# THE EFFECT OF PHYSICAL DISTRIBUTION ON CUSTOMER SERVICE LEVEL A CASE STUDY OF REM DISTRIBUTORS GGABA ROAD KAMPALA UGANDA

BY

# **ODERA NASILA CHRISTINE**

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A RESEARCH DISSERTATION SUBMITTED TO SCHOOL OF BUSINESS AND
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THE AWARD OF BACHELOR OF SUPPLIES AND PROCUREMENT
MANAGEMENT OF KAMPALA INTERNATIONAL UNIVERSITY

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#### **DECLARATION**

I ODERA NASILA CHRISTINE hereby declare to the best of my knowledge that the work embodied in this research paper is my own work and has never been submitted for a degree or any academic award in any university or any institution of learning. It is in this regard that I declare this work originally mine and hereby present it in partial fulfillment of the requirement for the award of Bachelors Degree of Supplies and Procurement Management of Kampala International University.

Literature and citation from other scholars' work has been fully referenced and acknowledged in the text and bibliography

ODERA NASILA CHRISTINE

Sign: Nantak

Date: 29/1/5/2012

#### APPROVAL

This is to certify that the following research of ODERA NASILA CHRISTINE has been carried out under the title " The Effects of Physical Distribution on Customer Service Level a Case Study of Rem Distributors - Ggaba Road Kampala Uganda" under my supervision. It is now ready for submission to Kampala International University faculty of business management for the award of a Bachelor of Supply and Procurement Management, with my due approval

MR. HENRY BARASA OCHIENO

Sign: 4520 30

Date: 29(5/2012

#### **DEDICATION**

The work presented throughout this research is dedicated to my beloved parents Mr. and Mrs. Wakyaya; my brother Kelvin and Sister Esther, my uncles and aunties, and all my cousins for the moral support she extended to me throughout my pursuit of academic excellence.

MAY GOD BLESS YOU ABUNDANTLY!

#### ACKNOWLEDGEMENT

Completing this work would have been an insurmountable task had there not been support from various people.

I would also like to thank the ALMIGHTY GOD who has enabled me to finish this study by giving me the gift of life and good health.

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#### ABSTRACT

The research topic "The Effects of Physical Distribution on Customer Service Level a Case Study of Rem Distributors - Ggaba Road Kampala Uganda." The main objectives of the study included;-

To establish the effect of Rem distributors on customer service level.

To determine the relationship between Rem distributors and customers service level.

The literature review presents works of other scholars on areas of Logistics and Distribution. The literature review is organized in such a way that it correlates with the objectives of the study and gives an insight into what researcher has done in as far as answering the research questions.

The study area deception and methodology o the study offers a concise discussion of the methodological aspects used in the study looking to how various tools were used to collect data from Rem Distributors as well as way in which all the information collected was processed, analyzed and presented discussed and so on .

The presentation and discussion of the findings is around the themes relating to the objectives, variables and research questions of the study. Here the effects Physical Distribution on Customer Service Level were analyzed. Finally the conclusions focus on the references from the research and answers to the research questions are briefly discussed in this area.

#### CHAPTER ONE

#### INTRODUCTION

#### 1.1Background of the study

Traditionally physical distribution focused on products at the plant and tried to find low-cost solution to get them to customers. According to Kotler, physical distribution addresses not only the problem of outbound distribution moving products from the factory to the customers but also the problem of inbound distribution among products from suppliers to the factory) it involves the management of the entire supply chain value added flows from suppliers to final users.

The study is about the effects of physical distribution on customer service level. Physical distribution is the transporting, storing and handling of goods to match customer's needs, Kotler (2005).

Physical distribution refers to the activities used to move finished goods from manufactures to final consumers including order processing, warehousing, material handling and inventory control, Michael R. (2003).

According to Boon and Kurtz (2003) "physical distribution is an organized group of components linked according to a plan for achieving specific objectives with the components of customer service, transportation, inventory control that is how much inventory a firm should maintain at each location, protective packaging and material handling that is how the firm can efficiently handle goods in the factory, warehouse and transport terminals, order processing, warehousing that is where the distribution system will locate stock of goods, the number of warehouses the firm should maintain".

According to McGraw (2005), "customer service level on the other hand refers to how rapidly and dependably a firm can deliver what its customers want".

Pepsi Company started its operations in the United Kingdom manufacturing beverages and snacks. However it is widely recognized because of its soft drinks Pepsi Company has distribution outlets all over African countries with its biggest competitor being the coca cola company.

In Uganda, Pepsi Company has many distribution centers for example Katwe, Kampala Kansanga, Ndebe, Jinja, Mbale and other different towns. Pepsi Rem distributors located along Kansanga-Gabba road near Kampala International University, begun its operations in August 2010.

Rem Distributors offer services to their customers and because of this the research seeks to investigate the effect of this particular distributor on customer service level.

#### 1.2 Problem statement

As a result of global competition, manufacturers of soft drinks have developed numerous physical distribution systems to be able to meet the needs of their customers efficiently and beat the competition. Therefore the research intends to investigate the effect of Rem distributors on the customer service level specifically around Kansanga because of the population around that is Kampala International University students and staff restaurants and is the residents of the area.

#### 1.3 Purpose of the study

The purpose of the study was to investigate the effect of physical distribution on customer service level.

# 1.4 Specific objectives of the study

To establish the effect of Rem distributors on customer service level.

To determine the relationship between Rem distributors and customers service level.

#### 1.5 Research questions

What is the effect of Rem physical distributors on customer service level?

What is the relationship between Rem distributors and customers service level?

# 1.6 Significance of the study

The research will be useful to Rem distributors in promoting better distribution services for better customer service level and gaining competitive advantage.

