible loss of business, the damage that results from 3PL services failing to deliver certain products on time creates a problem on a company. Businesses need a reliable structure to function. Logistical downtime can translate into large amounts of lost productivity and revenue. Consequently, while the free market dictates that a business which is dissatisfied with its 3PL service could always find another, or develop its own logistical infrastructure, the reality is not so simple. Switching the nature of a company's logistical support can cost the company a great deal in unforeseen costs resulting from the transition. When businesses contract with 3PL services it creates a dependency which is no small matter to change. This dependency puts the client company in uncomfortable situations if pricing schemes or service reliability from the 3PL service is not working out as expected (Damian Coffey, et al.; 2006).

Technology is mandatory to boost supply chain competitiveness and performance by enhancing the overall effectiveness and efficiency of logistics system. Not choosing the right technology for

various logistics activities communication creates a challenge in operational performance & competitive advantage of the business (Christopher Martin et al., 2001).

According to Rha (2010), operational performance is the ability of an organization to achieve high efficiency, high level of customer service and ability to respond to a changing business environment. It is based on interaction of manufacturing, logistics, and material, distribution and transportation functions within an organization (Muma et al., 2014).As the logistics environment changes frequently, and the amount of data available for analysis increases a company has to actively strategize in order to stay ahead of the fluctuations and avoid disorder. In order to do this evaluating success and inefficiencies to adjust its logistics management strategy with its changing needs should be a mandatory work to be done by the company. Logistics management resulted in operational performance through; decreased operation cost, increased productivity, timely delivery of service to clients, reduced lead time and improved profits, faster response to customers' demands and use of modern technology (Mulama, 2012).Logistics management activities improve operations performance by cutting down logistics cost and offering products at a more competitive rate. Logisics manamgment activites shoud be carfully done in order to have a sucessufl operational perormance.The organization under study experianes problems in the areas of order management of orders being received from it's KD customers, stock out situaions, issues from 3rd party trasportation service providers, warhouse managment issues and as well as information flow matters leading creating a hindrance in it's proformance.

### 1.2 Organization profile and Logistis Management System

Unilever is a British-Dutch consumer goods company co-headquartered in London, United Kingdom and Rotterdam, Netherlands. It's a company engaged in producing food and beverage products, cleaning agents and personal care products. Unilever is one of the oldest multinational companies were its products are available in around 190 countries. Unilever maintains more than 300production facilities around the world and operates in more than 100 countries.

Unilever Ethiopia was founded in the year 2014. It's engaged in the production of food, home care, skin cleansing & personal care products. Factory is allocated in Dukem Eastern industrial zone & is currently producing the detergent brands of OMO powder &Sunlight powder & skin care soap brands of Lifebuoy & Geisha & the food brand Knorr. It allocates & sales its products to more than 30 regions in the country. Addis Ababa, Mekele, Bahrdar, Gondor, Hawasa, Shashemene are some of the many regions. In each region there are territory managers who place orders coming from the KD's which are key distributors located in each region & which have an agreement with the company to sell the products to retailers or wholesalers at a given margin price. The distribution manager located in Addis compiles the orders. The order is passed to the production department& also warehouse in EIZ. Once order is ready at the warehouse the logistics planner plans shipment and passes necessary consignment info to the transporter& provides information of planned trucks to the warehouse. ULET outsources some of its activities by selecting qualified vendors through its system named SAP & transportation is one the activity. Up on the arrival of trucks warehouse team loads and dispatches the truck. The territory manager receives the shipment. After the arrival of the truck the territory manager makes sure that the goods arrive at the KD's warehouses& necessary shipment's invoice is given to them for payment. As ULET doesn't have its own warehouse in each region. Costs related to the KD's warehouses are covered by ULET.

ULET is company that is striving for a business growth which can create a job opportunity, create a positive social impact & an emerging market in our country. Therefore this study aims to examine the challenges of the companies' logistics management on its logistical activities of order processing, finished goods warehousing, packaging, transportation& inventory for it to provide its goods to the market and the influence that this activities have on its operational performance.

### 1.3. Statement of the problem

Logistics management activities are compiled of core practices and support activities. Order processing, inventory management, transportation and information flow are the core activities while support activities which give a support to the core activities are warehousing and packing (Ballou, 2003).

The research by Bowersox,et al.,(2010) contend that while many aspects of information were critical to logistics operations the processing of orders has a primary importance. Rahman (2003:499) on its study of internet based supply chain management indicated that using the internet in order processing can reduce paperwork

Inventory management activities provide for the upstream and down inventory visibility in logistics system. It aims to provide the service level to both internal and external customers.
Lyson and Farrington (2012) showed that measuring the effective performance of inventory depends on the extent to which the firm has the right quantity of inventory in the right place and at the right time. They also stated that the indicators to measure such inventory are lead time, stock outs in a given period and stock cover.The research by Coyle et al.( 2003) states that when a manufacturing company runs out of the particular product in demand a stock-out of the product occurs& results in inventory shortage cost which is lost in sales and lost in customer.
Günther and Van Beek, 2009) on their study of Advanced Planning and Scheduling in process Industry stated that flexible manpower planning strategy that has the strong impact with warehouse performance & overcome shortage of man power.

Transportation challenges have become the most addressed matters considering the rapid evolution of technology, manpower, demand, and supply, among others. Transportation is the most significant area of logistics because of the impact on customer service level and cost structure.
(Sarkisov, 2001) disclosed that it is necessary to minimize the loss and damage of goods transported while fulfilling customers' requirements for timely delivery and to provide

information about the goods in transit. There should be an efficient means of tracking trucks through using GPS for all trucks carrying goods to the customers. Schmidt, Thoroe, Schumann, (2013) stated that using a cellular communication for a number of targeted destinations has a drawback of monitoring the actual location of the vehicle &results in misunderstandings between the dispatcher and driver where this will have an impact on the planned delivery lead time .According to Tecnopedia outsourcing transportation management saves businesses time and money were 3rd party logistics service provide expertise to add value to your supply chain processes giving the company time to focus on what matters most.

Johnson, Wood, Murphy, (2002) stated on their writing that logistics information systems, should be an automated system in a logistics management as it will ensure full integration of all elements of material flow management, efficiency and reliability. (Childerhouse et al. 2003) on its study of re-engineering a construction supply chain identified that having real-time information available at any time can reduce lead-time and also increase accountability for tracking purposes. According to the reaserch of Nowakowska and Grunt (2007) effective logistis information system needs the use of hardwared & tecnology transfer. On antoher note (Wisner ET AL.2007) stated that information system must be customized to serve the logistics system effectively in order to increase the line of communication. He has also noted adopting ICT provides advantage as it helps to link one activity with the other and make real-time data availabe

On it's study of logistics functions of packaging (Pfohl,2004) described that packiaging shold support logitics by protecting the product during stoarge &trsnportion & also by providing information which in trun will lead to low cost. Adding the point that minimizing packing error is mandatory as it might lead to cusomer dissatsfaction.

As per the logistics planer and distribustion manager order is received&from the KDs' & compiled through using an XL sheet. Orders may also be received through phone communication or a text message which inturn result in receiving incorrect orders & incorrect processing of orders. In regards to inventory the company mostly faces the inbalance of demand and supply leading it to incounter stockout situations& not having the practice of safty stock accumulation

& poor inventory mangment system utilization. The disscusion made with the warehouse manager shows that warhouse space shortage, manpower shortage & motivation are hindrances being experianced creating a inadequacy on a trargeted performance. According to the output from the logistics planner during the plannng of shipmet the assigned thrid party transport service providers donot avail enogh vehilcles and mostly do not deliver shipments on time to the requred desination. In addtion there is no control over the drivers after truck despatch & tracking their location is difficult which shows inflexiblity when being viewed by the customer.In addition situations were the transporters load other companies consgnments led for the products of ULET to be damaged & delayed resluting in customser disastfaction. Sharing of real time data with in the outbound logistics system is also another problem that the company encounters as per the information received from the company.

The above studies do not specifically adress each of the explicit different challeges beings experienced in the outbound logistics operations of Unilever Manufacturing Ethiopia & how this challeges have a huge impact on its latter operational performace; were this showing a knowledge gap that must be filled.

In addition there are insufficient studies on the encounters of logistics management and its effect on operational performance focused on outbound logistics practices of manufacturing companies in Ethiopia which could be taken as references;where this also showing a knowledge gap.

Hence taking this facts into account the reasercher attempted to examine the challenges of logistics management and its effect on operational performance in the case of Unilever manufacturing PLC.

## 1.4.Research questions

The researcher tried to analyze and answer the following research questions.

1. What are the logistics management activities adopted in Unilever Manufacturing?
2. What are the challenges of logistics management in Unilever Manufacturing?
3. What are the effects of logistics management in the operational performance of Unilever Manufacturing?

## 1.5.Research objectives

### 1.5.1 General Objective of the study

The general objective of the study was to examine the challenges of logistics management and its effect on operational performance.

### 1.5.2 Specific objective

The specific objectives of this study are;

1. To identify the logistics management activities adopted in Unilever Manufacturing
2. To examine the challenges of logistics management in Unilever Manufacturing
3. To determine the effects of logistics management on operational performance of Unilever Manufacturing

## 1.6.Significance of the study

The output of the study creates an opportunity for the study organization and to other similar organizations to identify gap in operational performance related to logistics management activities, and ways to improve performance. It can also create awareness to decision makers and concerned staffs of the company on how and to what extent logistics practice affects firm's operational performance. In addition the findings from the research adds more knowledge on the existing body of knowledge in the subject area and can be used as basis for those researchers who want to make further study in the same subject area in the future.

### 1.7.Scope of the study

The scope of this study is delimited on the challenges of logistics management after the production of finished goods. It is focused on the logistical activity of outbound logistics which is on the flow of finished goods and other related information from the firm to the customer**.** It tries to address the challenges faced from receiving orders up to customer's delivery point which are the key distributors & points out the challenges having an impact on the key literatures universally agreed operational performances which are delivery time, cost, flexibility and quality.

It centered on the logistical activities of order processing, inventory, transportation, information flow &packaging.

### 1.8. Limitation of the Study

The researcher faced a delay in collecting data from the factory team at Dukem as they have an extremely tight & busy working schedule. Though the plan was to use a drop & pick later method the researcher had to wait for few weeks for the respondents to fill and return back the questionnaires.

There were some hesitancies witnessed from few respondents to fill the questioners at first but the researcher managed the problem by giving an assurance that the date will be used for academic purpose only & would be treated with outmost confidentiality. Another limitation experienced was that almost all the respondents didn't respond to the one open ended question from which the researcher hoped to get further outbound logistics challenges creating an impact on the operational performance of the company.

### 1.9.Organization of the study

This study will have five chapters. Chapter one consist introduction/background of the study, statement of the problem, research question, objective of the study, significance of the study, limitation of the study and scope of the study included in a separate section. Chapter two will present the related literature to the subject under study. Chapter three will report research

methodology. Chapter four will include data analysis, results and discussion and chapter five will consists of summaries of major findings, conclusions, recommendation & areas for further research.

# CHAPTER TWO
# LITERATURE REVIEW

## 2.1.Introduction

This section presents a review of the literatures concerning logistics management practices, the challenges and its effect on operational performance. The source considered in the review includes books, websites, past article journals, previous thesis and other documents from global institutions related to logistics management & operational performance.

