



ASSESSMENT OF WAREHOUSE PRACTICES: THE CASE OF OMEDAD PLC.

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OMEDAD PLC.**

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DECLARATION

I, the undersigned, declare that this thesis entitled 'Assessment of Warehouse Practices: The Case of Omedad Plc. ' is my original work and that I have not previously in its entirety or in part submitted at any university for a degree and all the sources of materials used for the thesis have been duly acknowledged.

Signature: _____

Abstract

The study aimed to assess the warehouse practice of Omedad plc from the perspective of the five major warehouse practices: receiving, put away, storage, order picking and shipping. The study used descriptive research design and applied both quantitative and qualitative research approach. The target population for the purpose of the study is small in number hence, the study applied census survey. Both primary and secondary data sources were used to attain the objectives of the study. Primary data were collected through semi structured questionnaires, unstructured interview and physical observation. The reason for using these three means of data collection is to triangulate the data obtained from each sources. To analyze the collected data frequency table, percentage, mean and standard deviation were used with application of IBM SPSS statistics 23. The result of the study indicates that put away activity in the warehouse is practiced below moderate which needs more emphasis; the receiving and shipping activity are practiced to moderate extent whereas storage and order picking are practiced to moderate and greater extent. The warehouse practice of the company has a gap in storage space utilization, material handling equipments and absence of computerized warehouse management system. The researcher recommends purchasing warehouse good handling equipments for loading and unloading items, utilizing storage space properly by eliminating unusable items and applying warehouse management system.

Key words: Warehouse Activity, Warehouse Management System, Warehouse Practice

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Acronyms

IT	Information Technology
KPI	Key Performance Indicator
PFSA	Pharmaceuticals Fund and Supply Agency
RFID	Radio Frequency Identification
SPSS	Statistical Package for Social Science
WMS	Warehouse Management System

CHAPTER ONE

INTRODUCTION

This chapter presents a brief background on the assessment of warehouse practices of Omedad plc. it encompasses statement of the problem, research question and objectives, scope and significance of the study. Limitation and terms of definition as well is presented in this chapter.

1.1 Background of the Study

Warehousing played a role in the storage and exchange of goods for centuries. Long-term storage to provide product for future consumption has been a utility of warehousing both past and present (Keller, Keller and Council, 2014). According to Richards (2018) warehousing makes up around 20 to 30 percent of a company's total logistics costs with inventory carrying costs at a further 20 to 25 percent. Warehouses apparently form an important part of a firm's logistics system. They are commonly used for storing or buffering products i.e. raw materials, goods-in-process, finished products at and between points of origin and points of consumption. The term 'warehouse' is used if the main function is buffering and storage (De Koster, Le-Duc and Roodbergen, 2007). It provides information to management on the status, condition, and disposition of items being stored to create time and place utility for the firm's customers (Min, 2015).

Warehousing has become a critical activity in the supply chain to outperform competitors on customer service, lead-times, and costs (More, 2016). In many cases today, warehouses aren't used to store things, but rather to receive bulk shipments, break them down, repackage various items into outgoing orders and then distribute these orders to a manufacturing location or retail centre (Wisner, Tan and Leong, 2012). Warehouse management is all about the careful use of space and time that is, labor or person-hours. Both space and time are expensive and so one would like to use as little of each as possible in delivering product to customers (Bartholdi and Hackman, 2014)

The flow of items through the warehouse can be divided in several different processes: the receiving process is the first process encountered by an arriving item. Products arrive by truck or internal transport, at this step the products may be checked or transformed; in the storage process items are placed in storage locations. The storage area may consist of two parts: the reserve area, where products are stored in the most economical way or bulk storage area and the forward area where products are stored for easy retrieval by an order picker; order picking refers to the retrieval of items from their storage locations and can be performed manually or partly automated. In succession, these items may be transported to the sorting and/ or grouping of items destined for the same customer. At the shipping area, orders are checked, packed and eventually loaded in trucks, trains or any other carrier (Rouwenhorst et al., 2000).

Many firms are automating their basic warehousing functions to achieve the increase in throughput rates or inventory turns required for their warehousing operations to be cost effective (More, 2016). A Warehouse Management System is a complex software package that helps manage inventory, storage locations, and the workforce, to ensure that customer orders are picked quickly, packed, and shipped. A typical WMS knows about every item in the warehouse, its physical dimensions, how it is packed by the vendor, all the storage locations in the warehouse, and their addresses and physical dimensions (Bartholdi and Hackman, 2014). Resources, such as space, labor, and equipment, need to be allocated among the different warehouse functions, and each function needs to be carefully implemented, operated, and coordinated in order to achieve system requirements in terms of capacity, throughput, and service at the minimum resource cost (Gu, Goetschalckx and McGinnis, 2007). Accordingly, with the development of IT technologies, most of warehousing operations turn into being connected to some software. Utilization of computer systems is beneficial, since it makes tracking easier and mistakes are simple avoided (Komarova, 2016).

1.2 Background of the Organization

Omedad Plc. was established in 1992 by five Ethiopian entrepreneurs. It was incorporated with the business objective of serving offices, homes, hotels, hospitals, and educational institutions. Most of the company's products deal with either electronics or electromechanical goods. The company's products are mainly catering equipment, consumer electronics, domestic appliances, fiscal cash registers, furniture – metal products and office machines. The company has 22 outlets in the capital and major commercial centres all over Ethiopia. The company has created a job opportunity for more than 600 employees. The company's main warehouse is located in Dukem.

1.3 Statement of the Problem

Warehouse plays a significant part in the supply chain. Delivering the right product in the right quantity relies on the warehouse picking and dispatching products accurately. Delivering to the right customer at the right place, on time, requires the product to be labeled correctly and loaded onto the right vehicle with sufficient time to meet the delivery deadline (Richards, 2014). These warehouses store products ready for sale, on behalf of manufacturers, wholesalers and retailers. They provide a buffer or safety stock for companies, enabling them to build up stock in preparation for new product launches, expected increase in demand and to deal with seasonality (Richards, 2018).

According to Keller et al. (2014) firms are constantly seeking ways to reduce the lead-time from customer order placement to customer receipt of product and all while reducing levels of inventory in the system. Warehouses must contribute by instituting processes that are flexible and responsive to individual client needs. However, warehousing is costly in terms of human resources and of the facilities and equipment's required, and its performance will affect directly the overall supply chain performance. Inadequate design or managing of warehouse systems will jeopardize the achievement of required customer service levels and the maintenance of stock integrity, and result in unnecessarily high costs (More, 2016). Furthermore the warehouse has to ensure the product leaves the warehouse clean and without damage (Richards, 2014)

The major problem observed in the warehouse and sub store of the company is mainly the use of manual warehouse operation systems. Suvittawat (2015) and other researchers confirmed the need for the application of computer programs to help support effective warehouse management and to improve storage equipment inside the warehouse such as console shelving and pallets. More importantly, the implementation of warehouse management system ensures company's competitiveness, effective management and reduction of costs (Au Yong, 2009). The right WMS can maximize labor productivity, increase space and equipment utilization, improve communication and increase accuracy. Thus, the introduction of new technologies into warehouse operation not only improves company's competitiveness in a challenging market but can also be instrumental in meeting ever increasing customer demands (Richards, 2018).

Another problem observed in the company's warehouse through the pilot study is the misuse of the warehouse space. However, numerous researchers including Komarova (2016) stressed the need for optimal storage activities to reduce the facility operating costs and achieve better efficiency by smart area, equipment, and staff utilization. Warehouse optimization is the selection of the best location within the warehouse for the storage and retrieval of products to minimize time and movement (Bowersox, Closs and Cooper, 2002). By employing mechanical and automated handling technologies, floor space between storage locations can be minimized and the locations themselves are able to occupy multiple levels. Moreover, automated materials handling improves and standardizes warehouse performance by minimizing human interventions (Mangan, Lalwani, Butcher, and Javadpour, 2012).

1.4 Research Questions

- ✚ How does Omedad plc practice receiving activities?
- ✚ How are the put away activities carried out in Omedad plc?
- ✚ To what extent storage activity is practiced in Omedad plc?
- ✚ How does order picking activity carried out in Omedad plc?
- ✚ Do the shipping activities is well-practiced in Omedad plc?

1.5 Research Objectives

1.5.1 General Objective

The general objective of this study is to assess the current warehouse practice of Omedad plc.

1.5.2 Specific Objectives

The specific objectives of the study are:

- ✚ To assess the receiving activity practices in Omedad plc.
- ✚ To examine the put away activity practice in Omedad plc.
- ✚ To assess the storage activity practice in Omedad plc.
- ✚ To describe the order picking activity in Omedad plc.
- ✚ To analyze the shipping activities in the Omedad plc.

1.6 Significance of the Study

The significance of any research paper is finding solution for a problem, providing additional knowledge and serving as material for future research in similar studies. Accordingly, this study will serve as a reference material for others stakeholders and academicians working on the same or related topics areas. In addition, the research will be of beneficial for the company as it investigates the major obstacles associated the current warehouse practice and came up with appropriate solutions which reduce costs thereby enhances profitability. It can be also applicable in other similar company's facing similar challenges.