The study will form basis for further research on the effect of physical distribution on customer service level.

The study will be significant for the award of a degree in Supplies and Procurement Management.

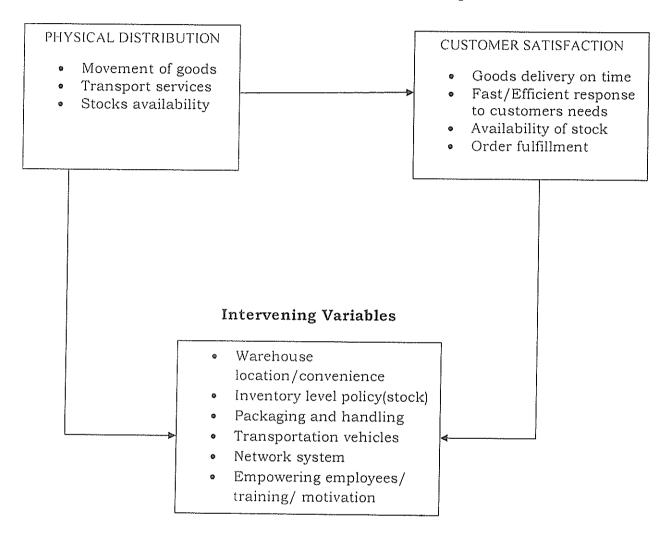
To other students in the same field it will help them understand the research process and data collection methods.

# 1.7 Scope of the study.

The research was carried out at Rem distributors' limited Kansanga-Ggaba road Kampala Uganda this is because of the fact that it was easy for me to get information because of its nearness to the university. The study was conducted between October 2010 and November 2010. The study focused on the effect of Rem distributors on customer service level. The research design included data collection by use of sampling, interviews questionnaires and observation techniques.

# 1.8 Conceptual Framework Independent Variable

# Dependent Variable



#### CHAPTER TWO

#### LITERATURE REVIEW

#### 2.0 Introduction

This chapter is an analysis of some of the major issue of the existing literature on the effect of physical distribution on customer service level. The literature will particularly focus on the relationship between physical distribution and customer service level, effects of distribution and the different distribution services.

#### 2.1 Definition of concepts

Physical distribution comprises of tasks involved in planning and implementing the physical flow of final goods from point of origin that is the manufacturers point to the point of use to meet the needs of the customers.

Physical distribution involves customer service. Ware housing, shipping, inventory control, private trucking fleet operations ,packaging, receiving, material handling warehouse and store location.

According to Shipiro, " customer service level refers to how rapidly and dependably a firm can deliver what its customers want".

Customer service is the ability to deliver to the customers what they need at the right time and the right quantity.

Borkowitz defines customer service level as the ability of a distribution system to satisfy users in terms of time, dependability, communication and convenience.

#### 2.2 Effects of distribution on customer service level.

Companies today are placing greater emphasis on logistics for purposes of achieving customer satisfaction. Physical distribution has become a key to winning and keeping customers. Companies have discovered that they attract more customers by giving better services or lower price through physical distribution on the other hand companies are likely to loose their customers to competitors if they don't supply the product on time.

Time, in distribution time refers to a lead time for an item which means the length of ordering an item until it is received and ready for use it is also referred to as order cycle time or replenishment time. Various elements that make up the typical order cycle include recognition of the need to order, order transmittal, order processing, documentation and transportation. The emphasis today is to reduce lead time so that the inventory levels of customers may be minimized ,the other emphasis is to make the process of reordering and receiving products as simple as possible often through electronic data change and other computer based ordering and inventory system.

**Dependability** this refers to the consistency of stock replenishment to the customers. It can be broken down into three elements that are consistent lead time, safe delivery and complete delivery. This has been discovered as the key element to customer satisfaction.

Communication this is usually two ways between the buyer and the seller it helps in monitoring service and anticipating future needs .Improved communication between the buyer and the seller creates effectiveness when tracing accuracy of information and improved ability of buyers to schedule shipments.

**Convenience**, with physical distribution it becomes easy for the customer to order, for hem to access the products since the seller has eliminated barriers such as distance.

According to Lillie ,Kotler, they point out the components of physical distribution which are

Inventory

Packaging and material handling

Warehousing

Transport

The above are able to affect the level of customer service. Johnson and Wood (1986) explain how this is possible.

Warehousing, locations are a promotional tool in that the buyers are able to easily access the goods faster if the ware house is near.

Inventory level policies, they affect availability of the product in that if the inventory level policies are poor this will lead to stock outs, angry customers. Sometimes it can lead to loss of customers due to the frustrations they have got which is a cost the company may not be able to cover even in the near future eventually leading to loss of sales. However if the inventory level policies are favorable order filling will be provided efficiently and faster hence high customer service level.

Packaging and handling procedures good handling and material procedures leads to the delivery of damage free goods to customers .this is important since it minimizes conflicts between the buyer and the seller hence leading to customer satisfaction.

**Transportation modes**, the type of transport mode chosen determine the arrival rate of goods, an efficient mode of transport enables the customer to receive goods whenever they need them. Some of the efficient transport mode include: - trucks, vans, motorcycles.

Adaptation to customer requirement is the key to securing sales and repeat of orders as firms become more customer oriented, they have to become more flexible in product planning as well as distribution. A facilitating mechanism in this adaptability has been the use of the computer which can appreciably speedup order processing through improved information flow; it is possible to tie production and distribution more closely to customer needs.

Many companies are concerned about product availability to customers .some establish an objective of 99 percent product availability and this requires close meshing of every physical distribution component .For example, a certain level of inventory must be maintained to insure product availability at all times, an order processing maximum time must be established and a maximum time in transit from plant to warehouse and from warehouse to customer must be established.