## 2.2.Theoretical Review

### 2.2.1. Definition of Logistics Management

Logistics management can be defined as a part of supply chain management that plans, implements, and controls the efficient, effective flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirement. It is an integrating function, which coordinates all logistics activities & integrates logistics activities with other functions of the organization such as manufacturing, sales, finance & information technology including marketing, sales manufacturing, finance, and information technology." (CSCMP 2011). Logistics activities are considered as the operational component of supply chain management, including quantification, procurement, inventory management, transportation and fleet management, and data collection and reporting. (Tecnopedia) defines logistics management as a management of selecting appropriate vendors having the ability of providing transportation facilities, choosing effective routes of transportation, discovering competent delivery method & using software & IT resources to handle related processes. According to (Lambert et. al., 2006) logistics management is a function which includes inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, inventory management and management of third party logistics services providers. The studies focus area out bound logistics has been defined by Johnson and Wood's definitions (cited in Tilanus, 1997) as the movement of finished goods outward from the end of the assembly line or from the warehouse to the customer.

### 2.2.2. Logistics Management Activities

Logistics management activities with in outbound logistics are comprised of the core practices and the support activities. The core activities are order processing, inventory management, and transportation and information flow. The related practices that support the core activities are warehousing and packaging (Ballou, 2003). A key factor for a business performance is the role of logistics management tasks in ensuring the smooth flow of materials, products and information throughout the company‘s supply chain (Kilasi, et al., 2013).

#### 2.2.2.1.Order Processing Management

The order processing activity is an activity that is directly related to the handling of individual customer orders of goods or services. It has three principal functions which is creating flow of information that precedes the goods, accompanied them & follow them (Christopher, 2010). Not understanding the importance of order processing management & not using efficient means of processing orders will lead to operational failures & will intern impact the logistics operation (Bowersox, et al., 2010).Order processing mainly includes the filling of a customer order and making it available to the customer. It’s important & needs attention since it has an impact on the time that it takes to process customer orders in the distribution channel & also absorbs cost. Woolsey and Robert Seaker (1995) on their study stated that errors in receiving and entering an order can be very costly & dedicated process team should have means to measure and track error levels and look for root causes of the errors. Case study carried out by of (Yin, R.K. 2003) on Western Cape suppliers of south Africa found that order processing problems have been experienced due to time consuming telephone calls, lack of automated system for confirming orders & telephone order errors indicating that buyers and sellers should invest in the underlying hardware, software and communication systems for a smooth flow of work.

According to (Chapman et al.2000:354) to minimize manual work that would result in reducing excessive paper-based systems a company should engage with customers to determine how to exchange information electronically which includes the electronic receiving and confirmation of orders. It is advisable and important for suppliers to dedicate time and resources to Internet technology in an effort to understand its role within their business processes. Order placement,

order processing, credit control, payment, and order delivery advice to customer and sales offers should all be automated by internet.

### 2.2.2.2 Inventory Management activities

The importance of inventory management and the relationship between inventory and customer service is essential in any company

Stevenson (2009) defined inventory as a stock or store of goods; and as well referring it as a vital part of business necessary for operations and contributing to customer satisfaction. According to (Lysons&Farrington, 2012) in a given manufacturing organization inventory policies must be of benefit by operating expense and working capital requirements. They have also stated on their study that measuring the efficient and effective performance of inventory will depend on to what extent the company has a right quantity of inventory in the right place and at the right time where the indicators to measure such inventory being lead time, safety stock and stock return and stock outs in a given period. Indicating also their point that the proper inventory management practice will decrease cost and contribute to customer satisfaction in the logistics system**.**

(Laird, 2012) indicated that stocks must be well managed in order to maximize profits &satisfy customers as a loss arises from poor inventory management. Noting his point that inventory management is vital to a business and logistics success. Too little inventory failed to satisfy customers, as the company could not get its product to its buyers (Kenyon &Meixell, 2011).The research by Toomey (2000), showed that since there will be a situation of uncertainty in demand or delays in lead time a company needs a small amount of safety stock on hand as its basic function is to avoid stock outs

A company must generate a system that will attempt to do planning according to demand and supply information. Such system creates an integration and the integration will make inventory control system better and inventory management improved (Simchi-Levi et al., 2004).

According to (Simchi-Levi, Kaminsky & Simchi-Levi, 2004; Toomey, 2000) inventory that corresponds to independent demand is called distribution inventory (finished goods inventory),

while that corresponds to dependent demand inventory is known as manufacturing inventory (raw material inventory).

Inventory is kept to meet demand, in light of dependent demand and independent demand.

Different methodologies to managing inventory should be applied to align inventory supply with demand. Just-in-Time (JIT) approach and Materials Requirements Planning (MRP) systems are typically associated with managing manufacturing inventory to serve raw material inventory & cross-docking is typically used for managing distribution inventory efficiently. If either a company is unable to estimate the demand correctly or if there are uncertainties in demand, additional inventory will be required to cover the demand variability. As explained by Bertolini et al., (2002) optimal management of inventories is a main objective for all the firms manufacturing make to stock finished goods. He also stated that inventory management policy allows companies to achieve higher profitability and facilitate in lowering the holding costs through higher inventory rotation, but without causing extensive stock outs and backorders, caused by demand increases and / or lead time delays. Inventory management is important to business and vital to logistics success (Laird, 2012)

#### 2.2.2.3. Transportation Management activities

Transportation refers to the activities involved in shipping any goods or finished products from suppliers to a facility or to warehouses and sales locations (Kenyon & Meixell, 2011). Frantisek (2003) describes transportation as an important element of the logistics activities which runs from vendors through to your customers. As described by (Chen and Paulraj 2004) managing the flow of materials & products across different stages to the customer is the key task of supply chain management, of which transportation is one key process. Transportation physically moves product from where they are produced to where they are needed & the movement across distance adds value to the product which is referred as place utility. According to Chopra et al (2007), transportation is the most significant area of logistics as it impacts customer service level and cost structure.

(Vallespir and Kleinhans, 2001; Quinn and Hilmer, 1994) describes that outsourcing is subcontracting of a company's non-core activities to a third-party company. It is the activity that

involved mainly two parties. The clients company who outsources logistics activities and the outsourcing service provider who performed the outsource activities. It offers the opportunity for organization to use the best 3rd party logistics service providers available to meet their needs (Lambert et al, 2006). It mostly involves 3rd party transportation carriers and warehouses. Lim (2000) stated that 3PL transporters are responsible for getting the right products to the right place at the right time, and at the right cost on behalf of the shipper.According to Tecnopedia poor transportation planning steadily increases expenses & most of these problems occur due to improper decisions related to outsourcing, such as selecting the wrong vendor to carrying out delivery tasks without sufficient resources which will thus intern lead to damage of goods as a result of careless transportation, delayed deliveries & buyer dissatisfaction.

Sink, H.L. & Langley C.J. (1997) indicated that when buying a transportation service from 3rd party logistics service providers the candidates must be evaluated based on cost, performance, capability of providing loading vehicles on time, responsiveness, reliability, service range, financial stability, pricing flexibility and commitment.

The (2018 22nd Annual Third-Party Logistics Study) shows the need & importance of transparent, effective & continuous communication between 3PLs and shippers concerning goods which are in transit to be delivered to customers as the lack to do so will have a cost & lead to customer dissatisfaction. The study also indicated that real-time exchange of data coming from 3rd party transportation service providers allows companies to know the condition of the cargo, make decisions earlier & update the current status of the shipment to the waiting customers in due time.

Manufacturing companies must know whether they will have a benefit when they engage third party logistics in their distribution activities. If a company is considering using a trucking company it must ensure that it's hiring a company that can meet specific needs in an efficient, highly functional way& provide reports in real time, Williams, BR. (2017).

According to the (Global Truck Study 2016) companies with a fleet of more than 1,000 vehicles was able to quickly identify location of consignment carrying trucks with the help from GPS and optimally adapt the routes of all vehicles accordingly & made sure that the lead times of their

customers are met.(Michael Gravier, 2016) mentioned that technologies such as RFID (radio frequency identification), GPS and sensors can aid in data capture and analysis.

As stated by Fchuki (2006) intermittent issues of on time truck availability for loading goods to be shipped with in outbound logistics operation affects the company's responsiveness and customers satisfaction with respect to lead time

Not only is transportation the most visible part of logistics but it is also the biggest single cost in logistics.

As stated by (Goldsby & Martichenko 2005, 27,29) majority of organizations use around half of the total logistics costs on the transportation of goods. After a company determines the possible costs that comes with the transportation it needs to work together with the chosen 3rd party transport company in partnership. If a company becomes the main client of a transportation company they might be entitled to receive extra benefits as the transportation company will give priority. As stated by (Blanchard 2010, 79-80) to gain savings in transportation costs companies should work together with their transportation company instead of just trying to get a low rate. If a company is only focuses on finding the cheapest option in it will only lead to unsatisfied customers.

If the products are damaged during transportation, the damaged items need to be collected and new must be reshipped. The cost of missing or damaged deliveries however can sometimes be claimed from the carrier used, but the cost of processing orders or paying the customer back their money along with the time it takes to handle the case with the customer will be excess costs the company will have to pay for bad service. (Goldsby & Martichenko 2005, 29-31).

Companies should not always base their transporter choices on price. They should as well look into for accessibility, speed, capacity, fuel efficiency, and reliability. Even after choosing a carrier it is important for the company to keep track of the service level provided by the carrier like how many pieces were delivered, and how many pieces were lost or damaged. (Goldsby & Martichenko 2005, 31)

### 2.2.2.4.Information flow activities

As defined by Harisson and van Hoell (2002) information flow is the flow of data in different directions. Stevenson and spring (2007) agreed that, the flow of true and real time information in logistics was considered very important to the flow of materials. According to Nowakowska and Grunt (2007) for the effective functioning of logistics system there must be hardware & technology transfer and information system must be tailored to serve the logistics system and increase the line of communication. Information technology is used to smoothen logistics flow & make it cost efficient and cost effective.

Logistics information system creates the interconnection of all participants in supply chain and creates efficient management of logistics processes (Ivanovic' et al.2014). Some of the mostly known LIS are transport management system- TMS, inventory management system- IMS & warehouse management system –WMS.

EDI is used to integrate the overall logistics activities & enables and constant and timely communication. It is used to connect a company with its customers and vendors.

(Children house et al. 2003) on its study of re-engineering a construction supply chain identified that having real-time information available at any time can reduce lead-time and also increase accountability for tracking purposes. In their study, Wardaya, *et al.,* (2013) confirmed that information flow had become an important element that reflected cooperation within the logistics management and firm performance. As discussed by (Schaarfet a.2015) apart from decreasing cost through timey and correct information using ICT could have a positive effect on business and increase satisfaction of customers. Bowersox*et al*., (2010) has stated four reasons why timely and accurate information become critical for effective logistics operations where the reasons being for customers perceived information about order status, product availability, delivery schedule, shipment tracking, and invoices as necessary elements of total customer service.

### 2.2.2.5.Warehousing Management activities

Successful management of the warehouse is critical in terms of the level of service provided, as well as the cost incurred (Rushton et al. 2010, 225). In logistics delivering the right product in

the right quantity depends on warehouse picking & dispatching. According to (Linder, Harold, 2002) the main purpose of the warehouse is the concentration of stocks, storage and ensuring the smooth and execution of customer orders.

Warehouse management systems are mandatory for controlling the process of storage and movement of materials within a warehouse. They make controlling of stock possible & provide accurate information about product status, bring more control and help in avoiding mistakes.

(Kwame Owusu et al,2014) on their study of *Guinness Ghana Breweries Limited* out bound logistics management stated that intermittent issues on material handling equipment's availability such as forklifts in outbound logistics operations have an impact on timely loading of trucks as well as causing delivery delays.