1.7 Scope of the Study

The research study is proposed to assess the warehouse practice in case of Omedad Plc. Although, warehouse practice involves numerous activities, because of the limitation of time, finance and other constraints, conceptually the scope of the study is delimited to the main warehouse activities which are, receiving, put away, storage, order picking and shipping. The company has one main warehouse which is located in Dukem, and have sub store in various parts of Addis Ababa.

Due to the limitation of time, finance and other constraints, to make the study manageable geographically the scope of the study is limited to the main warehouse and other four sub stores located in Addis Ababa. The research applied descriptive type of research design which employs both primary and secondary data source. The data were gathered from the warehouse employees and other departments which have direct relation to the study area.

1.8 Limitation of the Study

The proposed study is aimed at assessing the warehouse practice of Omedad plc and the result of the study does not represent the viewpoint of other company's warehouse practice. Even though, the company has many sub stores in the capital city and in major commercial centres of Ethiopia the study is limited to the main warehouse and other four sub stores of the company, due to the constraints of finance, time, accessibility and experience of the researcher. Accessing sufficient literature material related to the subject matter and the respondents taking long time to respond is the other limitation of the study.

1.9 Definition of Terms

Warehouse: a place which is used for storing or buffering products i.e. raw materials, goods-in-process, finished products at and between points of origin and points of consumption (De Koster et al., 2007)

Warehouse Management System: is a database driven computer application, to improve the efficiency of the warehouse by directing cutaways and to maintain accurate inventory by recording warehouse transactions (More, 2016).

Warehouse Performance Measurement: is a method to measure activity performance, program or service which is provided by a warehouse (Kusrini, Novendri and Helia, 2018).

1.10 Organization of the Study

The research is organized into five chapters with sub sections. Chapter one of the study include introduction section with brief explanation about warehouse and background of organization alongside with research question, objective, significance, scope, limitation of the study and definition of terms. Chapter two describes in detail theoretical concept of warehouse practice along with an empirical review and conceptual framework of the study. The third chapter briefly discusses the methodology used to conduct the research, research approach and design, data collection and analysis, reliability and validity, and ethical consideration. Chapter four of the research encompasses the finding of the study, interpretation and discussion. The last part is chapter five which present the summary of findings along with conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW

In this chapter, reviewing literature related to warehouse practice is the main focus. It encompasses both theoretical and empirical studies conducted by other researchers. This chapter will also elaborate essential concepts related to the subject matter.

2.1 The Concept of Warehouse

Now a day's firms are moving warehouses closer to suppliers, closer to customers, or to more centralized locations, depending on the storage objectives and customer service requirements (Wisner et al., 2012). A warehouse is an important part of a firm's logistics system that is used to store products e.g., raw materials, parts/components, goods-in-process, finished goods at and between the point of origin and the point of consumption (Min, 2015). In the past, warehouses were seen mainly as stockholding points, attempting to match supply to demand and acting as a buffer between raw material and component suppliers and the manufacturers and between the manufacturers and the wholesalers and retailers and/or consumers. Stock visibility along the supply chain was limited and information flow was very slow, resulting in companies holding more stock than necessary (Richards, 2018).

Warehouses are an essential component of any supply chain. Their major roles include: buffering the material flow along the supply chain to accommodate variability caused by factors such as product seasonality and/or batching in production and transportation; consolidation of products from various suppliers for combined delivery to customers and value-added-processing such as kitting, pricing, labeling, and product customization (Gu et al., 2007). According to Bowersox et al. (2002) warehouse service can provide benefits through enhanced revenue generation. When a warehouse is primarily justified on service, the supporting rationale is that sales can be increased, in part, by such logistical performance.

Specialized warehouse can be distinguished into two: the distribution warehouse and the production warehouse. Distribution warehouse function is to store products and to fulfill external customer orders typically composed of a large number of order lines where each order line specifies a quantity of one particular product. The number of different products in a distribution warehouse may be large, while the quantities per order line may be small, which often results in a complex and relatively costly order picking process. The second one is production warehouse; its function is to store raw materials, work-in-process and finished products, associated with a manufacturing and/or assembly process. Raw materials and finished products may be stored for long periods. Storage of goods for long periods must be cost efficient and is usually done in large quantities in an inexpensive storage system, such as a pallet rack (Rouwenhorst et al., 2000).

In a particular warehouse customer value can be added to a product by improving its quality during storage e.g. maturing whiskey, wine, cheese or cured meats, by improving the service associated with it e.g. delivery information availability or specialist packaging, by reducing its costs e.g. reduced packaging or reduced administration costs or by reducing its lead time e.g. cross docking. Warehousing operations can achieve each of these objectives in various ways, such as: Creating bulk consignments, breaking bulk consignments, combining freight Smoothing supply to meet demand (Mangan et al., 2012). Generally the basic processes of warehouse management are receiving goods into the warehouse, process the order, replenish, include some value adding service and then dispatch the product. Advances in warehousing tend to relate to the increased use of technology and automation improved performance measurement and the effective management of resources (Richards, 2014).

2.1.1 Role of Warehouse

Warehousing role in the supply chain has become more critical and at an escalating rate during the past two decades. The main role of warehousing includes; protection against uncertainty in demand and lead time. Warehouse inventory is compiled in anticipation of forecasted future demand. Warehousing has a role in supporting economies of purchasing; bulk purchase pricing may provide cost-savings per item that when purchased in great enough quantity it more than offsets the cost of storing and maintaining (Keller et al. 2014).

Another role of warehouse in the supply chain is value adding service, a role of warehouse in value-added services encompass a variety of product customization activities, including packaging, labelling, kitting i.e., light assembly of component parts, marking, pricing, repair, shrink wrap bundle packing, sequencing i.e., organizing the items in a load, and return processing. In other words, today's warehouses have become "flow-through" staging points where a majority of products move through warehouses without being ever stored and go through some transformation process for increased customization (Min, 2015). Warehouse can also increase the value added by refining products packaging to better meet the needs of customers down the channel. The other role is consolidation and break-bulk products to reduce transportation cost by using warehouse capability to increase shipment economies of scale (Bowersox et al., 2002).

Warehouse has a role in plant supporting also, warehouses add value in the supply chain by supporting long manufacturing runs to gain economies of production and reduce changeover needs (Keller et al. 2014). Distribution is one of the roles of warehouse in supply chain, products will be accumulated and consolidate from various points of manufacture within a single firm or form several firms for combined shipment to common customers. Holding inventory to balance and buffer the variation between production schedules and demand will be the role of warehouse in this case. In such case warehouse usually be located near the point of manufacture and is often characterized by the flow of full pallets in and full pallets outs assuming that product size volume warrant pallet sized loads (Frazelle, 2002). Warehouse holds finished products which are ready for sale, on behalf of manufacturers, wholesalers and retailers, enabling them to build up stock in preparation for new product launches, expected increases in demand and to deal with seasonality (Richards, 2014).

2.1.2 Need for Warehousing

The term 'warehouse' is used if the main function is buffering and storage. If additionally distribution is a main function, the term 'distribution centre' is commonly used, whereas 'transshipment', 'cross-dock', or 'platform' centre are often used if storage hardly plays a role.

They are commonly used for storing or buffering products i.e. raw materials, goods-in-process, finished products at and between points of origin and points of consumption (De Koster et al., 2007).

According to Singh (2009), the need for warehouse is presented as follows;

- i.** Seasonal production: some products are produced during particular period of the year, like agricultural goods are harvested during a particular season, but the requirement of consumption takes place all over the year. Therefore, it requires proper storage or warehousing for these goods, so that supply should be ensured through the year.
- ii.** Bulk production: manufacturing generally takes place throughout the year not only to meet the existing demands but also for the future demands. In order to enjoy the benefits of economies of scale, manufactures produce goods in bulk which is more economical.
- iii.** Non-stop production: known as continuous or regular production of goods require the adequate supply of raw materials takes place all over the year. Therefore, it requires proper storage or warehousing for these goods, so that supply should be ensured throughout the year.
- iv.** Lifeline for small traders: due to rising costs of land and financial limitations, small traders cannot afford to have their private warehouse. Public or government warehouses facilitate them to store goods at affordable rates. In absence of warehouses, it will be difficult for small traders to survive in cut-throat competition.
- v.** Assisting in continuous production: warehouse facilitate the manufacturers to produce goods throughout the year without much attention of raw material shortage. Warehouse assist them to provide agricultural (seasonal) and industrial goods all over the year.
- vi.** Location advantage: most of the warehouse is located at a convenient place near railways, highways, seaports and airports that facilitate smooth movements of goods. Further, convenient location reduces the distribution cost to great extent.
- vii.** Employment generation: warehouses located in or near industrial areas are so big that can store goods of large number of businessmen at a time. Further, besides storage, warehouse perform several functions like procurement sorting, dividing, marketing, preparing for shipment handling, inventory control, order processing, financing, transportation and branding resulting in employment generation.

viii. Financing: when businessmen store goods in the warehouse upon certain formalities, they get ‘deposit receipt’, which acts as a proof about the deposit of the goods. Warehouse also issues a document in the name of owner against storage of goods, which is known as warehouse-keeper’s warrant. This document can be transferred by simple endorsement and delivery. Businessmen on account of these documents may get financial aids/loans from banks, private tenders on financial companies. In some cases, warehouses also provide finance to the businessmen on keeping goods as collateral security.

ix. Risk reduction: warehouse owners make certain that the good stored in their warehouse are well protected, preserved and monitored. In order to keep proper information about good details, to save goods from theft and pilferage, warehouses employ employees and security staff.