As part of marketing strategy, the establishment of a customer service policy is extremely important .customer service interfaces with other functions such as marketing and production. A broad range of issues affect customer service they are

i. Credit rules

ii. Response to customers' complaint

iii. Minimum orders

iv. Order cycles returns

v. Stock outs

vi. Promised deliveries

The above issues must be carefully examined to ensure customer service.

The establishment of transit standard times via particular type of transport mode has been undertaken by some physical distribution department in order to determine the efficiency of a particular mode in meeting customer requirements

## 2.3 The tasks in physical distribution

These are activities involved in physical distribution. According to Douglas (1993), an effective physical distribution system is built around five subsystems. There is much interaction and interdependence among these subsystems. Executive of judgment must be exercised regarding the size, location, handling and transportation of inventories. These interrelationships are often quite complex. Stanton and Futrell (1987).

#### 2.3.1 Storage versus warehouse

Storage is the marketing activity that involves holding and preserving products from the time of their production until their sale. Warehousing embraces storage plus a broad range of functions such as assembling, bulk breaking and preparing products for shipping.

Logistic managers have attempted to save on transportation costs by developing central distribution centers which are the ware house. This is to cater for their customers that need products of low quantity.

The central distribution centers breaks down large shipments into several smaller ones and delivers them to individual customers in the area.

Ware housing is therefore a broad concept than storage, storage is more passive by nature warehousing involves more activities.

#### 2.3.2 Ware housing management

Dramatic changes have occurred in the management of warehousing function under physical distribution.

# 2.3.2.1 Evaluation of the ware housing function

An analysis of warehousing function should include the following.

- i. Number of warehouses
- ii. Location and size
- iii. Markets to be served
- iv. Products and there quantities to be made at specific plants

- v. Plants that should serve each ware house
- vi. Decisions on additional plants to be built
- vii. Desired customer service levels

To develop the information needed data needs to be collected for five subject categories:

- i. Market location
- ii. Alternate ware house location
- iii. Type of shipments
- iv. Freight costs
- v. Ware house operating costs

#### 2.3.3 Warehouse location

The number and location of company warehouses are often dependent upon the purpose they are intended to serve. If material is to be processed or fabricated, the warehouse will generally be located near the manufacturing firm since less value will be added in transportation from warehouse to plant. On the other hand warehouses used for maintaining adequate finished products available for customers will be located near consumer markets. These are often referred to as break bulk warehouses. Large quantities are shipped into the warehouses in truck loads which are broken down into much smaller individual orders that go out to customers. The geographical of a consumer type of warehouse necessitates analysis regarding the market, demand, population statistics, and trends should be carefully evaluated

#### 2.4 Inventory management

According to Buell (1970) "inventory management is the key in physical distribution." the goal of inventory control is to minimize both investments and the fluctuations in inventories, while at the same time filling customers' orders promptly and accurately. Inventory costs include acquisition costs, holding costs. Management needs to establish optimal quantity for reorder when it's time to replenish stock. This is possible by

the concept of economic order quantity which is the volume at which the inventory carrying costs plus order processing costs are at minimum. Another concept is " Just in time " the essence of this concept involves buying in small quantities just in time for use in production then producing in small quantities just in time for sale. Charles Taff categorizes inventory into five groups; working stock, safety stock, remnant stock, seasonal stock, and pipeline stock.

When more stock is carried than is needed for immediate demand its termed "working stock" one of the reasons for this is that there is no danger of stocking out. The sales department is happy with such an arrangement and so is the production department. This however ignores the cost of inventory and the management aspect .Over stocking does not make itself felt immediately but a slight change in either general economic conditions or company sales can have immediate and sometimes disastrous effects.

"Safety stock" is buffer stock and is carried in inventory to insure customer service against uncertainties in either demand or supply .Its designed to guard against shortages even when demand is greater than normal. Management may specify as a matter of policy that sufficient safety stock will be carried to insure that orders can be filled at 95 percent accepting the fact hat stock outs may occur at 5 percent of the time.

"Remnant stock" is as the term implies, a small quantity left in certain warehouses when other warehouses are stocked out . When this occurs, a new production run is required to restock all the facilities that normally carry the stock.

"Seasonal stock" is produced for a variable or seasonal market .It may be produced at a constant rate, which results in a buildup of inventory of certain products .This is acceptable because it is considered desirable to have constancy in rates of production.

"Pipeline stock" is stock in the supply line that may be in transit or in the production line. This stock is considered part of the available stock. The time required to assemble, process and distribute pipeline stock is important to inventory management and when multiplied by the rate of usage give the quantity of stock to be in the supply pipeline.

Inventory carrying costs: Inventory carrying costs are costs of acquisition, that is the cost incurred in entering an order and the cost of possession. The obvious cost of possession is space costs, obsolescence, breakage, pilferage, spoilage, taxes, and insurance. To these costs should be added the factor of capital tied up in inventory. If a company is earning 20 percent on assets employed in the business then it might charge 20 percent for the funds invested in inventory. Some firms include an additional cost for lack of liquidity of such capital.

Effective use of computes is a key element in the control of inventory as it tracks the amount of raw material and finished goods throughout the system. Many companies have been using the material requirement planning (MRP) this planning starts with an annual sales forecast but includes frequent revision based on sales . This short range forecast allow companies to alter orders and manufacturing to avoid imbalances in production and sales

#### 2.5 Order Processing

This is the set of procedures for handling and filling orders. It should include provision for billing, granting credit, preparing the invoice and collecting past due accounts. Order processing directly affects a firm's ability to meet its customer's service level. A company may have to compensate for proficiencies in order processing system by shipping products via costly transportation modes or by maintaining large inventories at expensive warehouse.