As stated by (Van den Berg 2007) there needs to be strategies to plan manpower in warehouses because the workload in warehouses fluctuates & were this fluctuations might sometimes be predictable being seasonal & other time totally unexpected. Manpower planning performance can be defined as the efficiency and effectiveness of a certain manpower planning strategy (Khoong 1996). Where effectiveness being the extent to which an objective has been achieved & efficiency being the degree to which resources have been used economically. According to (de Leeuw and van den Berg 2011) implementing a measurement system has a positive effect as it enables the staffs to understand the goals of the company, have a view of their achieved performance, increase their productivity, decrease mistakes & increase their motivation & focus on optimization. On their study (cf. Autry and Daugherty 2003) stated that employee's satisfaction through variety of tasks decrease absenteeism at work. They pointed out that keeping employees motivated by choosing the right manpower planning strategies such as job rotation is important. Job rotation decreases boredom, work stress, and job absenteeism (Michalos*et al.* 2010; Schaufeli and Kompier 2001). (Cheraskin and Campion 1996) marked in their study that job rotation in warehouse creates productivity and loyalty and decreased turnover.

Companies have to flexibly plan employees with fixed contracts in terms of contracted hours and free days (De Leede*et al.*,2002) were such planning will help to capture demand changes. According to (Autry & Daugerty 2003) flexible planning benefits employees' in terms of balance of work and free time resulting in their higher job satisfaction & productivity.

The purpose of a warehouse is to store goods that will take longer to produce and distribute than what the customers are willing to wait (Gu et al.,2006). A properly managed warehouse should know what is stored, where is stored and what quantities in order to fulfill customer expectations on time. On their study Schleyer and Gue (2011) identified that the design and capacity process of a warehouse must be carefully planned so that the warehouse can have a desired performance of storage. They concluded that the overall performance of a warehouse is determined by how well the customer agreement are met. How well a manufacturers warehouse SKU's stock keeping units are stored will determine the company's performance. According to (Wayman,1995). In order to have a sufficient storage space in a warehouse it's very important to evaluate the design of a warehouse & understand how well goods flow. He also stated that choosing an appropriate storage method of deep stacking, high rack storage & shelf stacking must be adopted. Lumsden (2007) on its study of Guthumberg manufacturing warehouses concluded that implementing a correct space usage is very important despite having a limited warehouse space as it enables to use the available space in a better way. He pointed out fixed and floating store location principles as an efficiency of space utilization.

Effective implementation of the software for sequencing the products is necessary because there should be no delay while locating the product when the order is placed.

Order picking is the most labor-intensive and costly activity of most warehouses. Approximately 55% of the total warehouses operating expenses are related to order-picking operations (Bartholdi & Hackman, 2011) & for this to be reduced there must be appropriate warehouse layout.

Fluctuation of demand can create a challenge in warehouse management. Seasonality of demand can may either create over stock in a warehouse or stock out situation.

According to Unleashed (2016) manufacturing companies that fails to adopt accurate inventory control, will find themselves rushing to empty shelves to fulfill orders from impatient customers. Finished goods warehouse stock out situations clearly show inventory management issues.

When a business does not have what a customer wants, when they want it and in the quantity they want it they lose a sale & this will lead to lost revenue. The root cause of most stock outs is poor inventory control. If a company does not have the ability to access accurate inventory information in real-time, then it will face a problem to analyze previous sales cycle performance on SKUs, forecasting future demand or automating re-supply points so as to avoid stock outs in future. The blog also stated while scrambling to fulfill the items which are out of stock a company will incur rush delivery costs which will decline the planned profit margin

Since a stock out situation results the inability of meeting agreed lead times of customers it will lead to loosing of customers, additional costs & loosing of reputation. The blog concluded that that most manufacturing companies were able to minimize their stock out problems through the passing of inventory level warning point alerts among key departments of procurement, production and distribution so that each of them will be aware of the situation.

**2.2.2.6.Packaging activities**

Packaging is a coordinated system of preparing goods for safe, secure, efficient and effective handling, transport, distribution, storage, retailing, consumption and recovery, reuse or disposal combined with maximizing consumer value, sales and hence profit (Saghir, 2002). According to Jonson (2000) packaging has a logistics function which is facilitating distribution, protecting the product and environment, providing information; marketing function of graphic design, customer requirement; & environmental function of recovery, recycling. Packaging should be viewed as a system that support logistics by arranging the product for secure, efficient and effective handling, transportation, distribution, storage retailing, consumption and recovery, reuse or disposal to meet the customer's requirement.

According to (Pfohl, 2004) packaging's logistics support through protection, storage, transportation, information and correct design can result in a low logistics cost as well as

delivery. According to (Kye et al., 2013) there should be adoption of "best practices"' and/or innovations in packaging design with a view to eliminating waste in the supply chain & logistics. This best practices being the standardization of formats and qualities in packaging& the implementation of efficient unit loads in the handling, storage and transport processes throughout the supply chain.

### 2.2.3. Operational Performance

According to Prathap and Mittal, (2010), Performance measurement is crucial for evaluating the competence and achievement of an organization.

As stated by (Sharon Gitonga, 2017) operational performance is the firm's capability to efficiently produce and deliver products to customers were quality, delivery time flexibility and cost are universally agreed being vital and frequently stated operational performance areas of logistics. Green *et al.* (2008), addressing the relationship between logistics practices and organizational performance in a large number of companies in the United States, concluded that logistic practices have a positive impact on the mutual organizations performance measurement's, namely in speed of delivery, responsiveness and flexibility of delivery and cost.

Quality is the standard of a product or service when being measured by customers against other products or service of a similar kind from competitors. On their study (Klassen &Vachon, 2008) found that logistical management cooperation with customers of has a positive association with quality enhancement. They have also stated that as long as quality is a strategic objective with in manufacturing then logistics management with customers can lead to achieving competitive quality gains. (Beamon & Ware, 1998) evidenced on their study that it is important to note that the quality level provided to a customer is the result of the quality management practices with in each logistics management practices.

In regards to cost on their study (Kumar et al. 2006) found that the cost of a company where in turn the cost of customers can be reduced through proper logistics management processes; & were this will also increase competitiveness of the company. This showing a positive relationship among them.

In regards to flexibility companies must respond to changing customer needs & according to the finding of (Zhang et al., 2005) products must be accessible to customers in their required time & for this to be achieved companies must have a flexibility with in their logistics activities & incorporate logistical values in to the product.

In regards to delivery time (Muga et al 2004) on their study made on Kenyan medical supplies agency found that logistics practices inefficiency lead to longer delivery lead time. Which shows that short or long delivery times are dependent on the logistics management performance. In his book of Logistics and Supply Chain Management, (Christopher, 2010) opines that companies have to understand the customer order cycle, which is how long their customers are willing to wait for the products they ordered.

Keebler and Durtsche (2001) in their study of logistics performance measurement and the 3PL value proposition indicated that a firm can achieve a superior performance with its logistics practices by aligning its key logistics activities with its business strategy and measuring this against predetermined key performance objectives.

With the increasing awareness of deliberate implications of logistics and the growing awareness of the benefits; measuring the operational performance with regard to logistics became important (Cheng & Grimm 2006; Stank, Davis, & Fugate, 2005; Griffis, Goldsby, Cooper, & Closs, 2007).

Manufacturing strategies consisted of competitive operational performance priorities in logistics which mainly focused on cost, delivery, flexibility & quality of the firm's services and goods (Prathap & Mittal 2010).

Green *et al.* (2008) concluded addressing the relationship between logistics practices of an outbound movement and organizational performance in a large number of companies in the United States, were the logistic practices revealed a positive impact on the mutual organizational performance measurements, precisely speed of delivery, responsiveness and flexibility of delivery and cost.

As stated by Bowersox, *at el.,* 2012, the processing of orders involves all aspects of managing customer requirements. He indicated that the error committed at this stage at times can prove to be very costly & that the performance of the firm could only be as good as its order processing competency.

(Laird, 2012; Mangarulkar, *et al.,* 2012; Bowersox, *et al*., 2010) stated that inventory management was important to business and vital to logistics success. They have indicated that inventory management is vital to a manufacturing industries performance in operation as the industry needs to consistently have the optimal amount of finished products available for its customers. (Rajagopalan and Kumar, (1994); Herer et al., (2002) indicated that too little inventory disrupts manufacturing operations, and increases the likelihood of poor customer service which in turn bringing a cost. In many cases good customers may become dissatisfied and take their business elsewhere if the desired product is not immediately available.

Inventory management should keep the overall wellbeing of a company in view and fix a minimum inventory level without trying to minimize the inventory level as an isolated objective.

The key element in a logistics which is transportation affects the performance of an organizations hugely (Tseng, *at el.,* 2005).As stated by (Laird, 2012) the flow of transportation seemed a natural piece of logistics and a dynamic factor affecting firm's operational performance in the significant areas of timely delivery, flexibility as well as rate.

According to Stevenson and Spring (2007), the flow of accurate and real time information in logistics is considered very important to the flow of materials. As indicated by (Han & Trienekens, 2009) the successful performance of operation of a firm will depend on the flow of information which is major handy tool. (Williams, 2002) indicated that automated through ICT can cut average costs from $100 (when done manually) to $33.

Christopher (2005) lists the roles of warehouses as being on customer support, holding inventory, achieving appropriate customer service and cost reduction in an environment prone to long lead times and disruptions; were this indicating that warehouses play a key role in supporting a firms over all supply chain & revealing an influence.

As stated by Alan Rushton, Phil Croucher & Peter Baker (2006, 117); packaging practices is very much a part of the total logistics function, and the design and use of packaging has an impact to other functions such as production, marketing and quality control, as well as for the total logistics cost and performance.

(Garcia et al., 2011; Wegelius-Lehtonen, 2001) pointed out on their study that the financial and non-financial performance measurement tools of quality, reliability, flexibility, cost & delivery performance are dependent on a focused, controlled and monitored logistics management practices

### 2.2.4. Logistics Management and its Challenges

Robinson, A. (2017) opined that the aim of effective logistics management is to improve the efficiency of operations, ensuring customer satisfaction, and increase productivity. Well-organized logistics management is the key to success in supply chain management. Automation and coordination are one of key factors in logistics management. Carol &Neu (2009) argued that the activities of logistics are necessary to achieve the basic goal of logistics which is revealed in the effective flow of goods, services & information, at the right time, with the right equipment, competent personnel, in the right place having the right quality and the right quantity in order to satisfy customers. According to JP institute of technology system (2011) logistics management increases superior performance, and it's required to contribute a gain profit. Chan (2003) stated that the quality presentation of a firm logistics management is determined by the factors of customer complaints, customer response time, on time delivery, lead time & accuracy. In outbound logistics if a company does not stock enough inventory, the odds are that it might lose its customers. To balance this, companies can use their past inventory entries to forecast future demand and stay in touch with their distributors. Bad outbound logistics management leads to

increasing operational cost & decreased customer service. A successful company will understand the value of having a strong outbound logistics process and also understand that having the right tools and experience can help them simplify and accelerate their logistics planning Williams, BR. (2017). Outbound logistics performance is a major factor in a distributor customers' decision whether or not to stock a supplier's products, and therefore, also represents an important determinant of the supplier's business success. Different surveys made by experts' show that with in outbound logistics on-time delivery is the most important measure of a supplier's service to a customer & a key service indicator. Different companies can achieve optimal profits through different optimal outbound logistics approaches. Investigating on how individual dimensions of logistics management are related to operational performance is important to explore the challenges of logistics management activities and its impact on operational performance (Holt & Rao, 2005)

Logistics management in a supply chain offers substantial benefits in reducing waste, reducing cost and improving customer satisfaction. However the management is a challenging task for companies & decision makers. Logistics management activities are affected by challenges were the firm experiences difficulties while providing products and services to its customers. Some of the challenges need an overtime effort to deal with them due to their long service effect on the company's performance while other challenges need a rapid response. The process of implementing and managing integrated logistics activities has been shown to be very difficult by most companies. The performance of logistics management will have an impact on a company's competitiveness & also the view of its customers. One major challenge in LM is the integration and coordination of all logistics activities as well as the poor operations of this activities. The effects of challenges of outbound logistics practices of order processing, inventory, warehousing, packaging and transportation are reflected on the performance of the firm (Christopher, 2010). According to Wisner et.al (2011) customer satisfaction which in turn shows operational performance is determined by the level of service & the challenge is the focus on how to avoid the inaccuracy in providing the right product, in the right quantity, in the right condition, at the right place and at the right time & at the right cost. The study of embracing logistics complexity to drive market advantage (2013) which had gathered information from 62 logistics sections of

firms pointed out that meeting customer expectations is the most important challenge for logistics managers & this challenges arise from the different improper logistics activities practiced. According to (Bowersox et al, 1996) the challenges of logistics activities which are out bound are related to ICT related factors, human related factors, time related factors, quality related factors, delivery related factors, asset related factors, cost related factors incorporated in each of the activities.