2.1.3 Types of Warehouse

I. Private Warehouse

A private warehouse is typically operated by the firm owning the product. The building, however, may be owned or leased. The decision concerning ownership or lease is essentially financial. The major benefits of private warehousing are control, flexibility, cost, and a range of intangibles. Private warehouses offer substantial control since management has authority to prioritize activities (Bowersox et al., 2002). Private warehousing can enable the firm to better utilize its workforce and expertise in terms of transportation, warehousing and distribution center activities. Firms can decide what to store, what to process, what types of security to provide and the types of equipment to use, among other operational aspects of warehouses. However, owning warehouse can also represent a significant financial risk and loss of flexibility to the firm. The costs to build, equip and then operate a warehouse can be very high and most small to moderate sized firms simply cannot afford private warehouses. Another problem insurance companies, in many cases, do not like insuring goods in private warehouses (Wisner et al., 2012).

II. Public Warehouse

Is owned and operated by a firm engaged in the business of offering space and diverse warehousing services on a “for hire, as needed” basis (Min, 2015).

As the name implies, public warehouses are for profit organizations that contract or lease a wide range of light manufacturing, warehousing and distribution services to other companies. Public warehouses provide a number of specialized services that firms can use to create customized services for various shipments and goods (Wisner et al., 2012). Public warehouses are used extensively in logistical systems. Almost any combination of services can be arranged on a for hire basis for either short or long term (Bowersox et al., 2002). To start such warehouses a license from the government is required. The government also regulates the functions and operations of these warehouses. Mostly these warehouses are used by manufacturers, wholesalers, exporters, importers, government agencies, etc. (More, 2016).

Public warehouses provide short term flexibility and investment cost saving. Cost to use public warehouse can also be very small if the capacity requirements are minimal. However, lack of control provided to the goods owners, communication problems with warehouse personnel, lack of specialized services and lack of care and security that might be given to products are the limitation of public warehouse (Wisner et al., 2012).

III. Government Warehouses

These warehouses are owned, managed and controlled by central or state governments or public corporations or local authorities. Both government and private enterprises may use these warehouses to store their goods (More, 2016).

IV. Contract

Contract warehouse combines characteristics of both private and public operations. A long-term contractual relationship will typically result in lower total cost than a public warehouse. At the same time, contract warehouse operations can provide benefits of expertise, flexibility, scalability, and economies of scale by sharing management, labor, equipment, and information resources with multiple clients. Contract warehouses typically offer a range of logistical services such as transportation management, inventory control, order processing, customer service, and planning, building, and operating a new distribution center represents a substantial investment for any organization (Bowersox et al., 2002).

A contract warehouse provides a fixed amount of space and customized supplemental services exclusively for a customer for an extended period of time e.g., six months or longer (Min, 2015).

2.1.4 Warehouse Activities

Warehouse operations have a fundamental set of activities in common. The following list includes the activities found in most warehouses which are receiving, put away, storage, order picking and shipping with brief explanation.

- **Receiving:** may begin with advance notification of the arrival of goods. This allows the warehouse to schedule receipt and unloading to coordinate efficiently with other activities within the warehouse. Once the product has arrived, it is unloaded and possibly staged for put away. It is likely to be scanned to register its arrival so that ownership is assumed, payments dispatched, and so that it is known to be available to fulfill customer demand. Product will be inspected and any exceptions noted, such as damage, incorrect counts, wrong descriptions and so on (Bartholdi and Hackman, 2014). Receiving, goods-in or in-handling is a crucial process within the warehouse. Ensuring that the correct product has been received in the right quantity and in the right condition at the right time is one of the mainstays of the warehouse operation (Richards, 2018). A primary benefit of receiving unitized loads is the ability to turn inbound transportation equipment more rapidly (Bowersox et al., 2002).
- **Put away:** is the act of placing merchandise in storage. It includes the material handling, location verification, and product placement (Frazelle, 2002). Before product can be put away, an appropriate storage location must be determined. This is very important because where products are stored determines to a large extent how quickly and at what cost you later retrieve it for a customer. It must be known at all times what storage locations are available, how large they are, how much weight they can bear, and so on. When product is put away, the storage location should also be scanned to record where the product has been placed. This information will subsequently be used to construct efficient pick-lists to guide the order-pickers in retrieving the product for customers (Bartholdi and Hackman, 2014).

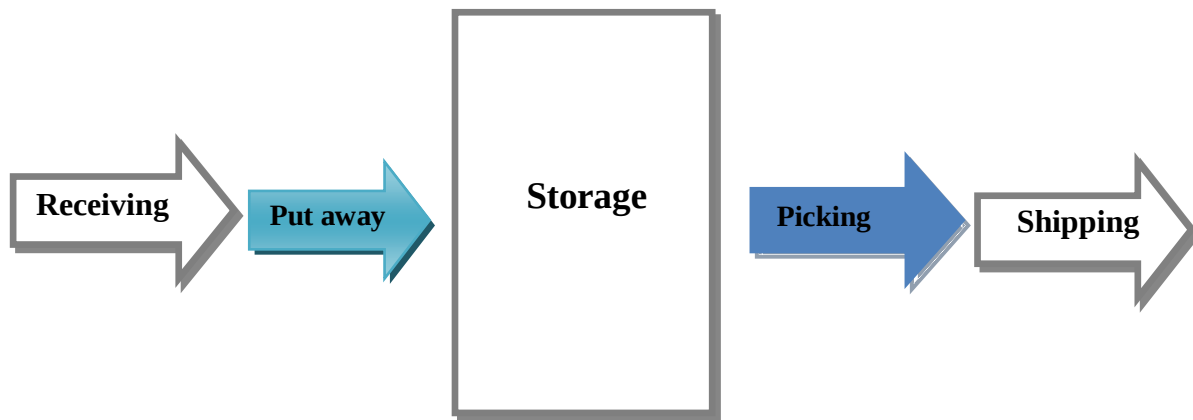


Figure 2.1 Warehouse Processes (Bartholdi and Hackman, 2014).

- **Storage:** is the physical containment of merchandise while it is awaiting a demand. The storage method depends on the size and quantity of the items in inventory and the handling characteristics of the product or its container (Frazelle, 2002). In the storage process items are placed in storage locations. The storage area may consist of two parts: the reserve area, where products are stored in the most economical way or bulk storage area and the forward area where products are stored for easy retrieval by an order picker. Products in the forward area are often stored in smaller amounts in easily to access storage modules (Gu et al., 2007). Storage deals with the organization of goods held in the warehouse in order to achieve high space utilization and facilitate efficient material handling. Goods in storage can be organized into different departments. The drivers of department organization may be physical characteristics of the goods e.g., pallet storage vs. case storage; management considerations such as a dedicated storage area for a specific customer; or material handling considerations such as a forward area for fast picking (Gu et al., 2007).
- **Order picking:** is the major activity in most warehouses which involves the process of obtaining a right amount of the right products for a set of customer orders. Between the time an order is released to the warehouse and the time it takes to reach its destination, there is ample opportunity for errors in both accuracy and completeness, not to mention time lost (De Koster et al., 2007).

According to Bartholdi and Hackman (2014) order picking is the most important process in most warehouses because it consumes the most labor and it determines the level of service experienced by the downstream customers. Order picking consists of roughly three phases: the first one is travel to the neighbourhood of the storage location. This is potentially the most work and it is non-value-adding. Second local search, say within a bay to find the exact location wanted. This can be significant when picking small parts, such as screws or other fasteners, or contact lenses. It is non value adding, but it is essential to avoid picking the wrong sku. Third reach, grab, and put. This is a value-added activity; and it is the warehouse activity most resistant to automation.

- **Shipping:** consists of order verification and transportation equipment loading. Similar to receiving, firms may use conveyors or unit load materials handling equipment such as lift trucks to move products from the staging area into the transportation vehicle. Shipment content verification is typically required when product changes ownership. Verification may be limited to a simple carton count or a piece-by-piece check for proper brand, size, and in some cases serial number to assure shipment accuracy (Bowersox et al., 2002). Shipments includes the following according to Frazelle (2002) checking orders for completeness, packaging merchandise in an appropriate shipping container, preparing shipping documents as well as the packing list, address label, and bill of lading, weighing shipments to determine shipping charges, accumulating orders by outbound carrier, loading trucks in many instances, this is a carrier's responsibility.