Order processing is logically part of physical distribution with its close relationship to inventory, warehousing, and transportation. It is possible to improve order processing efficiency if enough human and material resources are devoted to this component. The typical order processing begins with acknowledgment of the order from the customer, the order is received, it may be necessary to review the credit rating of the customer, the credit rating can be handled by the credit manager in absence of such an arrangement, a credit clearance has to be secured as quickly as possible after the order is received, paper processing can be done manually or with data processing equipment. The manual method provides flexibility in handling exceptions and special situations. It's adequate for small volume of orders. The electronic method can provide lower cost and greater speed in processing when a large volume of order is processed. The use of computers has the advantage of regularizing record keeping procedure as well as certain time and cost benefit. It also enables a company to effectively tie together other parts of their information system.

# Steps in order processing

- i. Customer places an order.
- ii. Transmission of the order to the seller
- iii. Receipt and acknowledgment of the order by the seller
- iv. Credit check
- v. Paper processing including shipping and
- vi. Scheduling of withdrawal from the warehouse
- vii. Assembling and packaging
- viii. Warehouse withdrawal to carrier
- ix. Customer invoice
- x. Adjustment of the inventory level
- xi. Production planning'

#### 2.6 Transportation

This involves the shipping of products to customers. A management must decide on both the form of transportation to use and the particular carriers. Major transportation modes include rail roads, motor carriers. Water carriers, pipelines and air freight, distribution managers usually select the best

alternative stretching the situation features to their specific transportation needs an efficient mode of transport can be evaluated on the basis of cost, time, capability that is in terms of what can be carried with this mode, dependability that is reliability of service regarding time, loss and damage of product, accessibility that is convenience of the mode routes frequency and scheduling.

# 2.6.1 Traffic and transportation management

To perform the transportation responsibilities ,the physical distribution manager has a unit that is the traffic and transportation management group . The principle function of this group include, rate negotiation, routing and carrier selection including mode , special and terminal service reliability, carrier evaluation and establishment of performance standards to be met by the carriers, regulatory matters including safety and environmental factors that relate to transportation and their effect on company operations and appearance before regulatory agencies , operation of company transportation , cooperate with carriers in the development of technological changes that enhance transportation productivity , analysis of transportation costs and services

#### 2.6.2 Transportation pricing

Traditionally the most important single function of the traffic manager has been that of securing the correct rate although carriers will supply rates to a shipper, there are many complexities in the rates structure since there are many different types of rates by different modes of transportation, the transportation department may be able to find an advantageous rate to its company than that quoted by a particular carrier. This does not imply that the carrier does not quote the correct rate because there could be more than one rate applied. The rate function is broad; therefore the transportation manager must consider not only individual modes of transportation but also common carriers and contract carriers within a mode.

#### 2.6.3 Rate negotiation

This involves initiation of requests to carriers; such requests are accompanied by the justification for the proposal, which will be submitted in accordance with the procedures outlined in the rates bureaus. Its as far time consuming to prepare an adequate presentation in rates adjustment procedure for it should be necessary to carry it into rate litigation before a regulatory body, the greater part will have been done .rate analysis requires a thorough analysis of all aspects of a proposal .

### 2.6.4 Routing

This involves the choice of mode of transportation and the selection of carrier or carriers within that mode. most shipment both inbound and outbound on which the company pays the transportation costs are routed by the traffic manager, in order to perform this service, the traffic manager must have thorough knowledge of the services offered by various carriers, he must be able to determine the route over which the shipment will be shipped and have knowledge of the places and times at which shipment and delivered by the different carriers whether or not a more expensive means of transport should be used in order to reduce inventory or warehousing costs is another important determination that must be made in routing. Routing must be carefully watched to assure that good service is maintained and that improvements are made when its possible to do so .if these things are done standard routings can be of value and time savers .

# 2.6.5 Transportation operation

The operation of company owned transportation equipment including intraplant equipment, is an important responsibility of many traffic departments. Company owned equipment may be operated because it is of special design and to insure an adequate supply of transportation equipment to meet the minimum shipping requirements of the organization. One of the duties in the operation of company equipment is to suggest improvement in design. The traffic department has charge of scheduling the use of such equipment,

scheduling the routes, and supervising the cost of operation. Leasing or chartering of transportation equipment has become more common in recent years and the arrangements for such leases are generally handled by the traffic department. An evaluation has to be made must be made of the relative merits of owning or leasing equipment.

# 2.6.6 Diversion and Reconsignment

It is sometimes necessary to change the routing of a shipment or its final destination after the shipment has been turned over to a carrier. The consignee remaining the same. This is called "diversion". Where the consignee is changed and perhaps the destination this act is termed "Reconsignment". Diversion and Reconsignment are terms which are used interchangeably however, when it is necessary to make the changes of this sort the traffic manager contacts the carrier that has the shipment and request that the necessary changes in routing or delivery be made. This usually must be accomplished before the shipment has reached the original destination or the lading will need to be reshipped on a new bill of lading if it has reached the original destination.

#### 2.6.7 Risks and Claims

Where the company owns and operates transportation equipment it is necessary that adequate protection be provided for the risks that exist in the company owned equipment. Protection may be provided by the establishment of a self insurance firm of the company. There are many different types of insurance policies, so that he coverage desired can be tailor made for the organization. There is need to provide insurance protection for shipments involved in water transportation. The procedure for detecting loss and damage and satisfactory handling the claim with the carrier is the responsibility of the traffic manager. Procedures are established so as to expedite the handling of such claims.