Challenges that face logistics operations have become a great concern since they result in poor performances of logistics.

A study by Hellen (2004) in the five procurement challenges of professionals found that the challenges such as human error & not using order data collection tech is one of the challenges in order processing having a negative impact on a manufacturing companies performance.

(Shashi Bhojwani & Morthi Raj,2015) reported that traditional order management process which is time taking and hindering the fulfillment of customers needs, not perusing information technology, omission of orders leading to a delay in processing orders & being unable to provide necessary information's to customer's in due time & error free execution of orders being one of the challenges of logistics.

David Essex (2009) mentioned on his study survey gathered from different vendors that inventory management challenges of integrating demand planning and inventory planning, implementing inventory software being hindrances in logistics operation &efficiency.

According to (Sarkisov,2011) delivering of goods to their destination as quickly as possible, cheaper, and with the least damage to the environment, minimizing the loss and damage of goods transported while fulfilling customer requirements for timely delivery and providing information about the goods in transit are among challenges experienced with in the logistics of manufacturing industries in Russia.

Tielman (2015) found in its study of supply chain challenges in emerging markets were the key issues in African logistics and supply chain being suitable warehouse space; shortage and investing in material handling equipment's (e.g. forklifts) and storage equipment like racks,

outsourcing transportation and warehousing to a small but growing network of third party logistics companies; improving transportation management through improved fleet maintenance and tracking. Disorganized third party logistics service providers with limited number of vehicles, limited information sharing and technology structure making it difficult to keep track of stock level are also some of the challenge mentioned.

(Schary and Larsen, 1995) showed on their study of managing global supply chain that information flow inaccuracy creates a negative impact to the success of supply chain & logistics in terms of providing proactive customer service and to reacting more quickly to customers demand. Viewing on their study that incorrect or incomplete data causes delays & this being a challenge among most firms logistics system.

### 2.3. Empirical Review

Sezhiyan and Nambirajan, (2010), examined various aspects and variables of management of logistics and firm performance of operation in India. The firm's operational performance was regressed against outbound logistics activities and the results indicated that the predictive variable had positive and significant effect on firm performance.

Green Jr., et al., (2008) in their research on eight US firms on the impact of logistics management on organizations performance of operation revealed that a success of logistics performance has flourished from the effective logistics practices were this showing their effect.

In their case study Keebler and Plank (2009) examined the impacts logistics performance had within the US firms performance based on delivery time, cost wise, pace of response to customers demand change & the quality of goods & services and found seven factors that had demonstrated their effect on manufacturing firm's performance of operation**.**

Zhang, Zhang, and Lim, (2005), surveyed the impact of logistics flexibility on manufacturing firm's source of operation performance which is customer satisfaction through a survey of 273 manufacturing firms in USA were they found that logistics activities flexibility had a significant positive and direct impact on the customer satisfaction.

As discussed by Waweru et al. (2015) to gain superior performance, the logistics management or supply chain management must have the ability to meet customer satisfaction, respond to customer complaints, deliver ordered consignments on timely basis, and have a fill rate, accuracy & avoid stock-out probability.

(Rushton et al. 2006) indicated that logistics affects many procedures and activities in a business, bad logistics management leads to increasing operational costs and decreased customer service.

Wisner (2011) empirically examined the link between logistics management practices performance and organizational performance in US export manufacturing sectors.

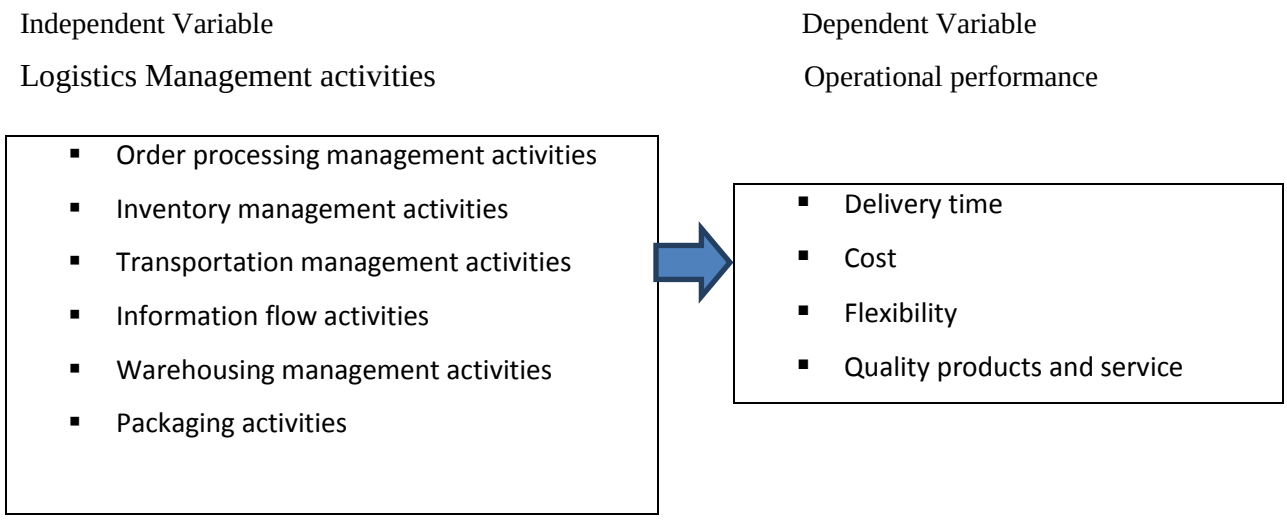
As stated by (Rao & Holt, 2005) the logistic management practices and its impact on performance, is identified by how individual dimensions of logistic management are related to select known dimensions of operational performance which are related to delivery time, flexibility, and cost & product/service quality. Chan (2003) stated that the quality of a firm's logistics management practices is determined by the factors of customer complaints, customer response time, on time distribution, lead time & accuracy.

As pointed out by (Celebi & Murthy, 2004) logistics practices if managed properly yield a minimized cost, time, maximized service level, high quality & non-damaged products which are being a major performance indicators of a firm.

## 2.4. Conceptual Frame work

The conceptual framework explained the connotation between the logistics management activities & operational performance with an attempt also to show the effect & direction of logistics management activities on operational performance

In the study the dependent variable is operational performance while the independent variable is logistics management activities.




Source: (Sharon Gitonga, 2017).

## CHAPTER THREE

# Methodology

## 3.1. Introduction

The chapter describes the research design employed in order to achieve the objectives of the study. It also discuss the research design, source of data and population used in the study, the data collection instrument and methods of data analysis used in the entire study**.**

### 3.2. Research design

The study adopted both descriptive and explanatory research designs. Descriptive research design was used to describe various variables & explanatory research design has been used to establish the magnitude, direction and effect that logistics management activities have on the operational performance of the company.

Furthermore, the study was cross-sectional, where respondents were contacted once to collect the present evidences. In the study the researcher used a quantitative data.

### 3.3. Population & sample

As the total number population is small in number the target population used in the study were all the clerical employees of Unilever manufacturing based at head office and factory at Dukem eastern industrial zone which were a total which is 115populations. For this reason a sampling technique was not applied.

### 3.4.Type & source of data

The necessary data for this study was collected from both primary and secondary sources. The primary data was collected through closed ended questionnaires for ease of administration. The secondary information was used from books, journals, published/unpublished materials, from the company's website and circulars of the organization.

### 3.5.Data Collection procedure

Since there was certainly no a standard questionnaire found that rated all the selected logistics management activities and challenges, the questionnaire was prepared by referring different related studies. The questionnaire was reviewed by some respondents having adequate knowledge as a pre-test to increase the validity & was latter prepared. Using the expert views and suggestions, the final questionnaire was prepared and distributed to the respondents. In designing the questionnaire, a five point likert-type scale; extent scale type was used in order to know the level of the respondents' feelings or views on the logistics management activities being practiced in the company, the challenges being faced with in this activities as well as the source of operational performance of the company. Extent scales are one of the 5 point likert scales used in surveys & it's used to know the extent or level of respondents feelings or opinions among selected items Brown,,S (2010).

The questionnaire consists four parts. Part A for collecting biographic data, part B for collecting data on logistics management practices of the company, part C for collecting data on logistics management practices effects & operational performance and part D for covering the challenges of logistics management practices in the company.

### 3.6.Ethical Consideration

The information collected from the employees was kept confidential in order to keep their ethical value. All of the employees were informed about the purposes of the study. In addition to this, in relation to questionnaires, confidentiality and privacy were ensured by using codes instead of subjects' names on the questionnaire to assure that the information given by each respondent was kept confidential.

### 3.7. Data Analysis

The study used descriptive statistics for the first and the second objectives in order to describe the distribution of scores of the data collected & also because it enables the researcher to meaningfully describe the distribution of scores using few indices (Mugenda, 2003). For the third objective the study used regression analysis to measure the effect of the independent variable on the dependent variable. Then the data collected was entered into the Statistical Package for Social Sciences (SPSS) version 23 to interpret the result. The regression equation used for the multiple regression analysis was the below:-

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

Y = Operational Performance

$X_1$ = Order Processing management activities

$X_2$= Inventory management activities

$X_3$= Transportation activities

$X_4$= Information flow activities

$X_5$= Finished goods warehouse management activities;

$X_6$= Packaging practices and $\beta_0$ $\beta_1$ $\beta_2$ $\beta_3$ $\beta_4$ $\beta_5$and $\beta_6$were the regression equation coefficients for each of the variables

## CHAPTER FOUR:

# DATA ANALYSIS, FINDINS AND DISCUSSIONS

### 4.1.Introduction

This chapter presents the analysis of the primary data collected from the administered questionnaires. The collected data was cleaned for completeness and consistency in preparation for coding; then it was keyed into the Statistical Package for Social Sciences (SPSS) for analysis version 23. Descriptive statistics such as means and standard deviations were used to analyze the data. The study also used inferential statistics to discuss the findings. Regression analysis was used to test the effect of the independent variable on the dependent variable. Analysis of variance (ANOVA) was also done to confirm the findings of regression analysis.

### 4.2.Response Rate

A total of 115 questionnaires were administered for all the clerical employees of the company. The questionnaires contained questions that addressed the objectives of the study. The objectives of the study were: To identify the logistics management activities employed in Unilever Manufacturing, to examine the challenges logistics management in Unilever Manufacturing and to determine the effects of logistics management functions on the operational performance of Unilever Manufacturing. From the total of 115 questionnaires 105 questionnaires were collected as 10 respondents didn't complete & the 105 completed questionnaires represented 91.3% response rate which was suitable to allow the researcher to continue with the analysis.

### 4.3.Reliability and Consistency

To check reliability Cronbach's alpha coefficient was calculated to all items arranged in a five point Likert scale based on the responses of the respondents. Cronbach's alpha is known as a good measure of reliability (Monette, at el., 2002). Cronbach's alpha values between 0.70 and 0.80 indicate an acceptable reliability while values below 0.70 are considered less reliable and unacceptable.