2.1.5 Warehouse Layout

It is difficult to generalize warehouse layouts since they are usually customized to accommodate specific handling requirements. Whenever possible, a standard size pallet should be used throughout a warehouse (Bowersox et al., 2002). The warehouse layout will very much depend on the size and shape of the building, access to it, type of equipment utilized and the operation envisaged (Richards, 2018).

Warehousing layout should always support activities. Materials and products must be properly placed to be accessible, so staff can avoid mistakes and delays carrying tasks (Komarova, 2016). In general, the larger the pallet load, the lower the movement cost per pound or package over a given distance. One lift truck operator can move a large load in the same time and with the same effort required to move a smaller load (Bowersox et al., 2002).

Warehouse design must consider product movement characteristics. Three factors to be determined during the design process are; the number of floors to include in the facility, a cube utilization plan, and product flow. The ideal warehouse design is a one-floor building that eliminates the need to move product vertically. The use of vertical handling devices, such as elevators and conveyors, to move product from one floor to the next requires time, energy, and typically creates handling bottlenecks. So, while it is not always possible, particularly in central business districts where land is restricted or expensive, as a general rule warehouses should be designed as one-floor operations to facilitate materials handling (Bowersox et al., 2002). Determining the appropriate product storage locations for potentially thousands of products is the main major challenge for warehouse manager during the new design of warehouse or the refurbishment of existing warehouse. There are many factors which effect on storage assignment such as order picking method, size and lay out of space, materials handling system, product characteristics, demand changes, product turnover rates and space requirements (Chan, 2011).

Types of layout

- ❖ **U- Shaped flow:** the floor space is allocated in such a way that receiving areas are located closer to unloading/loading docks in the front of the warehouse, storage and retrieval areas are reserved in the back of the warehouse, and unitizing/shipping areas are located near the loading/unloading docks in the same side of the warehouse (Frazelle, 2002). The receiving and dispatch are on the same side of the building thus ensuring high dock utilization and facilitating cross docking. The fastest moving items are closest to the dispatch bay, thus ensuring minimum travel and the opportunity to combine put-away and retrieval. The advantage of U-flow design is that it enables greater utilization of the loading bays but can result in congestion and confusion if both areas are busy at the same time. It also makes security easier and access is via one side of the warehouse only (Richards, 2018).

- ❖ **Through flow:** the warehouse is considered a “flow-through” terminal where receiving docks are located on one side of the warehouse, whereas shipping docks are located on the opposite side of the warehouse, in between the receiving and shipment staging areas, this layout positions sorting, assembly, and temporary inventory holding areas. This layout may be ideal for Just-In-Time operations where the storage of the materials is brief. This layout is more common in the manufacturing sector (Min, 2015). A through-flow warehouse provides a layout where the movement is in straight lines and is more natural. Advantage of through-flow is that, there are no issues with congestion but travel distances are increased. Having doors on both sides of the warehouse requires increased security and access either via two separate external gates or a perimeter road around the outside of the warehouse (Richards, 2018). Warehouse design should facilitate continuous straight product flow through the building. This is true whether the product is moving into storage or is being cross docked. In general, this means that product should be received at one end of a building, stored as necessary in the middle, and shipped from the other end (Bowersox et al., 2002).
- ❖ **L shape flow:** positioning pallet in 90 degree or square, placement. It is widely used because of layout ease. It means that the pallet is positioned perpendicular to the aisle (Bowersox et al., 2002).

2.1.6 Warehousing Cost

Within the warehouse, materials handling is an important activity. Products must be received, moved, stored, sorted, and assembled to meet customer order requirements. The direct labor and capital invested in materials handling equipment is a significant element of total logistics cost (Bowersox et al., 2002). In general, the costs typically associated with a warehouse operation are; space costs (includes rent/leasing costs, insurance, telecoms etc.), direct labor costs for fixed and variable (includes wages, personnel insurance, safety wear, welfare, overtime and bonuses), equipments cost (includes running costs, packaging etc), overhead cost (includes salaries, information technology costs, marketing spend), miscellaneous costs (includes communication costs, bank charges, cost of finance, legal and professional fees, audit fees etc.) and other non-wage costs including sickness, maternity and paternity costs, vocational training costs and recruitment costs plus any benefits in kind which might apply (Richards, 2014).

Without understanding and estimating warehousing costs, a company cannot control these costs. Unfortunately, warehousing costs often include some hidden elements that are either invisible or unquantifiable. These hidden costs can include; pilferage loss, damage, security, workers safety, compliance with rules and regulations, and labor management (Min, 2015). Therefore, warehousing cost data should be collected, stored, traced, and updated periodically. To do so more effectively, these cost data should be properly categorized into elements such as real-estate costs, equipment costs, labor costs, administrative expenses, and hidden miscellaneous costs (Min, 2015).

2.1.7 Warehouse Management System

Although companies operating with paper-based systems are able to introduce best practice into the warehouse such as improving warehouse layout and minimizing travel time by having the fastest-selling items closest to dispatch, they can improve even further and become more productive by introducing software technology into the warehouse (Richards, 2018). Nowadays the use of information technology is increasing, because people need faster communication, also storage information and fast data processing. ITs are an important way to achieve these goals. These IT capabilities can be implemented by using integrated warehouse management systems (Simoes Gomes, Cabral Ribeiro and Matos Freire, 2016).

Warehouses have been going through various challenges, supply chains are becoming more integrated and shorter, globalized operation, customers are more demanding and technology changes are occurring rapidly. In order to cope up with these challenges organizations are adopting innovative approaches such as warehouse management system (A, N. Subramanya and M. Rangaswamy, 2012). A warehouse management system (WMS) is a database driven computer application, to improve the efficiency of the warehouse by directing cutaways and to maintain accurate inventory by recording warehouse transactions (Richards, 2018). WMS essentially controls the flow of material, and keeps statistics such as work requirements, labor productivity and equipment utilization. Many of the best strategies for efficiency cannot be implemented without support from WMS (Hackman et al., 2001). It makes detecting and control of stock possible, since employees always have real time information after every performed activity like transportation picking or put away (Komarova, 2016).

Timely and accurate information about products, resources and processes are essential to operationalize a planning and control structure that effectively and efficiently achieve high performance of warehousing operations required in today's marketplace (Faber, Koster & Velde, 2002). According to Au Yong (2009), warehouse management system is designed to introduce improvement into every aspect of a company's warehouse operations offers an organized approach to manage efficiency. Opportunities that come with widespread implementation of information technologies such as WMS, radio frequency communications and bar coding include real time control of warehouse operation, easy communication with the other parts of the supply chain and high level of automation (Gu et al., 2007).

WMS can also updates the inventory level on a real-time basis and fills customer orders in the distribution environment by enhancing inventory visibility (Min, 2015). The key objectives of the WMS include; eliminating order fulfillment errors by product identification and continuous cycle counting, sending and receiving critical warehouse information with minimum lead time through electronic transmission, maximizing labor productivity by managing and prioritizing tasks, maximizing space utilization by selecting a proper storage location and reducing inventory and handling requirements through continuous flow of information (Min, 2015). The development of automated systems is characterized by the expansion of the relationship individual systems and subsystems that integrate process control, operational management, operational and current planning, administrative and economic activities, design and testing of products (Komarova, 2016).

The objective of a WMS is to provide a set of computerized procedures to handle the receipt of stock and returns into a warehouse facility, model and manage the logical representation of the physical storage facilities, manage the stock within the facility and enable a seamless link to order processing and logistics management in order to pick, pack and ship product out of the facility (Arora, 2009). Some of the benefits of WMS are providing increased productivity, reduction of inventories, better space utilization, reduced errors, support of customer EDI requirements, and value added logistics compliance programs (Faber et al., 2002).

Also according to Richards (2018) the potential benefits of having a WMS in place are real time stock visibility and traceability; accurate stock records; reduction in miss picks; automatic replenishment; reductions in return; accurate reporting; improved responsiveness; remote data visibility; improved customer service; and minimized paperwork. The introduction of new technologies into warehouse operation not only improves company's competitiveness in a challenging market but can also be instrumental in meeting ever increasing customer demands (Richards, 2018). WMS has revolutionized the way to schedule, plan, and fulfill orders, track inventories, and ensure the on-time delivery of the right products (Min, 2015). The right WMS can maximize the productivity of your labor, increase both space and equipment utilization, improve communication and increase accuracy to (Richards, 2018).

2.1.8 Warehouse Performance Measurement

The reason to measure warehouse performance is to ensure customer satisfaction; to ensure that there is a culture of continuous improvement within the operation; to discover potential issue before they become major problems; to train staff in right areas and to reward staff where appropriate (Richards, 2014). A warehouse performance measurement is a method to measure activity performance, program or service which is provided by a warehouse (Kusrini et al., 2018). Unless we measure our performance against our customers' expectations and continually improve on that performance, we are not only in danger of losing our customers but we will also incur additional costs (Richards, 2014).