# 2.6.8 Demurrage and retention

To assure that cars, pipelines are released during the period of free time allowed by the carrier is an important function of the traffic manager. Average

demurrage agreements may be established on in bound and outbound cars. So that credit earned through release of cars or their transportation equipment within the first 24 hours may be used to offset debits accrued on equipment held during the free time.

# 2.6.9 Distribution centre concept

An effective location strategy may be compromise to the establishment of one or more distribution centers. Such centers are planned around markets rather than transportation facilities. The basic idea is to develop under one roof an efficient, fully integrated system for the flow of products. This has lowered distribution costs by reducing the number of warehouses, cutting excessive inventories and eliminating out of stock conditions.

#### 2.7 Material Handling

Logistics managers arrange and control activities for making products within plants, warehouses and transportation terminals which together comprise the material handling system. Two important concepts influence many material handling choices. Initialization and containerization combines many packages as possible into each load that moves within outside a facility e.g. Pallets containerization combines several unitized loads.

The selection of proper equipment to physically handle products is an important aspect; proper equipment can minimize losses from breakage, spoilage and theft. Efficient equipment can reduce handling costs as well as time required for handling crates, pallets.

Objectives of material handling include.

- Reduction of handling costs that is reduction of labor costs, material cost and overhead costs
- ii. Increase of capacity that is in terms of increase in production, increase of storage capacity, improved stores lay out.
- iii. Improvements in working conditions, by the increase in safety, reduced fatigue, improved personnel comfort.

iv. Improvement in distribution, through improvement in routing facilities, strategic location of business facility, improvement in user services, increase in availability of products.

Various factors must be considered before selecting material handling equipment for use of shipping and receiving docks. They are

- i. Type of material handled whether in bulk or in packages.
- ii. Available space, including amount of clearance and headroom and floor loading factors
- iii. Whether unit loads are used as such as palletizing and methods of packaging.
- iv. The material handling equipment used throughout the rest of the plant
- v. The type of carriers used, motor, rail, water and air
- vi. One of the most widely used material handling method is the pallets and forklift trucks. Some of the advantages of Palletization are,
- vii. Efficient loading and offloading of materials
- viii. Palletization in most cases eliminates to a great degree inaccuracies in counting goods.
  - ix. It adds a false floor to which steel strapping may can be anchored.
  - x. Palletizing makes efficient warehousing, uniform placement of stock, neat aisles and clear floors and allows the proper lighting of the room as well as utilization of ceiling heat.

There are many other different types of material handling equipment and they are;

#### 2.7.1 Platform Trucks,

Roller conveyor which is a series of rollers supported in a frame over which packages are moved manually by gravity or by power.

Wheel conveyor, it's a series of wheels supported in a frame over which packages or objects are moved manually by force of gravity or power.

Hand truck two wheel.

#### 2.7.2 Unitization

One of the methods of preventing damage in loading and unloading and reducing time required is that of combining packages into a unit. Unit loading systems widely used are standard pallets, skids, disposable pallets, steel strapping, glued loads, pallet packs and sheep sheets

#### Advantages of unitization

- i. Leads to greater speed in handling products.
- ii. Decreased damage to materials hence safety is guaranteed.
- iii. Less change for pilferage.
- iv. Protection against environmental conditions.
- v. Efficient utilization of space.

# 2.8 The relationship between physical distribution and customer service level

According to stern and El-Ansory, a strategically planned physical distribution system can provide the company with a better understanding of the impact corporate strategy has no physical distribution responsiveness, increased sensitivity to the distribution environment and increase awareness and understanding of distribution, cost reduction and customer service level.

The strategy planning process for a physical distribution system involves an valuation of alternate physical distribution system configuration that meet customer service requirement. Therefore the physical distribution process begins with the determination of customer service goals and services which in turn serve as the basis for the determination of inventory, warehousing, transportation and order processing strategies.

Companies need to establish the strategic role that customer service should have in its relationships within other components of physical

distribution, analysis indicate that there is need to inform the top management the need of order processing in the overall performance and the necessity of providing the resources to ensure that it fills its functions. By doing this they will be able to know the order entry, order scheduling time, order documentation, customer communication and hence satisfying their customers. Taff, (1984).

Some companies state that logistics objective as providing maximum customer service at the least cost, unfortunately no logistical system can both maximize customer service implies rapid delivery, large inventories, flexible assortments, liberal returns policies and other services all of which receive distribution costs. In contrast minimum distribution costs imply lower level of delivery smaller inventories, larger shipment lots which represent as lower level of customer service.

It has been determined that response to questionnaires from both customers and suppliers that customer service has a direct effect on suppliers sales to a customer. A one percent sales improvement in customer service will lead to a 1 percent increase in sales. A point of diminishing returns is reached however, when the cost of over all service improvements exceeds the value of increased sales this indicates that there is an area that needs careful scrutiny by the distribution manager.

A vexing problem for retailers is the ability to insure the availability of a product for customers especially when it is being heavily advertised. Such advertising campaigns are typically of short duration covering three to seven days .The prices which such advertised products carry encourage customers to visit the store .While at the store the customer may on impulse buy other items which add to the stores gross profits as well as its net profit .Thus the availability of the advertised product is considered critical to the marketing success of a store. Future breakdowns should be eliminated.

Many diverse arrangements exist in purchasing goods from the manufacturers, jobbers and wholesalers. The product seeks to maintain maximum customer flexibility in handling orders but at the same time coordinate order processing so as to secure benefits of production runs in economical units. The economic unit of production runs can be accomplished by producing in advance of sales and storing the good, but the total cost of such arrangement must be carefully analyzed. The trade practices in many lines of the business are difficult, it is not impossible to modify so it is necessary to work within the existing practices to accomplish the desired objective.