The value of the Cronbach's alpha for all measurement constructs of this study is greater than 0.7 as shown on table 4.1 below, were the values implying that the research instrument is reliable & consistent.

**Table 4.1. Reliability Statistics**

| Measurement constructs | N of items | Cronbach's Alpha results |
|---|---|---|
| Order processing management activities | 6 | 0.792 |
| Inventory management activities | 5 | 0.759 |
| Transportation activities | 5 | 0.841 |
| Information flow activities | 5 | 0.729 |
| Finished goods warehousing activities | 5 | 0.872 |
| Packaging activities | 5 | 0.768 |
| Operational performance | 12 | 0.829 |
| Challenges of logistics Management | 11 | 0.874 |

**Source: Own survey, 2019**

### 4.4.General Demographics

This section covers the general demographics of the respondents. The demographics discussed are the respondent's number of work experience, age, sex, and education level & job positions held by the respondents of Unilever Manufacturing.

### 4.4.1. Work experience of respondents

The study sought to establish the year of work experience of the respondents & the results of the study are as shown in Table 4.2

**Table 4.2: Work experience of respondents**

| | | Frequency | Percent |
|---|---|---|---|
| Valid | BELOW 1 YEAR | 21 | 20.0 |
| | 1-2 | 26 | 24.8 |
| | 2-3 | 26 | 24.8 |
| | 3-4 | 16 | 15.2 |
| | 4-5 | 16 | 15.2 |
| | Total | 105 | 100.0 |

**Source: Own survey, 2019**

From the research findings, the study revealed that 24.8%& 24.8% of respondents worked for

1-2 years & 2-3 years respectively, 21% of respondents worked below 1 year, whereas 15.2% &15.2%of respondents worked for 3-4 & 4-5 years respectively.

### 4.4.2. Age of respondents

The study sought to establish the age of the respondents & the results of the study are as shown in Table 4.3

**Table 4.3. Age of respondents**

| | | Frequency | Percent |
|---|---|---|---|
| Valid | UNDER 25 | 15 | 14.3 |
| | 25-30 | 34 | 32.4 |
| | 30-35 | 38 | 36.2 |
| | 35-40 | 10 | 9.5 |
| | ABOVE 40 | 8 | 7.6 |
| | Total | 105 | 100.0 |

**Source: Own survey, 2019**

From the research findings, the study revealed that 36.2% of respondents are in between the age of 30-25; 32.4% of respondents are in between the age of 25-30, 14.3% of respondent are under the age 25; 9.5% of respondents are in between the age 35-40 whereas 7.6% of respondents are above the age 40.

### 4.4.3. Sex of respondents

The study sought to establish the sex of the respondents & the results of the study are as shown in Table 4.4

**Table 4.4. Sex of respondents**

| | | Frequency | Percent |
|---|---|---|---|
| Valid | MALE | 60 | 57.1 |
| | FEMALE | 45 | 42.9 |
| | Total | 105 | 100.0 |

**Source: Own survey, 2019**

The study found out that 57.1% of the respondents were male & 42.9% of the respondents were females which shows that the gender composition of male respondents is higher which are 60 compared to the female are respondents which are 45.

### 4.4.4. Education level of respondents

The education level of the respondents & the results are as shown in Table 4.5

**Table 4.5. Education Level of respondents**

| | | Frequency | Percent |
|---|---|---|---|
| Valid | Diploma | 18 | 17.1 |
| | BSc/BA | 56 | 53.3 |
| | MSc /MA | 31 | 29.5 |
| | Total | 105 | 100.0 |

**Source: Own survey, 2019**

From among the 105 respondents, 53.3% hold bachelor degree in the academic qualification, 29.5 % hold a master's degree whereas 18% of respondents hold a diploma. The result shows that good number of respondents furthered their study at higher level next to the respondents holding bachelor degree.

### 4.4.5. Job position of respondents

The job position of the respondents & the results are as shown in Table 4.6

**Table 4.6. Job position of respondents**

| | | Frequency | Percent |
|---|---|---|---|
| Valid | Operation management | 13 | 12.4 |
| | Logistics Management | 4 | 3.8 |
| | Other | 88 | 83.8 |
| | Total | 105 | 100.0 |

**Source: Own survey, 2019**

The study found out that most of the respondents which are 83.8% were employees engaged in the different field of the company followed by 12.4% of the respondents engaged in the management of main operations of the company. 3.8% of the respondents are engaged in the management of the logistics operations. The respondents by the virtue of their job titles were in a position to understand the logistics management challenges sought by the researcher.

### 4.5.Logistics Management Activities

This section discusses the result of the extent to which Unilever Manufacturing is practicing logistics Management activities.

### 4.5.1 Order processing management activities

The study results of the extent to which order process management is practiced by Unilever Manufacturing PLC are as shown in Table 4.7.The analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1= Very little Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The scores of very little extent have been taken to represent a variable which had a mean score of 0 to 1.5, the scores of little extent have been taken to represent a variable with a mean score of 1.5 to 2.5, the score of moderate extent have been taken to represent a variable which had a mean score of 2.5 to 3.5, the score of very large extent have been taken to represent a variable which had a mean score of 3.5 to 4.5 and the score of very large extent have been taken to represent a variable which had a mean score of above 4.5, standard deviation of >0.9 implies a significant difference on the impact of the variables among respondents. Boaz M. Amuhaya, (2013),

**Table 4.7. Order processing Management activities**

| | The company uses Electronic Order Processing | Orders are processed in a timely manner | The company use database to track it's orders and inventory | Company has effective way of tracking and analyze order processing errors | Demanded orders matching with supply capacity of warehouse at the time of order receiving | The company has a system where customers can track their orders |
|---|---|---|---|---|---|---|
| N Valid | 105 | 105 | 105 | 105 | 105 | 105 |
| Mean | 2.6000 | 2.7048 | 2.5619 | 2.0381 | 2.4667 | 1.6190 |
| Std. Deviation | 1.18970 | .87622 | 1.16787 | 1.10003 | .87779 | 1.08646 |

**Source: Own survey, 2019**

Among the order processing management activities orders being processed in a timely manner is found to be in a leading activity with a mean score of 2.7048. The mean score value indicates that it is practiced in a moderate extent.The statement company uses electronic order processing was rated second with a mean score of 2.6 showing that it's practiced in a moderate extent. This finding reveals that in the company orders are mostly received through phone communication or text messages which in turn results in receiving incorrect orders & incorrect processing of orders. The activity statement company uses database to track its orders and inventory was rated third with a mean score of 2.5619 were the score showing that it's adopted in a moderate extent.This revealing that the company's manual work and excessive paper based system which couldn't allow it to easily track its orders. The statements demanded orders matching with supply capacity of warehouse at the time of order receiving&company has effective way of tracking and analyzing order processing errorswere ratedthird with mean sore of 2.4667& 2.0381 respectively were this activities mean score showing that they are found in a little extent. The findings of both reveals that the company almost doesn't engage with its customers in the exchange of product orders electronically as well as confirmation of orders. The statement the company has a system

where customers can track their orders was also rated third with a mean score of 1.619 were its mean score showing that it's practiced in a little extent.

The statements the company uses electronic order processing had the largest standard deviation of variation in response (1.18970) while the statement the statement orders are processed in a timely manner registered the lowest standard deviation of (0.87622).
Not understanding the importance of order processing management & not using efficient means of processing orders will lead to operational failures & will intern impact the logistics operation (Bowersox, et al., 2010).

In general the findings imply that the order processing activities in ULET are practiced at a moderate level.

### 4.5.2 Inventory management activities

The results of the study on the extent to which Inventory Management activities are practiced by Unilever Manufacturing PLC are as shown in Table4.8. The analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1= Very Little Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The scores of very little extent have been taken to represent a variable which had a mean score of 0 to 1.5, the scores of little extent have been taken to represent a variable with a mean score of 1.5 to 2.5, the score of moderate extent have been taken to represent a variable which had a mean score of 2.5 to 3.5, the score of very large extent have been taken to represent a variable which had a mean score of 3.5 to 4.5 and the score of very large extent have been taken to represent a variable which had a mean score of above 4.5.A standard deviation of >0.9 implies a significant difference on the impact of the variable among respondents. Boaz M. Amuhaya, (2013).

**Table 4.8. Inventory Management activities**

| | The firm uses Enterprise Resource Planning System (Barcode) to track its inventory | Accurate stock updates on the quantity of produced goods | The inventory management practice enable the firm to avoid inventory bottle neck in production | The inventory management practice keep cost at a minimum | The company uses the right inventory technique (JIT, Kaizan, ABC analysis, cross docking etc) to manage its inventory |
|---|---|---|---|---|---|
| N Valid | 105 | 105 | 105 | 105 | 105 |
| Mean | 1.8286 | 2.9524 | 2.7048 | 2.9429 | 2.3810 |
| Std. Deviation | 1.28943 | .94443 | .88713 | .83007 | .95455 |

**Source: Own survey, 2019**

Among the inventory management activities accurate stock updates on the quantity of produced goods is found to be in a leading activity with a mean score of 2.9524. The mean score value indicates that it is practiced in a moderate extent. The statement; inventory management practice keep cost at a minimumwas rated second with a mean score of 2.9429 same indicating that its practiced in a moderate extent. The next activity statement; inventory management practice enable the firm to avoid inventory bottle neck in productionwas rated third with a mean score of 2.7048; indicating a moderate extent. The remaining statements;the company uses the right inventory technique (JIT, Kaizan, ABC analysis, cross docking etc) to manage its inventory&firm uses enterprise planning system (barcode) to track its inventorywere rated next with mean sores of 2.3810&1.8286 respectively were the score showing that they are found in lower level. This findings revile the minimal usage of inventory system & manual entering of finished goods data which results in errors & increases the time spent in searching and allocating finished goods to be moved to customers. The statement the firm uses Enterprise resource planning System (Barcode) to track its inventory had the largest standard deviation of variation in response (1.28943) which is greater than the 0.9 range while the statement inventory management practice keep cost at a minimum registered the lowest standard deviation in response which is (0.83007).

In general the company practices the inventory management activities in a moderate level.

### 4.5.3 Transportation activities

The study results of the extent to which transportation management activities are practiced by Unilever Manufacturing PLC are as shown in Table 4.9.. The analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1= Very little Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The scores of very little extent have been taken to represent a variable which had a mean score of 0 to 1.5, the scores of little extent have been taken to represent a variable with a mean score of 1.5 to 2.5, the score of moderate extent have been taken to represent a variable which had a mean score of 2.5 to 3.5, the score of very large extent have been taken to represent a variable which had a mean score of 3.5 to 4.5 and the score of very large extent have been taken to represent a variable which had a mean score of above 4.5.A standard deviation of >0.9 implies a significant difference on the impact of the variable among respondents. Boaz M. Amuhaya, (2013).

**Table 4.9 Transportation Management Activities**

| | The transportation management practice enables timely delivery of products to customers | Through transportation management practice products are made available to the customers desired location | The company's products are delivered using the right mode of transportation | The company spends at a minimum cost to transport products to customers | The firm uses electronic system to track all products that are transported to customer |
|---|---|---|---|---|---|
| N Valid | 105 | 105 | 105 | 105 | 105 |
| Mean | 2.9905 | 2.7905 | 3.0476 | 2.9333 | 3.1333 |
| Std. Deviation | 1.10502 | 1.09803 | 1.12985 | .91217 | 1.02906 |

**Source: Own survey, 2019**

Among the transportation activities the statement the firm uses electronic system to track all products that are transported to customer is found to be leading with a mean score of 3.1333. But

this doesn't mean that it's found in a large extent but rather its mean score indicates that it's found in a moderate extent. This finding reveals that majority of third party transportation service providers of the company do not use advanced GPS tracking system tools.The statement company's products are delivered using the right mode of transportation was rated second with a mean score of 3.0476; scale indicating moderate level. Transportation management practice enables timely delivery of products to customers was rated third with a mean score of 2.9905indicting also being found in a moderate extent. The reason for this finding per the info received from the logistics team indicates the non-reliability of third party transportation service providers. The remaining activity statements of company spending a minimum cost to transport products to customers& the transportation management practice enabling products to be made available to the customers' desired location were rated at a mean score of 2.9333 & 2.7905 respectively; and their mean score indicates that they are practiced in a moderate extent. This finding reveals that company doesn't own its own trucks & every transportation of its products to its customers in different regions are made by third party transportation service providers whose charges are very high; in addition products are mostly not made available to the customers required location were a compiled report found showed that there are incidents of miss location of consignments by the assigned third party transportation service providers.