There are two main ways of evaluating a warehouse and each has strengths and weaknesses. One way is to compare a warehouse with an ideal expressed as a mathematical model. Issues can be clarified by basing analysis on an abstract idealization of the actual warehouse (Bartholdi and Hackman, 2014). Another way to evaluate a warehouse is to compare not with an ideal but with actual warehouses to suggest standards of performance proven to be achievable. But this assumes that other warehouses, possibly including competitors, are willing to share best practices (Bartholdi and Hackman, 2014). Warehouse performance measurement is needed to improve performance of logistics system. In order to improve warehouse performance, it is necessary to identify key performance indicators (Kusrini et al., 2018).

The warehouse performance can be captured in these four categories of indicators; financial, productivity, quality and cycle time. Frazelle (2002) elaborated the four indicators as follows;

- Warehouse Financial Performance: each warehouse should establish a warehouse activity based on costing program, a cost for each warehousing activity i.e. receipt, put away, store, pick, ship, and load must be established. The activity costs become the basis for comparing third-party warehousing proposals, budgeting, measuring improvement, and menu-based pricing for warehousing services.
- Warehouse Productivity Performance: the customer should monitor the productivity and utilization of the key assets in the warehouse - labor, space, material handling systems, and warehouse management systems.
- Warehouse Quality Performance: indicators of quality performance are put away accuracy, inventory accuracy, picking accuracy and shipping accuracy.
- Warehouse Cycle Time Performance: the warehouse track performance in two key areas in cycle time dock-to-stock time and warehouse order cycle time (Frazelle, 2002).

Performance measurement is one of the important keys to smoothly manage supply chain as a whole. In various products and service, performance is often tested in each step from supplier's views down to distributor's views in order to satisfy customer requirements same s take responsibility to society as well (Hirunwat, Khemavuk and Rungreunganun, 2017). The challenge in performance measuring is often put in negative terms because people think of surveillance and pressure to perform, another challenge is to develop KPI can be very challenging and time craving, after measurement system is in place it has to be continuously updated to stay relevant and it's easy that the system keeps expanding and the meaning of having a few powerful KPIs are lost (Axelsson and Frankel, 2014).

2.2 Empirical Review

Research conducted by Teka (2017) at Addis Ababa university entitled "Assessment of warehousing practice: in Finfine furniture factory" the study implies that the attempts made by the company are not as such substantial in protecting accidents in the warehouse at the time of receiving and they are in a poor position regarding inspecting received materials on the reasonable time as well as in minimizing loss by inspecting items properly.

The study also shows that there is moderate put-away activity in the company. The company perform their operation manually that results in errors, delay on performance and also demotivation of the employees. According to More (2016) warehouse complexity affects planning and control structure through the comprehensiveness of the work to be done. In highly complex warehouses, feeding organizational actors with the right type of information and knowledge at the right time is difficult. A complex warehousing operation requires a control structure that has a great deal of information, data, and knowledge about products, processes, customers, and resources readily available.

Another researcher Hailu (2018) conducted research on the assessment of warehouse management in case of pharmaceutical fund and supply agency head office, stated that human resources and materials availabilities are the most important inputs for the efficiency and effectiveness of the warehousing system. The findings reveal that storage areas, non-categorical and random arrangements of goods, spaces for in-house movement and records of the locations of goods in their areas are found to be the main challenges that affect the retrieval speed and effectiveness of the system when goods are issued in the warehouse. Also warehouses space limitations, limited equipments and materials, lack of employees` on the job trainings, lack of safety and personal protective was found to be a hinder for the effectiveness and efficiency of the warehouse.

A research conducted by Berhanu (2017) under the heading of “Effectiveness of Warehouse Management in Save the Children Ethiopia” at Addis Ababa University, the research revealed that the use of both manual and inventory management software cause a disorder in the inventory control and in record keeping activities of the warehouse. Lack of inventory control, material handling as well as recording keeping has contribution for the effectiveness of a warehouse. Alene (2018) under the title “Assessment of Pharmaceuticals Warehousing Practice: The Case of Pharmaceuticals Fund and Supply Agency, Central Level, Ethiopia” at Addis Ababa University indicates that lower effort was exerted in warehousing practices by PFSA. Shortage of material handling equipment, insufficient storage space, lack of designated receiving area and long searching time of customer order are the major challenges in warehousing activity of PFSA. The researcher concluded that the company should categorize storage space into different zones to decrease long search time for customer order.

Suvittawat (2015) in a case study under the title of “Major factors for effective warehouse management” stated effective warehouse management has many dimensions which depend on business types, size of the business or competition environments. Computer program helps support effective warehouse management and improves storage equipment inside warehouse such as console shelving and pallets. A study conducted by Nigus (2018) on information technology utilization on the performance of warehouse operations: the case of pharmaceuticals fund and supply agency revealed the agency is applying information technology to manage warehouse operations however poor utilization of information technology in warehouse operation negatively affected the performance of warehouse operation. The study also revealed the challenges for not properly utilizing the information technology in the agency includes inadequate training and support, electric power interruption, unavailability and slow internet connection, and low level of staff confidence.

Another research on warehouse management system and business performance of regional distribution centre by Au Yong (2009) reveals the company’s competitiveness in strategic level, reduction of cost in operational level and effective management in management level was contributed by implementation on WMS. The study revealed there is a positive impact on companies’ performance on operation management measures. Research done by Komarova (2016) a case study on improvement of warehousing operations states, warehousing is an important piece of the company’s activities and even if the main focus is on production, warehousing operations should not be neglected. More optimal storage activities lead to the reduction of facility operating costs and better efficiency by smart area, equipment, and staff utilization.

The study conducted by Hagos (2019) assessed the warehousing practice and challenges of ethio telecom; reveals poor warehouse practice affects the overall performance of the cooperation. The main contributor for poor practice of warehouse in the cooperation are insufficient availability of equipments to load and unload items, not enough available space to load and unload, insufficient available of packaging materials, improper storage area for the items, longer time taken to perform order picking due to the design of the storage area and low attention is given for training the employees.

2.3 Identified Literature Gap

Numerous researches have been conducted on assessment of warehouse practice in manufacturing sector and service sector. However there is a lack of research conducted on the warehouse practice on import company's, hence this research aimed at bridging the gap by assessing the warehouse practice from the perspective of the five basic warehouse activities; receiving, put away, storage, order picking and shipping. Moreover most researches focused on warehouse are inclined towards assessing the practise without emphasising the role of IT for improving warehouse operation. Therefore this research aids to fill the gap regarding the subject matter.

2.4 Conceptual Framework

This part of the study describe the conceptual framework .The main focus of this study is to assess the warehouse practices. The framework is formulated based on concept identified in the literature review. It consists of the five warehouse practices.