The specification that customers establish regarding shipment at the time that an order is taken will have substantial impact upon the production runs. Order specification may provide for shipment when the material is ready and in such instances, the customer will take delivery at any time prior to a specified date regardless of his or her own needs.

#### CHAPTER THREE

#### METHODOLOGY

#### 3.0 Introduction

This chapter is about how the researcher will arrive at the findings of the study. It will include research design, study population, sample frame work, sampling techniques, research instruments, and data collection procedures and data analysis.

#### 3.1 Research design

The research design used was cross sectional survey including both quantitative and qualitative forms. The qualitative design was used to collect information from respondents on the attitudes and opinions in relation to the effect of Rem distributors on customer service level. The quantitative design was used to collect numerical data.

# 3.2 Study population

Rem Distributors is located in Kansanga- Ggaba road and have many customers located at Kansanga, Kabalagala, Nabutiti, and Ggaba. The respondents included the selected customers from various locations and some staff of Rem Distributors limited.

#### 3.2.1 Sample size

The sample size consisted of a total of 20 respondents out of a random selected total population of 50 people.

#### 3.2.2 Sampling techniques

The sample size was selected using purposive sampling technique.

#### 3.3 Research instrument

The research instrument in used were questionnaires and interviews .It was used to collect systematic and variety of data from respondents who did not get

time to be interviewed, more so interviews were used to gather data necessary for obtaining the information from respondents who did not feel inconvenienced by the researcher's request.

#### 3.3.1 Questionnaires

The researcher used a set of questionnaires in which open ended and closed ended questions were used to identify research problem and collect relevant data to answer the research questions under investigations. The open ended questions were used to get more information from respondents while closed ended questions were used to facilitate easy statistical data entry and analysis. Fifty questions were given to the respondents to collect data from those can't be interviewed.

#### 3.3.2 Interviews

The interview was conducted on 20 respondents. It was both structured and unstructured. The unstructured interview helped the respondents to be open and freely out more information while the unstructured enabled the researcher to collect relevant data.

#### 3.3.3 Observation

This technique was used to check on the level of customer service and how the customer responds to these services of distribution.

#### 3.4 Research procedures

The research was carried out in Kampala at Rem distributors Kansanga the proposal was submitted to the project supervisor for approval in Kampala International University. A letter of approval was then issued by the school of business and management. As a go ahead to enable Rem distributors approve for data collection. An introductory meeting was conducted early November with the employees of Rem distributors to familiarize myself with them and request for particular days when the research was conducted.

# 3.5 Data analysis

After collecting data open ended questionnaires items, interviews were grouped under broad theme and converted into frequency counts. All data was analyzed at the level of 95% significance or d=0.05 was chosen depending on the particular case as was determined. The value d=0.05 was chosen because the sample size was adopted from figures calculated on the basis of 0.95 level of confidence.

#### CHAPTER FOUR

#### PRESENTATION, DATA ANALYSIS AND INTERPRETATION

#### 4.0 Introduction

This chapter presents the findings of the data collected from the questionnaire and interview schedule and observations that aimed at investigating into the effect of physical distribution on customer service level. Data was collected from 20 respondents of Rem Distributors. Data was organized, presented and analyzed in qualitative form with use of simple percentages, graphs and pie charts.

#### 4.1 Respondents according to age

Table: 4.1

Age Of Respondents	Frequency (f)	Percentage (%)
18 to 24	10	50%
25 to 31	5	25%
32 to 38	3	15%
39 and above	2	10%
Total	20	100%

Source: Primary Data

From the above table 50% of the respondents are between the ages of 18-24 years, 25% are between the ages of 25-31 years, 15% are between 32-38 years and 10% are above 39 years. This implies that Rem Distributors employs the young generation to carry out the physical distribution activities. This is graphically represented as below;

Figure 4.1



## 4.2 Gender of Respondents

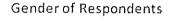
Table 4.2

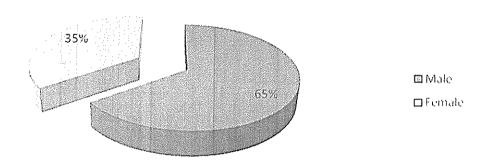
Gender	Frequency (f)	Percentage (%)
Male	13	65%
Female	7	35%
Total	20	100%

Source: Primary Data

According to the above table, 13 respondents (65%) were male and 7 respondents (35%) were female. This data is further represented in the data below;

Figure 4.2





## 4.3 Level of Education of the Respondents

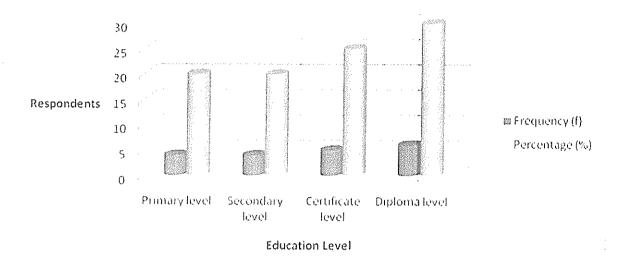
Table 4.3

Education level	Frequency (f)	Percentage (%)
Primary level	4	20
Secondary level	4	20
Certificate level	5	25
Diploma level	6	30
Degree level	1	5
Total	20	100%

Source: Primary Data

Table 4.3 above revealed that there were 20% of the respondents who were at Primary Level, 20% of the respondents were of Secondary Level, 25% of them were Diploma Holders, 5% were degree holders. The table revealed that most of the workers in Rem Distributors were Diploma holders and Certificate holders. This information was enough to tell that workers in this organization are qualified and therefore do their work perfectly. The information was further presented in a bar graph as shown below.