The findings show that the respondents had varying responses on the practiced transportation management activities as evidenced by the registered standard deviations which are greater than 0.9.

In general, in the company transportation activities are practiced in a moderate extent.

### 4.5.4 Information flow activities

The study further sought to know the extent to which information flow is practiced Unilever Manufacturing. The findings of the study are as shown in Table 4.10.. The analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1= Very little Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The scores of very little extent have been taken to represent a variable which had a mean score of 0 to 1.5, the scores of little extent have been taken to represent a variable with a mean score

of 1.5 to 2.5, the score of moderate extent have been taken to represent a variable which had a mean score of 2.5 to 3.5, the score of very large extent have been taken to represent a variable which had a mean score of 3.5 to 4.5 and the score of very large extent have been taken to represent a variable which had a mean score of above 4.5.A standard deviation of >0.9 implies a significant difference on the impact of the variable among respondents. Boaz M. Amuhaya, (2013).

**4.10. Information flow activities**

| | The information flow through ICT practice is use to plan logistics process | Logistics management process is monitored using information flow through ICT | The firm information flow through ICT is used to control the logistics process | The information flow through ICT is used to coordinate | The firm information flow through ICT is used to communicate |
|---|---|---|---|---|---|
| N Valid | 105 | 105 | 105 | 105 | 105 |
| Mean | 3.6095 | 3.2571 | 3.0095 | 2.8762 | 3.5810 |
| Std. Deviation | .86040 | 1.01932 | 1.06062 | .94762 | .93830 |

**Source: Own survey, 2019**

Regarding information flow activities the statement information flow through ICT practice is used to plan the logistics process& the firm information flow through ICT is used to communicate were found to be leading with a mean scores of 3.6095 & 3.5810 respectively were their mean score indicating that they are practiced in a large extent. The statement logistics management process is monitored using information flow through ICT was rated third with a mean score of 3.2571 were the mean score indicating that it's practiced in a moderate level. The remaining practices; information flow through ICT used to control the logistics process & information flow through ICT used to coordinate show being practiced in a moderate level with mean scores of 3.0095 & 2.8762 repectively.

The respondents had varying opinions as evidenced in by the registered standard deviations. The statement the firm information flow through ICT used to control the logistics process had the largest standard deviation variation of response (1.06062) which is >0.9 while the statement the information flow through ICT practice is use to plan logistics process has the lowest standard

deviation of (0.86040) which is <0.9 showing that the respondents were unanimous that the activity is practiced in the company.

The above findings relate to the statement of Grunt (2007) were he had stated that for the effective functioning of logistics system there must be hardware & technology transfer and information system must be made to serve the logistics system and increase the line of communication.

By and large, based on the findings the listed information flow activities are practiced in the company in a moderate level.

### 4.5.5 Finished goods warehousing activities

The findings of the study on the extent to which finished goods warehousing is practiced by Unilever Manufacturing are as shown in Table 4.11. The analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1= Very little Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The scores of very little extent have been taken to represent a variable which had a mean score of 0 to 1.5, the scores of little extent have been taken to represent a variable with a mean score of 1.5 to 2.5, the score of moderate extent have been taken to represent a variable which had a mean score of 2.5 to 3.5, the score of very large extent have been taken to represent a variable which had a mean score of 3.5 to 4.5 and the score of very large extent have been taken to represent a variable which had a mean score of above 4.5.A standard deviation of >0.9 implies a significant difference on the impact of the variable among respondents. Boaz M. Amuhaya, (2013).

**Table 4.11. Finished goods warehousing activities**

| | Products are delivered in the right quantity to the customer | Applying Warehouse Management System software for stock control | Loading goods with sufficient material handling equipment (conveyors, forklifts..) | Loading goods on truck with sufficient man power | Storing goods in a sufficient storage space |
|---|---|---|---|---|---|
| N Valid | 105 | 105 | 105 | 105 | 105 |
| Mean | 2.9905 | 2.0476 | 2.6762 | 2.3619 | 2.4000 |
| Std. Deviation | 1.01428 | 1.27386 | 1.14770 | 1.08419 | 1.05247 |

**Source: Own survey, 2019**

Among the finished goods warehousing activities the statement products are delivered in the right quantity to the customer is found to be a leading practice with a mean score of 2.9905. The mean score value of this activity designates that it is practiced in a moderate extent. The statement loading goods with sufficient material handling equipment (conveyors, forklifts...) was rated second with a mean score of 2.6762 same showing that it's practiced in a moderate extent. This finding revealed that the availability of material handling equipment's at the time of loading orders on trucks is limited which in turn results in the late delivery of orders to customers. This issue is agreedspecially by almost all the members of the warehouse team.The next activity statement storing goods in a sufficient storage space was rated third with a mean score of 2.4 were the score indicating that it's adopted in a little extent. The finding reveals that the company lacks frequently evaluating the design of the warehouse & choosing the appropriate storage & stacking methods. The remaining practices which are loading goods on truck with sufficient man power & applying warehouse management system software for stock control were rated with mean sore of 2.3619 & 2.0476 respectively; were the mean scores of both indicating that they are practiced in a little extent. The finding revels that appropriate warehouse manpower planning strategy isn't adopted by the company& that storage and movement of finished goods within the

company's warehouse are less controlled & accurate information about the status of goods for appropriate control is available in a lower level.

The finding revealed that all of the mentioned practices have a standard deviation which is >0.9 were this indicating that the respondents have varying opinions on the extent to which the warehouse management activities are practiced in the company.

In general, based on the findings finished goods warehousing activities are practiced in the company in a lower level.

### 4.5.6 Packaging Activities

The findings of the study on the extent to which packaging is practiced by Unilever manufacturing PLC are as shown in Table 4.12. The analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1= Very little Extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The scores of very little extent have been taken to represent a variable which had a mean score of 0 to 1.5, the scores of little extent have been taken to represent a variable with a mean score of 1.5 to 2.5, the score of moderate extent have been taken to represent a variable which had a mean score of 2.5 to 3.5, the score of very large extent have been taken to represent a variable which had a mean score of 3.5 to 4.5 and the score of very large extent have been taken to represent a variable which had a mean score of above 4.5.A standard deviation of >0.9 implies a significant difference on the impact of the variable among respondents. Boaz M. Amuhaya, (2013).

**Table 4.12. Packaging Activities**

| | The company's product are packaged in a way to protect it from damage | The company's product are packaged in a way to protect it from loss | The company's product is easily identified from other competitors product | The products can be transferred from different locations to different locations without damage | The company's product information are easily identified according to their value and purpose |
|---|---|---|---|---|---|
| N Valid | 105 | 105 | 105 | 105 | 105 |
| Mean | 3.3429 | 3.3333 | 3.3619 | 3.3524 | 3.3810 |
| Std. Deviation | .47694 | .47367 | .48286 | .48000 | .48795 |

**Source: Own survey, 2019**

Among the packaging activities company's product information are easily identified according to their value and purpose was found to be leading with a mean score of 3.3810 indicating that it's found in a moderate extent. The statement company's product is easily identified from other competitor's product was rated second with a mean score of 3.3619were the mean score also indicating that it's found in a moderate extent. This finding reveals that there is inability of not identifying the company's product brands due to the numerous duplicate products being manufactured by other companies were this in turn resulted for a grievances to come from customers. The statement products can be transferred from different locations to different locations without damage was rated third with a mean score of 3.3524.The mean score of this activity indicates also that it's found in a moderate extent. This statement's finding revealed that there are records of products secondary package being damaged during transit due to some poor packaging issues. The statements company's product are packaged in a way to protect it from damage &company's product are packaged in a way to protect it from loss were rated fourth and fifth with a mean score of 3.3429 and 3.3333respectively; were there mean score likewise

showing that they are found in a moderate extent. The mentioned activities have low variation of the standard deviation which is < 0.9 indicating that the respondents response was unanimous on the packaging activities being practiced in the company.

In general, based on the findings the listed packaging activities are practiced in the company in moderate level.

**4.6.Operational Performance**

In this section, the study sought to know how the respondents rated the operational performance of Unilever Manufacturing. Shown on table 4.13. The analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1= Very little extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The scores of very little extent have been taken to represent a variable which had a mean score of 0 to 1.5, the scores of little extent have been taken to represent a variable with a mean score of 1.5 to 2.5, the score of moderate extent have been taken to represent a variable which had a mean score of 2.5 to 3.5, the score of very large extent have been taken to represent a variable which had a mean score of 3.5 to 4.5 and the score of very large extent have been taken to represent a variable which had a mean score of above 4.5.A standard deviation of >0.9 implies a significant difference on the impact of the variable among respondents. Boaz M. Amuhaya, (2013).

**Table 4.13. Operational Performance**

| | N valid | Mean | Std. Deviation |
|---|---|---|---|
| Products are delivered to customers on time meeting the customers' requirements | 105 | 2.6952 | .88929 |
| There is a decrease in customers complaints | 105 | 2.5810 | .87465 |
| There is Adoption of up-to-date communication technology | 105 | 2.7619 | 1.04259 |
| Responsiveness to sudden change in customers demand | 105 | 2.4762 | .98151 |
| Increased efficiency | 105 | 2.8857 | .90207 |
| Customer Satisfaction | 105 | 2.8762 | .79294 |
| Continuous Improvement of Product quality | 105 | 3.0095 | 1.01428 |
| There is reduction in overall operational cost | 105 | 2.8667 | .91006 |
| There is a reduction in lead time | 105 | 2.5619 | .69232 |
| Timely delivery of orders | 105 | 2.5905 | .80498 |
| Reduction of transportation cost for good moved across route | 105 | 2.6286 | .78761 |

| | | | |
|---|---|---|---|
| Appropriate warehouse layout with efficient storage space for efficient order piking and reduced warehouse cost | 105 | 2.4476 | .80838 |

**Source: Own survey, 2019**

The respondent's response show that the company's operational performance isn't found in a large extent.

Respondents indicated that continuous improvement of product quality (mean 3.0095), increased efficiency (mean=2.8857), customer satisfaction (mean=2.8762), reduction in overall operational cost (mean=2.8667), adoption of up-to-date communication technology (mean=2.7619), delivery of products on time meeting customers' requirements (mean=2.6952), decrease in customers complaint (mean=2.5810), timely delivery of orders (mean=2.5905), reduction of lead time (mean of 2.5619), reduction of transportation for good moved across route (mean= 2.6286) are found in a moderate extent. In addition the respondents response show that responsiveness to sudden change in customers demand (mean=2.4762) & appropriate warehouse layout with efficient storage space for efficient order piking and reduced warehouse cost are found both in a little extent.

The respondents had varying opinions as evidenced in by the registered standard deviations. The statement there is Adoption of up-to-date communication technology process had the largest standard deviation variation of response (1.04259) which is >0.9 while the statement there is a reduction in lead time has the lowest standard deviation of (0.69232) which is <0.9 showing that the respondents were unanimous that the activity is an operational performance source in the company.