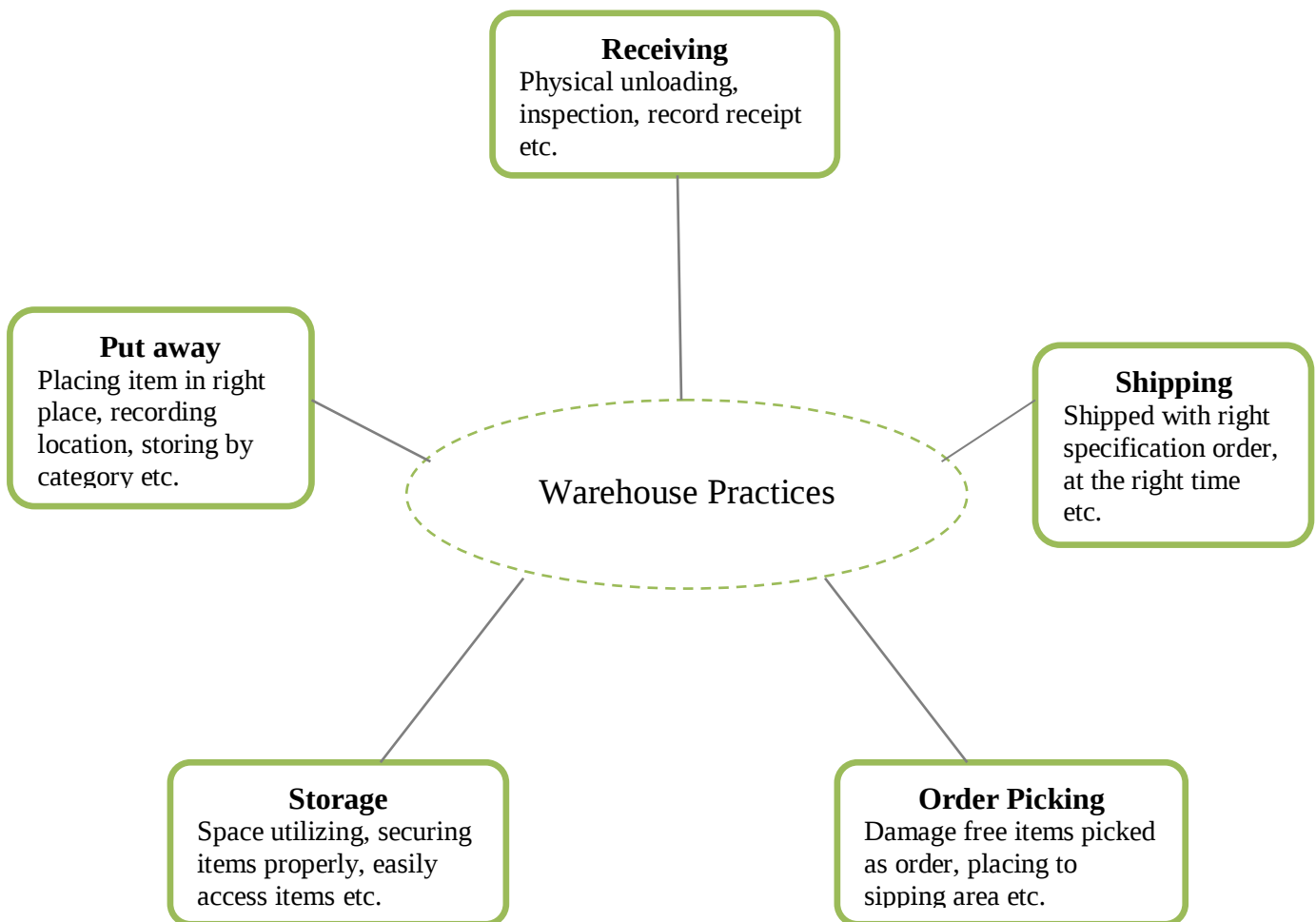


Figure 2.2 Conceptual Framework (Source: Adopted With Modification From Tompkins, 1984)

CHAPTER THREE

METHODOLOGY

The aim of this chapter is to describe the methodology that was applied to achieve the objective of the research. It include the; research approach, research design, population and sampling, data collection, data analysis, reliability and validity as well as ethical consideration.

3.1 Research Approach and Design

3.1.1 Research approach

To attain the objective of the study both quantitative and qualitative research approach were applied. Quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity (Kothari, 2004). According to Creswell (2009) quantitative research is used for testing objective theories by examining the relationship among variables, the variables can be measured by instruments to obtain numbered data that can be analyzed using statistical procedures. On the other hand, discovering the primary motives and desires using interviews are stated under qualitative research (Kothari, 2004). The aim of qualitative analysis according to Adams, Khan, Raeside and White (2007) to detect patterns in the data, to identify deviants and oddities and so on (Creswell, 2009). It is a means of exploring and understanding the meaning individuals ascribe to a social problem. Mixed research is an approach to analysis both qualitative and quantitative forms.

3.1.2 Research Design

Research design is the blueprint for fulfilling research objectives and answering research questions. To be specific, it is a master plan specifying the methods and procedures for collecting and analyzing the needed information (Adams et al., 2007). The purpose of descriptive research is to describe the characteristics or behaviors of a given population in a systematic and accurate fashion (Leary, 2012). In descriptive research design one can only report what has happened or what is happening (Kothari, 2004). For assessing the warehouse practice of Omedad plc the study applied descriptive research design to obtain information.

3.2 Population and Sampling

Population can be characterized as the set of individual persons in which a researcher is primarily interested during the research problem (Isotalo, 2014). The target population for the study is 41 employed under the company in the warehouse section, which includes the warehouse managers, supervisors and all warehouse personnel and others department which has direct relation with warehouse. The number of people in the target population was finite and small in number, due to the above reason the study applied census survey rather than sampling from the population.

3.3 Data Collection

The study applied both primary and secondary data source to achieve the objective of the study. According to Adams et al. (2007) primary sources are those in which we need to conduct a new survey for gathering information at different levels with regard to the inquiry and secondary sources are those which are made available or have been collected for other research purposes. For the purpose of the study, primary data was collected through semi structured questionnaires. The questionnaire encompasses both open and closed ended questions. The items within closed ended question consist of a five point Likert scale i.e. 1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree. Open ended questions are questions in which respondents are asked to describe issues or state their views and feelings on the other hand, closed ended questions restrict the choice available to the respondents but often the respondents find these easy to deal with (Adams et al., 2007).

Primary data was also collected through physical observation to obtain significant primary data from the warehouse. Unstructured interviews were as well conducted. When conducting interviews information is obtained through conversation in which the interviewer asks prearranged questions and records answer, and the respondents answer (Neuman, 2007). The secondary data of this study were collected from related researches, from books, journals, articles, from internet and databases.

3.4 Data Analysis

The study gathered quantitative and qualitative data through semi structured questionnaires, unstructured interviews and observation, the collected quantitative data mainly the questionnaire were analyzed by using descriptive statistics. The statistical analysis tool the study employed were Statistical Package for Social Science (SPSS) software version 23.0, the data were coded, entered and analyzed. Descriptive statistics includes the construction of graphs, charts, and tables, and the calculation of various descriptive measures such as averages, measures of variation, and percentiles (Isotalo, 2014). When analyzing the demography of the respondents, respondent rate and open ended question frequency tables and percentages were applied. While, analyzing the score for warehouse activities mean and standard deviation was used in order to describe the gathered data. The mean value of responses from 1 up to 1.80 implies low practice of warehouse activity; the mean value of 1.81 up to 2.60 indicates below moderate practice of warehouse activity, the score of moderately practiced warehouse activity ranges from 2.61 up to 3.40, the mean score of 3.41 up to 4.20 indicates above moderate warehouse practices and the score of above 4.20 indicates well practiced warehouse activity. After the data analysis the results were presented in tabular form. On the other hand unstructured interview were analyzed qualitatively.

3.5 Data Collection Procedure

The study applied collective administration to accomplish high response rate and to be able to give explanation for questions that can be raised from the respondents. The employees were cooperative when it comes to filling the questionnaire, however some questionnaires were not filled at all and some were questionnaires were returned uncompleted. Due to tight schedule of the employees some questionnaires were collected through drop and pick later method.

3.6 Reliability and Validity

3.6.1 Reliability

Reliability is the ability of the measure to produce the same results under the same conditions. To be valid the instrument must first be reliable (Field, 2009). Reliability implies dependability

or consistency. It suggests at the same thing is repeated or recurs under the identical or very similar conditions (Neuman, 2007). Common used indicator of internal consistence is Cronbach's alpha. Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale (Gliem and Gliem, 2003).

George and Mallery (2003) as cited in (Gliem and Gliem, 2003) provide the following rules of thumb to give details how to interpret Cronbach's alpha: " $\alpha > .9$ - Excellent, $\alpha > .8$ - Good, $\alpha > .7$ - Acceptable, $\alpha > .6$ - Questionable, $\alpha > .5$ - Poor, and $\alpha < .5$ - Unacceptable"

Accordingly, as indicated in the below table 3.1 all Cronbach's alpha coefficient are above 0.7 which indicates the internal consistency and good reliability of the instruments.

Table 3.1 Reliability Statistics

Variable	Cronbach's Alpha	Number of Items
Receiving	0.705	6
Put away	0.738	5
Storage	0.829s	6
Order picking	0.744	5
Shipping	0.853	4

Source: Survey Result, 2020

3.6.2 Validity

According to (Field, 2009), validity refers to whether an instrument measures what it was designed to measure. Validity suggests truthfulness, refers to the match between a construct or the way a researcher conceptualize the idea in a conceptual definition (Neuman, 2007). One way to try to ensure that measurement error is kept to a minimum is to determine properties of the measure that give us confidence that it is doing its job properly (Field, 2009). To attain the validity of the research, the instrument used (questionnaires) were derived from related literatures and previously conducted study, Alene (2018), Teka (2017), Hailu (2018).

3.7 Ethical Consideration

Social researcher confronts many ethical dilemmas and must decide how to act. They have a moral and professional obligation to be ethical even if research participants are unaware of or unconcerned about ethics (Neuman, 2007). The researcher obtained support and clearance letter from Addis Ababa University School of Commerce. Accordingly, respondent's willingness was ensured when distributed the questionnaires as well as the interviews. The researcher clarified about the purpose of the research for the respondents. Respondent's confidentiality was conserved by maintaining the complete data confidential, only applying it for academic purpose. Leary (2012) stated confidentiality is the data that participants provide may be used only for purposes of the research and may not be revealed to other.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

This chapter analysis and discuss the finding of the research that are obtained through questionnaires, interview and observation that covered different dimension of warehouse activity from the organization. The questionnaires were distributed to the employees who are working in the warehouse and also to some other department employees who are knowledgeable to warehouse activity. The collected data were analyzed using qualitatively and quantitatively approach.

4.1 Response Rate

The questionnaires were distributed to the organization warehouse employees and for some other department employees. Total number of 41 questionnaires was distributed. From the total number 3 questionnaires were not returned and 5 questionnaires were incomplete. Total usable questionnaires were 33.