Figure 4.3



## 4.4 Working Experience of Respondents

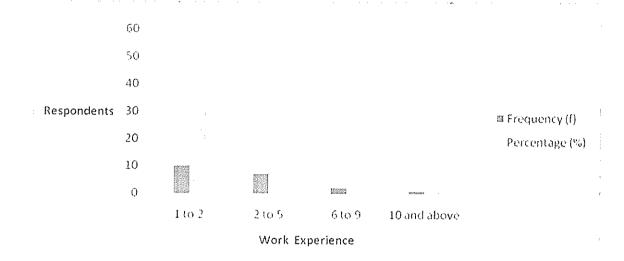
Table 4.4

Working Experience (Years)	Frequency (f)	Percentage (%)
1 to 2	10	50%
2 to 5	7	35%
6 to 9	2	10%
10 and above	1	5%
Total	20	100%

Source: Primary Data

Table 4.4 above revealed that only 50% of the respondents had worked in the organization for less than two years, 35% had worked in the organization for 2 to 5 years, 10% also had worked in Rem Distributors for 6 to 9 years while 5% of the respondents had worked in the organization for more than 10 years. Therefore it can be deduced that the majority of the respondents had worked in the organization for less than 2 years. The data was also analyzed using a bar graph as shown in the figure below;

Figure 4.4



# 4.5 What are the modes of transport do you use most for distribution/delivery of your products?

Table 4.5

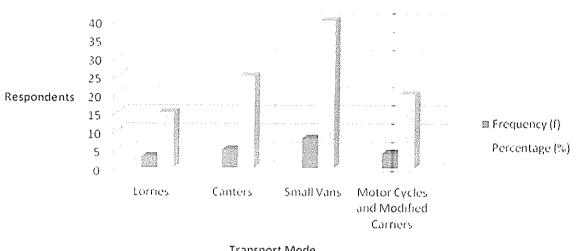
Transport mode	Frequency (f)	Percentage (%)
Lorries	3	15%
Canters	5	25%
Small Vans	8	40%
Motor Cycles and Modified	4	20%
Carriers		
Total	20	100%

Source: Primary Data

Table 4.5 reveals that 15% of the respondents said that lorries are mostly used mode of transport, 25% of the respondents said Canters are used, 40% said small vans are used most and 20% of the respondents said that Motor Cycles and Modified Carriers are most used by Rem Distributors. This implies that small vans are one of the modes of transport that is mostly used. This is

because Rem distributors distribute their products to retailers and wholesalers who order in small quantities. The data is further repented in a bar graph below;

Figure 4.5



Transport Mode

#### 4.6 Do the means of distribution serve the customer well?

Table 4.6

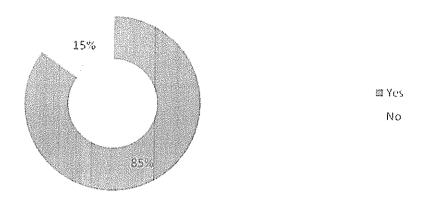
Respondents	Frequency (f)	Percentage (%)
Yes	17	85%
No	3	15%
Total	20	100%

Source: Primary Data

According to table 4.6, 17 respondents (85%) said yes and 3 respondents (15%) said no. This implies that majority of the respondents agree the means of distribution at Rem Distributors serve the customers well. This data is further represented in the pie chart below;

Figure 4.6

#### Do the means of distribution serve the customer well?



### 4.7 Does distribution affect customer service level?

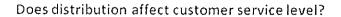
Table 4.7

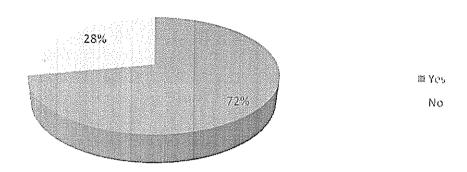
Respondents	Frequency (f)	Percentage (%)
Yes	16	80%
No	4	20%
Total	20	100%

Source: Primary Data

Table 4.7 reveals that, 16 respondents (80%) agreed that distribution affect service level and 4 respondents (20%) did not agree that distribution affects customers well. This implies that majority of the respondents agree that distribution affects customer service level. This data is further represented in the pie chart below;

Figure 4.7





## 4.8 Which distribution service is best offered by Rem distributors? Rate the service according to strength.

Table 4.8

		R	ating scal	е	
Distribution Service	1	2	3	4.	5
Warehousing					*****
Inventory Control					
Transportation					
Packaging & Material Handling					
Order Processing					
Customer Service					

According to the above rating scale, it is revealed that among the distribution services offered at Rem distributors, customer service is the best offered service which was rate number one, followed by warehousing, Transportation and order processing, then inventory control and packaging and material handling were rated number three. This implies that all the services are offered to the optimal expectation of the customers.

#### CHAPTER FIVE

## SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.0 INTRODUCTION

This chapter involves the general summary of the findings, conclusion and recommendations made based on the objectives of the study and the data collected from the customers and employees of Rem Distributors.

#### 5.1 SUMMARY

The study was carried out around Kansanga. The target customers and employees used in the sample size are those around Kansanga this is because the distributing centre is located around this area and the research was to find out the effect of physical distribution on customer service level.

The first objective of the study was to find out the effect of Rem distributors on customer service level. Most employees and customers admitted that distribution positively affects customer service level. This is because of the advantages the customer enjoys as a result of distribution centre concept which include ,convenience its easy for the customers to access the goods ,dependability ,this means there is consistency of stock replenishment to the customer there is also safe delivery ,short lead time when it comes to ordering, saves time this is because its very easy for the customers to make orders and their orders are fulfilled within a very short period of time there is also communication which means the complaints of the customers can easily be handled by the employees of Rem distributors. The above replicates the views of Borkowitz, (1991) who defines customer service level as the ability of a distribution system to satisfy users in terms of time, dependability, communication and convenience.