The above findings show that the company didn't achieve a higher operational performance with its outbound logistics as it didn't align the key logistics activities with its business strategy were such fact has also been confirmed by the findings of Keebler & Durtsche (2001) on their statement that a firm can achieve a superior performance with its logistics practice by aligning its

logistics practices with its strategy of business and measuring same against predetermined performance objectives.

### 4.7.Challenges of logistics management in the company

The study sought to know the extent to which Unilever Manufacturing faces challenges when implementing logistics management activities. Shown in Table 4.14. The analysis of the data was done using means and standard deviations. The means recorded were interpreted as follows: 1= Very little extent; 2= Little Extent; 3= Moderate Extent; 4 = Large Extent; 5=Very Large Extent. The scores of very little extent have been taken to represent a variable which had a mean score of 0 to 1.5, the scores of little extent have been taken to represent a variable with a mean score of 1.5 to 2.5, the score of moderate extent have been taken to represent a variable which had a mean score of 2.5 to 3.5, the score of very large extent have been taken to represent a variable which had a mean score of 3.5 to 4.5 and the score of very large extent have been taken to represent a variable which had a mean score of above 4.5.A standard deviation of >0.9 implies a significant difference on the impact of the variable among respondents. Boaz M. Amuhaya, (2013).

**Table 4.14. Challenges of Logistics Management**

| | N valid | Mean | Std. Deviation |
|---|---|---|---|
| Products become damaged during transit | 105 | 3.5810 | 1.16669 |
| There are order receiving errors & incorrect sales orders | 105 | 3.6381 | 1.35961 |
| There is inadequate storage capacity to manage customers future demand | 105 | 3.7714 | .94317 |
| Delay of 3rd party transportation service in providers in providing trucks | 105 | 4.0762 | 1.00666 |

| | | | |
|---|---|---|---|
| on time for loading | | | |
| Inefficient inventory control leading to Stock out situation | 105 | 3.7308 | .92674 |
| There is a high cost of transporting products across regions | 105 | 4.0476 | .94443 |
| Difficulty of getting real-time info of location from dispatched trucks | 105 | 4.1143 | 1.14618 |
| Lack of efficient IT based communication/processing techniques | 105 | 3.6952 | 1.02960 |
| Lack personnel's fully utilizing inventory controlling system | 105 | 3.3429 | .89688 |
| Shortage of Man power / material handling equipment's during loading finished goods to delivery | 105 | 3.7429 | 1.09218 |
| Warehouse manpower turnover and lack of motivation | 105 | 3.7429 | 1.13535 |

**Source: Own survey, 2019**

Respondents showed the challenges that Unilever Manufacturing faced when executing logistics management activities which are rated in a large extent. This are difficulty of getting real-time info of location from dispatched trucks (mean=4.1143), delay of 3rd party transportation service providers in providing trucks on time for loading (mean=4.0762), high cost of transporting products across regions (mean=4.0476),inadequate storage capacity to manage customers future demand (mean=3.7714),warehouse manpower turnover and lack of motivation, shortage of Man

power / material handling equipment's during loading finished goods to delivery with a (mean=3.7429), inefficient inventory control leading to stock out (mean=3.7308), lack of efficient IT based communication/processing techniques (mean=3.6952),order receiving errors & incorrect sales orders (mean=3.6381) as well us products becoming damaged during transit (mean=3.5810). Respondents also revealed that Unilever Manufacturing faces lack personnel's fully utilizing inventory controlling system (mean=3.3429) which is rated in a moderate level.

The study findings are consistent with the findings of Wisner *et al* (2011) that the challenge in logistics management is the focus on how to avoid a slip-up in providing the right product, in the right quantity, in the right condition, at the right place, at the right time, for the right customer and at the right cost.

### 4.8.Normality and Multicollinearity test

**Table 4.15 Tests of Normality**

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Unstandardized Residual | .079 | 105 | .100 | .989 | 105 | .518 |
| Standardized Residual | .079 | 105 | .100 | .989 | 105 | .518 |

a. Lilliefors Significance Correction

**Source: Own survey,2019**

According to (Asghar Ghasem & Saleh Zahediasl, 2012) concentration of test having P-value greater than 0.05 indicates a normal distribution of data while a less that 0.05 indicates that data isn't normally distributed. On the above table 4.15 Shapiro-Wilk which is based on the correlation between the data and the corresponding normal scores & which is used for small and medium samples up to two thousand; shows a P-value of 0.518 for both the unstandardized and standardized residuals & no difference between their results. This reveals that the data is normally distributed as the P value 0.518 is greater than 0.05.

**Table 4.16 Multicollinearity test**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant) | 3.961 | 4.478 | | .885 | .379 | | |
| Order processing management activities | .567 | .125 | .356 | 4.539 | .000 | .388 | 2.579 |
| Inventory management activities | .404 | .168 | .195 | 2.405 | .018 | .363 | 2.756 |
| Transportation activities | .221 | .094 | .131 | 2.342 | .021 | .762 | 1.312 |
| Information flow activities | .297 | .132 | .112 | 2.249 | .027 | .953 | 1.050 |
| Finished goods warehousing activities | .567 | .122 | .358 | 4.670 | .000 | .406 | 2.466 |
| Packaging activities | .696 | .262 | .135 | 2.659 | .009 | .928 | 1.078 |

a. Dependent Variable: Operational performance

**Source: Own survey, 2019**

Based on the coefficient output on table 4.16 above- collinearity statistics obtained VIF values of 2.579, 2.756, 1.132, 1.050, 2.466& 1.078. This values lie between1 to 10 reveling that there is no multicollinearity with in the data.

### 4.9. Relationship of Logistics Management activities to Operational performance

The study sought to establish the relationship between logistics management activities and operational performance. The researcher then conducted a regression analysis to explain this relationship using SPSS version 21. The results obtained are presented and discussed below;

**Table 4.17.Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .876[a] | .767 | .753 | 3.04513 |

a. Predictors: (Constant), Order processing management activities, Inventory management activities, Transportation activities, Finished goods warehousing activities, Information flow activities, packaging activities,

b. Dependent Variable: Operational performance

**Source: Own survey, 2019**

The research findings showed that there is a strong relationship ($R^2$= 0.767) between logistics management activities and the operational performance of ULET.

The result of the study also indicates that the value of adjusted R-squared is 0.753 were this denotes that 75.3% of the alteration in ULET's operational performance can be accounted for by the out bound logistics management activities. The remaining 24.7 % can be explained by other variables which were not included in the model.

**Table 4.18. ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 2987.956 | 6 | 497.993 | 53.704 | .000[b] |
| | Residual | 908.738 | 98 | 9.273 | | |
| | Total | 3896.694 | 104 | | | |

a. Dependent Variable: Operational performance

b .Predictors: (Constant),Order processing management activities, , Inventory management activities, Transportation activities ,Info flow activities, Finished goods warehousing activities , Packaging activities

**Source: Own survey, 2019**

Based on the ANOVA statistics, the study proven that the regression model had a significance level of less than 0.001% which shows that its less than the value of significance (P-value) 0.05%; this indicating that the data was ideal for making a conclusion on the population parameters & showing that there is a high significance; which means that all logistics management activities identified have a highly significant effect on the operational performance of ULET. This statistics also shows that the result is very highly unlikely to have occurred by chance alone.

**Table 4.19 Coefficients of determination**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.961 | 4.478 | | .885 | .379 |
| | Order Processing Management Activities | .567 | .125 | .356 | 4.539 | .000 |
| | Inventory Management Activities | .404 | .168 | .195 | 2.405 | .018 |
| | Transportation activities | .221 | .094 | .131 | 2.342 | .021 |
| | Information flow activities | .297 | .132 | .112 | 2.249 | .027 |
| | Finished Goods Warehousing Activities | .567 | .122 | .358 | 4.670 | .000 |
| | Packaging activities | .696 | .262 | .135 | 2.659 | .009 |

a. Dependent Variable: Operational performance **Own survey, 2019**

From the table 4.19 above it is evident that at 95% confidence level that the independent variables of order processing management activities, inventory management activities, transportation activities, information flow activities, finished goods warehousing activities & packaging activities have positive relationship on the operational performance and are highly significant .They also show that they have a positive and statistically significant relationship on the operational performance. The positive effect was conveyed for order processing management activities having **t value 4.539** & **p value less than 0.001**; inventory management activities having **t value 2.405 & p value 0.018**; transportation activities having **t value 2.342 & p value 0.021**; information flow activities having **t value 2.249 & p value 0.027**; finished goods warehousing activities having **t value 4.670 & p value less than 0.001** & packaging activity having **t value 2.659 & p value 0.009.**

Moreover the study reviled that a unit increase in order processing management activities would lead to the development in operational performance by 0.567, a unit increase in inventory management activities would lead to the increase in operational performance by 0.404 ,a unit increase in transportation activities would lead to the increase in the operational performance by 0.221 , a unit increase in information flow activities would lead to the increase in operational performance by 0.297, a unit increase in finished goods warehousing activities would lead to an increase in operational performance by 0.567, while a unit increase in the packaging activities by would lead to a development in the operational performance of 0.696.

# CHAPTER FIVE

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

## 5.1.Introduction

This final chapter presents a summary of the basic findings of the study as well as the conclusions, recommendations & suggestions for further area of research.

## 5.2. Summary of Findings

### 5.2.1. Summaries on the logistics management activity practices of Unilever Manufacturing PLC

- From the findings the study identified the majority's agreement that Unilever Ethiopia moderately uses electronic order processing for the finished goods orders that are received from its customers at different regions & orders are not processed in a timely manner. The majority agrees that the company uses in a moderate scope a database to track its orders and inventory. Majority also agreed that the company do not have effective way of tracking and analyzing order processing errors & a system where customers can track their orders. Demanded orders not matching with the supply capacity of the companies warehouse at the time of order receiving was another finding which is also agreed being found in a small range in the company

- On application of inventory management activities, the study found that Unilever Ethiopia uses barcode to track its inventory in a slight level & accurate stock updates on the quantity of produced goods is available moderately. In addition its current inventory management practice only moderately enables it to avoid inventory bottle neck in production & keep its cost at minimum. The study also found that the company uses the important inventory techniques which are used to manage inventory in a slight range.

- Concerning transportation activities the study found that the current transportation management practice of Unilever Ethiopia enables it in a moderate extent to deliver its products to its customers and also make its products become available to the customer's

desired location. This shows the non-reliability of third party transportation service providers of the company. The delivery of the company's products through the right mode of transportation is found in a moderate level as per the respondents. The finding shows that the company moderately spends minimum cost to transport products to its customer & moderately uses electronic system to track the products that are transported to its customers.

- Concerning information flow activities the study showed that ULET adopts ICT to plan its logistics process & to communicate in a large extent. Monitoring of logistics management processes using the information flow through ICT is adopted by the company in a moderate level. As per the study there is a moderate adoption of information flow through ICT to control the outbound logistics process as well as using information flow through ICT to coordinate. According to Grunt (2007) for the effective functioning of logistics system there must be hardware & technology transfer and information system must be tailored to serve the logistics system and increase the line of communication.

- In regards to finished goods warehousing practices the study found that products are moderately delivered in the right quantity to the customers & the application of warehouse management system software for stock control is adopted moderately and not practiced fully. The study also revealed that the company moderately uses sufficient material handling equipment for loading goods. It also showed that the company has a lower sufficient man power for loading the finished goods on truck & also insufficient storage space for storing its finished goods.

- Related to Packaging activities, it was found that packaging products so that they can be protected from damage and loss is practiced by the company moderately & moderately the products information are identified according to their value and purpose. The study also revealed some of the respondent's agreement that the company's product is easily identified from other competitors product in a moderate extent & that products might be damaged while being transferred from different location to different location.