Table 4.1 Respondent Rate

Population	Number	Percent
Number of questionnaire distributed	41	100%
Returned questionnaires	38	92.2%
Incomplete questionnaires	5	12.1%
Total	33	80.4%

Source: Survey Result, 2020

4.2 Respondent's Demographic Information

The demographic profile of the respondent's age, sex, educational qualification, job position and year of service in the organization are included.

Table 4.2 Respondent's Demography Information

Characteristics	Category	Frequency	Percent
Age	18-25 years	5	15.2
	26-35 years	15	45.5
	36-45 years	12	36.4
	Above 45 years	1	3.0
	Total	33	100.0
Sex	Male	21	63.6
	Female	12	36.4
	Total	33	100.0
Educational Qualification	Below college diploma	6	18.2
	College diploma	23	69.7
	First degree (BSc, BA)	4	12.1
	Second degree (MSc, MA)	-	-
	PHD and above	-	-
	Total	33	100.0
Job position	Non-managerial	26	78.8
	Managerial	7	21.2
	Total	33	100.0
Year of service in the organization	Below 1 year	2	6.1
	1 to 2 year	8	24.2
	2 to 5 year	12	36.4
	Above 5 year	11	33.3
	Total	33	100.0

Source: Survey Result, 2020

4.2.1 Age of the Respondent's

Majority of the respondent's 45.5% were aged between 26 – 35 years, followed by 36 – 45 years which is 36.4%. 15.2% were aged between 18 – 25 years and only 3% of the respondents are above 45 years. There study showed that majority of employees in the organization is between 26 – 35 years.

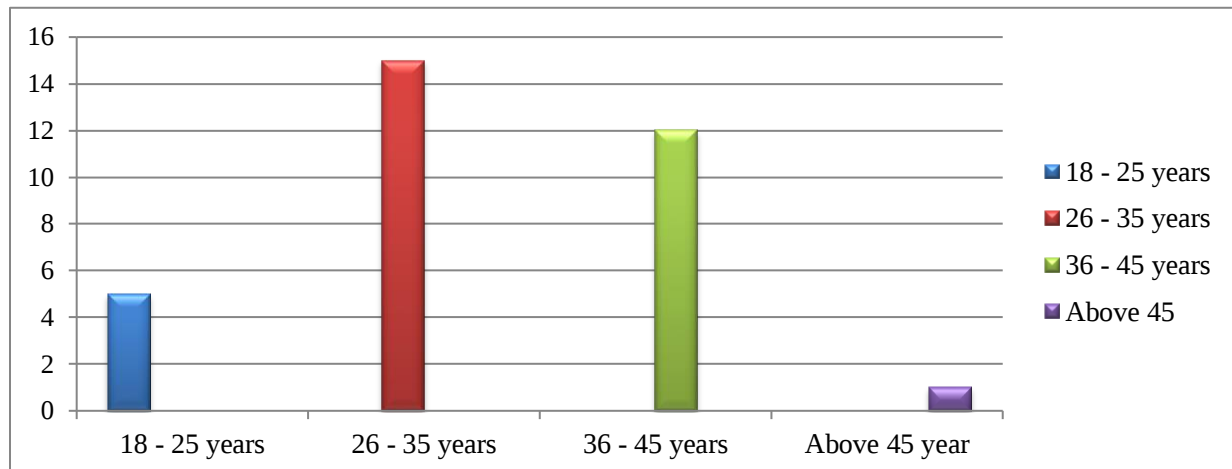


Figure 4.1: Age of the Respondent's (Source: Survey Result, 2020)

4.2.2 Sex of the Respondent's

As shown on the below figure from the total respondents majority of the respondents 63.6% were male and 36.4% were female.

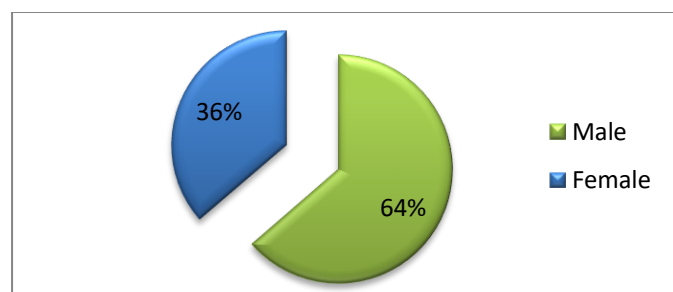


Figure 4.2: Sex of the Respondent's (Source: Survey Result, 2020)

4.2.3 Educational Qualification of the Respondent's

The respondents also specified their educational status, higher percentage of the respondents 69.7% were holders of college diploma, 18.2% of the respondent were below college diploma and first degree holder were 12.1%. We can refer from the results of the study most of the respondents are college diploma holders.

Table 4.3 Educational Qualification of the Respondent's

Educational qualification	Frequency	Percent
Below college diploma	6	18.2
College diploma	23	69.7
First degree (BSc, BA)	4	12.1
Second degree (MSc, MA)	-	-
PHD and above	-	-

Source: Survey Result, 2020

4.3.4 Job Position of the Respondents

Out of the total respondents 79% were non-manager in the organization warehouse section and in some other section. The remaining 21% of the respondents were managers.

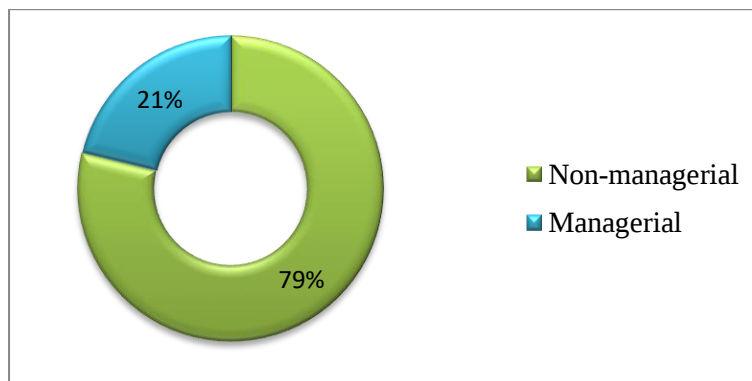


Figure 4.3: Job Position of the Respondents (Source: Survey Result, 2020)

4.2.5 Year of Service in the Company

The last section of the respondent's demographic information is year of service the respondent worked at the company. 6.1% of the respondents have been in the company less than 1 year. Around 24.2% of the respondents had been in the company 1-2 years, those who served from 2-5 years dominate the list by taking 36.4% of the entire respondents and 33.3% of the respondents had worked more than 5 years in the company.

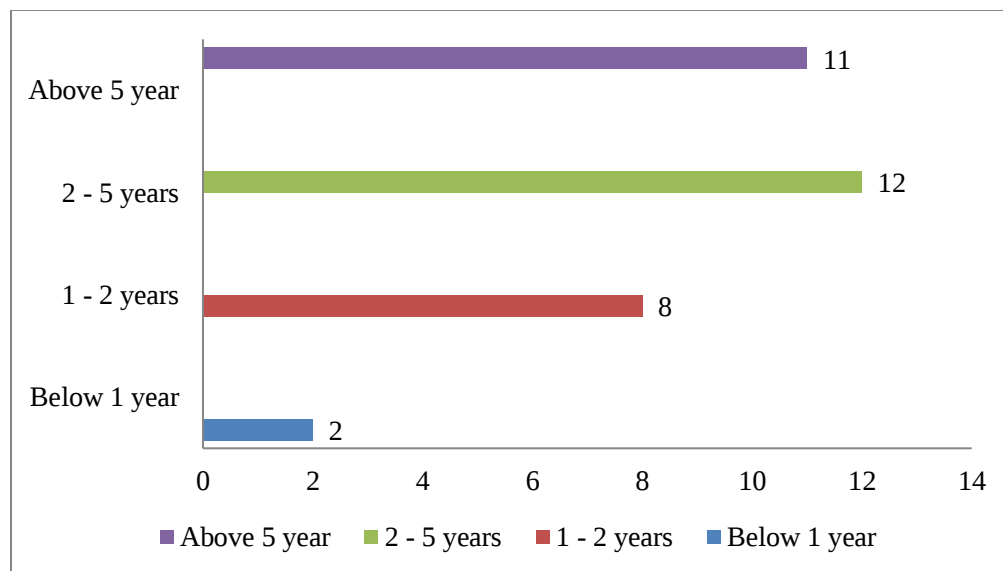


Figure 4.4: Year of Service in the Company (Source: Survey Result, 2020)

4.3 Warehouse Practices

From the collected information through questionnaires, interview as well as observation, analysis was performed. The warehouse practices of Omedad is presented and discussed for each parameter with respective tables with mean and standard deviation.

4.3.1 Responses on Receiving Activities

The respondents were asked to give response towards receiving activities. The mean values of each of the items of receiving activities were calculated between 2.55 and 3.88 with standard deviation that ranges between 0.331 and 0.566.