The second objective was to determine the relationship between Rem distributors and customer service level. According to the date collected most employees and customers admitted that the services offered by Rem distributors are good and this is because of the satisfaction derived from their services such as warehousing where the customer does not need to buy the products and store them since the distribution center stores the products on behalf of the customer, the customer also doesn't have to incur transport costs since the distribution centre does the delivery on behalf of the customer.

According to the findings, the researcher identified that the mode of transport used for distribution by Rem distributors included lorries, canters, trucks, modified motorcycle carriers and small vans. With this the researcher identified that the mode of transport mostly used are the small vans. Many respondents admitted that the means of distribution serve the customers well—they also admitted that the services offered by Rem distributors are good and according to the rating of the services offered, customer service was rated first as the best followed by warehousing—, transportation, order processing and third it was packaging and material handling and inventory control his implies that most services are offered to the optimal expectations of the customers.

#### 5.2 CONCLUSION

Basing on the findings, the researcher concluded that Rem distributors carry out physical distribution this is because they offer services such as warehousing, transportation, order processing, inventory control, customer service, packaging and material handling. These services directly affect customer satisfaction .The relationship between Rem distributors exists in terms of convenience, dependability timely delivery and effective communication. The service that is efficiently offered is customer service this means that there is need for the management to put more effort in the other

services to enable them to reach the maximum level. Important to note is that the services offered by Rem distributors are not poor but they are optimal because most customers around Kansanga purchase the products of Rem distributors this is in relation to their competitors' product which is COCA COLA.

#### 5.3 RECOMMENDATIONS

Basing on the findings of the study, the researcher recommends that there is need for improvement in the following areas.

- Warehousing, there is need for the management to put in place more warehouses to be able to serve their customers efficiently. Expansion plans should be in place since the area where the warehouse is located limits expansion and does not provide enough parking space for the trucks, vans, canters and Lorries.
- Material handling and packaging, improvements are needed especially on how materials are handled during the loading and offloading of the goods in order to avoid losses which are usually as a result of poor material handling. The management should also provide convenient packaging material that is plastic especially for slow moving products such as seven up, to enable the customers of that brand to use it conveniently.
- Transportation, there is need for diversity when it comes to the mode of transport in terms of variety, the modes of transport that are dominant include lorries, canters, modified motorcycle carriers and small vans. The management can also adopt the use of bicycles this will enable them to be able to reach those customers that cannot be accessed due to poor roads.
- Inventory control, the management should try to adopt the use of barcodes especially when it comes to slow moving brands this will help to avoid stock out of such products.

## 5.4 Areas for Further Research

- i. The relationship between physical distribution and customer service
- ii. The importance of physical distribution in supply chain management
- iii. The significance of physical distribution on customer satisfaction
- iv. The impact of transportation in a physical distribution systems

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#### APPENDICES

#### APPENDIX I

### QUESTIONNAIRE

As a student pursuing a bachelor degree in supplies and procurement management. I'm carrying out a research on the topic "The effect of physical distribution on customer service level ".The research is conducted in the fulfillment for the award of bachelor degree in supplies and procurement management. I hereby request for your contribution to this study to enable my successful completion of this course. Your response will be confidential and strictly for academic purposes.

#### SECTION A

#### PERSONAL DATA

1. AGE (years)	18-24	
	25-45	
	31-37	
	38 and above	

Please tick in the box

2. GENDER		
(a)Male	(b) Female	

3. Level o	f education				
Primary	level	Secondary level		Certificate level	
Diploma	a level	Degree level		Other	
4. Workin	g Experience (Y	ears)			
	1 - 2				
	2 - 5				
	6 - 9				
	10 and above				
		SECTION B			
5. What are products?	e the modes of ti	ansport do you us	e for distri	bution/ delivery	of your
	Lorries				
	Canters				
	Small Vans				
	Motor Cycles ar	nd Modified Carrier	s		

6.	a) Do the means of distribution serve the customer well?
	Yes No
	b) If yes what means would you like to use?
7.	a) Does distribution affect customer service level?
	Yes No
	b) If yes in which way? (Explain)
8.	Which distribution service is best offered by Rem distributors?
	What would you recommend for distribution to improve on customer
ser	vice?

## THANK YOU FOR YOUR RESPONSE!

## INTERVIEW QUESTION

1.	What level of customer service are you providing?
2.	How do handle orders?
3.	How much inventory do you hold?
4.	Do you have warehouses to serve your customers?
	What are the challenges of physical distribution in your effort to serve
	you customers?

### APPENDIX II

## TIME SCHEDULE

The study will pass through different activities, which will include those that are to be carried out in the process of the study as illustrated below

ACTIVITY	WEEKS
Topic selection and statement of the problem	
Meeting the supervisor to approve the statement	1
and topic	
Drafting proposal	1
Literature review	1
Meeting supervisor for editing and analyzing	2
data	
Final proposal	
Questionnaire design	1
Field survey	2
Meeting supervisor	2
Data processing	1
Meeting supervisor	1
Final report	2
Submitting a report	1
Total number of weeks	15 weeks

## APPENDIX III

## THE BUDGET

The researcher estimates to incur the following expenses in carrying out the research study as illustrated in the table below.

ITEM	AMOUNT
A	
Stationary	10,000
Typing and printing	40,000
Photocopying	10,000
Binding of the proposal	10,000
Browsing	20,000
SUB TOTAL	90,000
В	
Meld Work	50,000
Miscellaneous	30,000
SUB TOTAL	80,000
С	
Data analysis	30,000
Data entry	10,000
Report production	40,000
Binding of the report	30,000
SUB TOTAL	110,000
GRAND TOTAL	280,000