### 5.2.2. Summaries on Operational performance& challenges of Unilever Manufacturing PLC

The study reviled that the sources of Unilever Ethiopia's leading operational performances though agreed being found in a moderate level are the improvement of products quality, increased efficiency, customer satisfaction, reduction of cost, adoption of up-to-date communication technology, delivery of products on time meeting customers requirements, decrease in customers complaint, timely delivery of orders, reduction of lead time & reduction of cost of transportation for goods moved across route. The study also showed that responsiveness to a sudden change in demand & appropriate warehouse layout with efficient storage space for efficient order piking & reduced warehouse cost are areas of operational performance were the company is not doing well as they are found in a lower extent.

By in large this shows that the sources of operational performances of the company being found in both moderate and little extent are the results of less effective and efficient logistics management activities.

In addition the study presented the specific areas of challenges that the Unilever Ethiopia faces in each of the logistics management activities of order processing, inventory management, transportation, finished goods warehousing & packaging were this revealing that the company should work on this areas of challenges in order to achieve a superior operational performance & avoid the hindrance they are resulting.

## 5.3. Conclusions

The study recognized that Unilever Ethiopia though not gratifying somewhat adopts the logistics management activities of order processing, inventory management, transportation, information flow, finished goods warehousing & packaging activities. The adoption of this logistics management activities is not gratifying as the study reviled that they didn't result in a satisfying operational performance.

The study distinguished the challenges that Unilever Ethiopia faced when employing logistics

management practices; were this challenges being: difficulty of getting real time information from dispatched trucks, delay of 3rd party transportation service providers in providing trucks, high cost of transporting products across regions, inadequate storage capacity to manage customers future demand, warehouse man power turn over & lack of motivation, shortage of man power/material handling equipment's, inefficient inventory control leading to stock out situations, lack of efficient IT based communications/processing techniques , order receiving errors and incorrect sales orders & products being damaged during transit.

The regression analysis of the study recognized positive beta coefficients for all of the study variables;-order process management activities, inventory management activities, transportation activities, information flow activities, warehousing activities, and packaging activities. Based on this the study concludes that any change made on the logistics management activities is expected to positively impact the operational performance of the company.

### 5.4. Recommendations

Constructed on the findings of the study and conclusions drawn the following recommendations are suggested for actions to be under taken by Unilever Ethiopia to overcome the logistics management challenges & to insure a continued improvement in operational performance.

- The company should have a dedicated process team that will measure and track order error levels and look for root causes of the errors, it should reduce its excessive paper based system, engage with its customers & territory managers to determine on how to exchange information electronically to electronically receive & confirm orders.

- The company should evaluate the design of its finished good warehouse & layout, understand how well goods flow & choose appropriate storage methods of deep stacking, high rack storage & shelf stacking in order to have a sufficient storage space.

- It must strictly evaluate its 3rd party transportation service providers based on cost, their performance, capability of providing loading vehicles on time, responsiveness, reliability, service range, financial stability, pricing flexibility & commitment in order to cut the delay they are triggering.

- The company should have a strong mechanism of inventory control, have a real time information of its inventory to analyze its previous sales performance of SKUs so that it will enable it forecast its future demand & avoid stock out situations. Moreover to minimize its stock out state the company should use inventory level passing warning point alerts among the key departments of procurement, production and distribution so that each of them will be aware of the situation in due time.

- In order to reduce the high transportation charge it incurs from the 3rd party transportation service providers; being an international enterprise the company should purchase its own trucks which will be dedicated to the fast movement of finished goods across different regions. The company can also gain savings from its transportation costs by working together with a better 3rd party transportation service provider, becoming its main client of& getting entitled to receive extra benefits.

- Real-time exchange of data about goods in transit allows a company to know the condition of it's the cargo, make decisions earlier & update the current status of the shipment to the waiting customers in due time & meet its promised lead time. In this regard Unilever must first ensure that it's hiring a transport service provider that is capable of providing specific real time status of consignments in a highly functional way. Being an international company it must engage with transport service providers that use the technologies of radio frequency identification and GPS to quickly identify the location of consignment carrying trucks & meet lead time.

- The less adoption of using information flow through ICT in the coordination of outbound logistics has a huge impact on the later operational performance output. In this regard Unilever must adopt tailored EDI in each steps of the outbound logistics which will integrate the overall logistics activity and enable a constant and timely communication. The company must also use the logistics information systems of transportation management system (TMS), inventory management system (IMS) & warehouse management system (WMS) as processing techniques.

- Though it might seem insignificant the company must be fully equipped with warehouse material handling equipment's which are very mandatory at the time of loading of finished goods on trucks as their unavailability have caused delivery delays as witnessed by the respondents.

- For the shortage of manpower and turn over that is being experienced in the warehouse and creating a hindrance on early delivery of consignments; the company must develop strategies to plan its manpower. The company should have a view of its man power's achieved performance. It must engage its manpower through variety of tasks and use the strategy of job rotation as same will decrease boredom, work stress, job absenteeism& turn over.

By and large the company must optimally manage all of its logistics activities in order to gain increased flexibility, quality of product and service & also gain a lower cost and shortest delivery time.

### 5.5. Suggestion for Further Research

Since the outbound logistics management activities used in the study didn't explain the reason for the 27.30% of change in the operational performance of Unilever Ethiopia a research should be made to know this other factors that accounted for the change. In addition though it based on the perception of the selected respondents the researcher believes that the study can be a path way for future similar researches on the outbound logistics areas of manufacturing industries in our country.

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## ANNEX 1

**ADDIS ABABA UNIVERSITY**
**SCHOOL OF COMMERCE**
**GRADUATE STUDIES**
**MA PROGRAM**

**Questionnaire to be filled by Unilever Manufacturing staffs.**

**Dear Respondent,**

The questionnaire has been designed to assist the researcher collect data on the research topic: "Challenges of Logistics Management and its Impact on the Operational Performance of Unilever Manufacturing" in partial fulfillment of Requirements for award of Master Degree in Logistics and Supply Chain Management. The information gathered will be used only for academic purpose and will be held confidential. The success of this study depends on your frank response to the questions given below. No need to write your name in any place on this questionnaire.

Should you have any enquiry feel free to contact the researcher at the following contact address.

Email:cabusem2000@gmail.com

Phone: +251913658431

Thank you in advance for your full cooperation!

APPENDIX I: RESEARCH QUESTIONNAIRE

I. **Demography of Respondents**

1. Number of total work experience working in the company

   a. 1-2 b. 2-3 c. 3-4 d. 4-5

2. Age

   a. Under 25 b. 25-30 c. 30-35 d. 35-40 e. above 40

3. Sex – Male ( ), Female ( )
4. Education Level

   a. Diploma b. BSc/BA c. MSc /MA d. PhD

5. What job position do you hold

   Operation Manager ( )

   Logistics Manager ( ) Other ( )

SECTION B: Logistics Management Practices in the Firm

6. To what extent does your company practice the following logistics practices? Tick as appropriate using the following Likert scale of 1-5 where: The means recorded were interpreted as follows: **1**= Very little Extent; **2**= Little Extent; **3**= Moderate Extent**; 4**= Large Extent; **5**= Very Large Extent

| **Logistics Management Activities** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| **Order Processing management Activities** | | | | | |
| The company uses Electronic Order Processing | | | | | |
| Orders are processed in a timely manner | | | | | |
| The company use database to track it's orders and inventory | | | | | |
| Companies has effective way of tracking and analyze order processing errors | | | | | |
| Demanded orders matching with supply capacity of warehouse at the time of order receiving | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| The company has a system where customers can track their orders | | | | | |
| **Inventory Management Activities** | | | | | |
| The firm uses Enterprise Resource Planning System (Barcode) to track its inventory | | | | | |
| Accurate stock updates on the quantity of produced goods | | | | | |
| The inventory management practice enable the firm to avoid inventory bottle neck in production | | | | | |
| The inventory management practice keep cost at a minimum | | | | | |
| The company uses the right inventory technique (JIT, Kaizan, ABC analysis, cross docking etc) to manage its inventory | | | | | |
| **Transportation activities** | | | | | |
| The transportation management practice enables timely delivery of products to customers | | | | | |
| Through transportation management practice products are made available to the customers desired location | | | | | |
| The company's products are delivered using the right mode of transportation | | | | | |
| The company spends at a minimum cost to transport products to customers | | | | | |
| The firm uses electronic system to track all products that are transported to customer | | | | | |
| **Information flow Activities** | | | | | |
| The information flow through ICT practice is use to plan logistics process | | | | | |
| Logistics management process is monitored using information flow through ICT | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| The firm information flow through ICT is used to control the logistics process | | | | | |
| The information flow through ICT is used to coordinate | | | | | |
| The firm information flow through ICT is used to communicate | | | | | |
| **Finished Goods Warehousing Activities** | | | | | |
| Products are delivered in the right quantity to the customer | | | | | |
| Applying Warehouse Management System software for stock control | | | | | |
| Loading goods with sufficient material handling equipment (conveyors, forklifts,.) | | | | | |
| Loading goods on truck with sufficient man power | | | | | |
| Storing goods in a sufficient storage space | | | | | |
| **Packaging Activities** | | | | | |
| The company's product are packaged in a way to protect it from damage | | | | | |
| The company's product are packaged in a way to protect it from loss | | | | | |
| The company's product is easily identified from other competitors product | | | | | |
| The products can be transferred from different locations to different locations without damage | | | | | |
| The company's product information are easily identified according to their value and purpose | | | | | |

**Section C: <u>Operational performance</u>**

7. The follwing are some of the sources of a compaies superior performance. Please indicate the extent to which the bewo applies in the firm. Tick as appropriate using the follwing Likert scale of 1-5 where: **1**=Ver little Extent; **2**= Little Extent; **3**= Moderate Extent; **4**= Large Extent; **5**= Very Large Extent

| | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Products are delivered to customers on time meeting the customers' requirements | | | | | |
| There is a decrease in customers complaints | | | | | |
| There is Adoption of up-to-date communication technology | | | | | |
| Responsiveness to sudden change in customers demand | | | | | |
| Increased efficiency | | | | | |
| Customer Satisfaction | | | | | |
| Continuous Improvement of Product quality | | | | | |
| There is reduction in operational cost | | | | | |
| There is a reduction in lead time | | | | | |
| Timely delivery of orders | | | | | |
| Reduction of transportatoin cost for goods moved across route | | | | | |
| Appropriate warehouse layout with efficient storage space for efficient order piking and reduced warehouse cost | | | | | |

**Section D: <u>Challenges of logistics Mangment activities in the companay</u>**

8. The follwing are some of the challenges of logistics management activies in the company. Please indicate the extent to which the bewo applies in the firm. Tick as appropriate using the follwing Likert scale of 1-5 where: **1**=Very little Extent; **2**= Little Extent; **3**= Moderate Extent; **4**= Large Extent; **5**= Very Large Extent

| | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Products become damaged during transit | | | | | |
| There are order receiving errors & incorrect sales orders | | | | | |
| There is inadequate storage capacity to manage customers future demand | | | | | |
| Delay of 3rd party transportation service in providers in providing trucks on time for loading | | | | | |
| Inefficient inventory control leading to Stock out situation | | | | | |
| There is a high cost of transporting products across regions | | | | | |
| Difficulty of getting real-time info of location from dispatched trucks | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Lack of efficient IT based communication/processing techniques | | | | | |
| Lack personnel's fully utilizing inventory controlling system | | | | | |
| Shortage of Man power / material handling equipment's during loading finished goods to delivery | | | | | |
| Warehouse manpower turnover and lack of motivation | | | | | |

9. Indicate any challenges of logistics management which in your opinion has an impact on the operational performance of the company & must be addressed by the company

_____

_____