The mean value for guidelines that provide instruction for receiving items in the warehouse is 3.48 which is moderate or a little bit above indicating the warehouse providing guidelines for receiving items. The mean value for pre notification of new arrivals to be received is mostly in place for warehouse managers 3.64 indicates the managers receive notification before items arrive which is above moderate. The managers getting pre notification helps to arrange space and get pre-planned for the receiving of new arrival.

Table 4.4 Descriptive Analysis on Receiving Activity

Item	Mean	SD
There are guidelines that provide instruction for receiving items in our warehouse	3.48	.566
In our warehouse pre notification of new arrivals to be received is mostly in place for warehouse managers	3.64	.549
In our warehouse we check incoming products by using check list for quantity, type, for any damage and expiry date	3.06	.496
Most of the time our warehouse personnel utilizes a reasonable warehouse spaces at the time of receiving	2.55	.506
In our warehouse the shelves/pallets for the received items are appropriate to store	3.52	.508
Grand Mean	3.35	.331

Source: Survey Result, 2020

Checking incoming products by using chick list (quantity, type, for any damage and expiry date) scored a mean value of 3.06, which shows there was moderate effort exerted. The company has to check every quantity, type, if there is damage in the items and also expiry date before placing the item in the warehouse. Mean value for warehouse personnel utilizes a reasonable warehouse spaces at the time of receiving is 2.55 which is below moderate, lower efforts have been made by the warehouse personnel in the time of receiving.

The mean value for shelves/pallets for received items is appropriate to store 3.52 which is above moderate, shows the respondents agreed that the shelves of the warehouse is suitable for storing the items. The last question in the receiving activities is lack of good handling equipments for unloading and moving the incoming goods which scored a mean value of 3.88 which is high, most of the respondents agreed that little effort has been exerted in procuring suitable handling equipments. Generally, the grand mean 3.35 show that the receiving activity of the company is moderate. With the exception of good handling equipments for unloading and moving the incoming goods; utilizing the warehouse space at the time of receiving, these activities needs major improvement so as to improve receiving activities.

4.3.2 Responses on Put Away Activity

The second activity is put away. In the case company put away activity is performed manually. Employees use labor force to move the items that are received to the storage area. The mean values of each of the items of put away activities were calculated between 2.24 and 3.82 with standard deviation that ranges between 0.465 and 0.508.

Table 4.5 Descriptive Analysis on Put Away Activity

Item	Mean	SD
In our warehouse fast moving items are put away in the most accessible locations	2.48	.508
Our warehouse personnel arrange the products by category, type and expiry date before moving them from receiving area to storage area	2.24	.502
Do the warehouse personnel know what storage locations are available, how large they are, how much weight they can bear and so on before putting away the items?	2.42	.502
In our warehouse when a product is put away the storage location is scanned to record where the product is placed	2.39	.496
Grand Mean	2.67	.465

Source: Survey Result, 2020

First question from table 4.5 fast moving items are put away in the most accessible locations scored a mean value of 2.48 which is moderate or a little bit below. The items which are fast moving should be stored in more accessible location to save time. The mean value for the items in the warehouse are arranged by category, type and expiry date before moving them to storage area is 2.24 which is low, there is low effort exerted in arranging the items by category, type and expiry date by the warehouse. Item should be located in suitable place according to their category.

On the third question, what storage location are available, how large they are, how much weight they can bear and so on before putting away the items scored a mean value of 2.42 which is low, indicates low effort has been exerted by the company warehouse personnel to know the data and to identify the exact available storage location, how large they are also how much weight they can bear. Having this kind of information helps the warehouse personnel to maximize put away productivity. When product is put away the storage location is scanned to record where the product is placed scored a mean value of 2.39, indicates that most of the warehouse personnel will not record the items storage location, this will bring an additional work when the items are needed. All items should be scanned when they put away to the storage location.

The last question in put away activity, mean value for the space between shelves in the warehouse is enough to move the workers is 3.82. Majority of the respondents agreed there is a plenty of space to move them between shelves, indicate there is sufficient space in the warehouse which shows the capability of the warehouse to accommodate various kinds of items. Generally the mean value of put away activity is 2.67, the respondent rated put away activity moderate or a little bit below.

4.3.3 Responses on Storage Activity

The mean value of each of the item in storage activity ranges in between 2.15 and 3.52 with a standard deviation that ranges between 0.442 and 0.585. First question in storage activity, the warehouse space is properly used by warehouse personnel scored a mean value of 2.70, which is moderate.

The mean value for the design of the warehouse is easy to access products and well-situated to load and unload is 3.39 moderate a little bit above, this shows that in the time of storing there is a sufficient space also at the time of loading and unloading. Expired, damaged and quality defect products are frequently separated from useable items to use storage space efficiently comes after the second question of the storage activity with a mean value 2.15 which is low, indicates low effort has been exerted separating expired, damaged and quality defect products also indicate there are storage spaces occupied by these products, eliminating unusable products will avail more space in the warehouse to store various categories of items.

The mean value for entire warehouse is organized into sections according the intended purpose of the items kept in them is 2.39 indicating there is a little bit below moderate effort exerted in this activity. The fifth question, the company's warehouse personnel constantly check the percent of available storage location that are taken scored a mean value of 2.45 which is moderate or a little bit below, this implies there was not enough effort made by the company to improve this activity.

Table 4.6 Descriptive Analysis on Storage Activity

Item	Mean	SD
Our warehouse personnel use warehouse spaces properly	2.70	.585
Our warehouse design is easy to access products and well-situated to load and unload	3.39	.496
Expired, damaged and quality defect products are frequently separated from useable items to use storage space efficiently	2.15	.442
The entire warehouse is organized into sections according to the intended purpose of the items kept in them	2.39	.496
Our warehouse personnel constantly check the percent of available storage location that are taken	2.45	.506
Grand Mean	2.76	.508

Source: Survey Result, 2020

The last question under storage activity is there are no security issues raised in the warehouse scored a mean value of 3.52 which is above moderate. To some up storage activity warehouse utilization should position products based upon individual characteristics (Bowersox et al., 2002). The activity scored a grand mean of 2.76 which is moderate.

4.3.4 Responses on Order Picking Activity

The mean value of each of the item in order picking activity ranges in between 3.21 and 4.00 with a standard deviation that ranges between 0.354 and 0.619. The lowest mean value was registered in the case of the system of the warehouse is designed properly to improve customer service and to remove errors in order picking process which is 3.21.

The highest mean value was registered in the case of the order picking activity is performed manually by the use of labor force scored 4.00 which is high, shows most of the respondents agreed that in the warehouse order picking activity is done using labor force or manual system.

Table 4.7 Descriptive Analysis on Order Picking Activity

Item	Mean	SD
Our warehouse design is easy to pick items free from damage during order picking activity	3.58	.561
Our warehouse system is designed properly to improve customer service and remove errors in order picking process	3.21	.415
Items are picked from storage area correctly mentioned on the issue order i.e. right items, in the right quantity, right expiry, from the right location of storage area and then placed into the right truck	3.58	.561
Our warehouse personnel's performs order picking activity manually by the use of labor force	4.00	.354
Grand Mean	3.57	.619

Source: Survey Result, 2020

The mean value for the warehouse design is easy to pick items free from damage during order picking activity scored 3.58 above moderate, implies in the design of the warehouse moderate or little bit above effort has been exerted. Order picking is the basic service a warehouse provides for customers and is the function around which most warehouse designs are based (Frazelle, 2002). Items are picked from storage area correctly mentioned on the issue order; right items, in the right quantity, right expiry, from the right location of storage area and then placed into the right truck scored a mean value of 3.58 which indicates there is moderate or a little bit above effort exerted in this area. The last question in order picking is the company order picking system try to maximize the service level scored a mean value of 3.52 which is above moderate. In general, the grand mean of order picking activity is 3.57 which are moderate or a little bit above.

4.3.5 Responses on Shipping Activity

The mean value of each of the item in shipping activity ranges in between 2.67 and 3.61 with a standard deviation that ranges between 0.502 and 0.659. The lowest mean value was registered under when order is received the items are packed into the correct sized boxes to prevent damage scored 2.67 which moderate or a little bit below. The highest mean value was registered under the customer will be served on the reasonable times starting from order received until the order is shipped to the client scored 3.61 which is high, indicates the company serve their customer on time.

Table 4.8 Descriptive Analysis on Shipping Activity

Item	Mean	SD
Items are delivered to the buyer according to the order, right quantity, and right quality without any damage	3.58	.502
Our warehouse personnel serve our customer on the reasonable times starting from order received until the order is shipped to the client	3.61	.659
In our warehouse there enough shipping area	3.52	.508
Grand Mean	3.34	

Source: Survey Result, 2020

Items are delivered to the buyer according to the order, right quantity, and right quality without any damage scored a mean value of 3.58 which is moderate or a little bit above. The last question in shipping activity, there is enough shipping area in the warehouse scored a mean value of 3.52 which is moderate or a little bit above.

Generally the shipping activity of the company scored a grand mean of 3.34 which is moderate, implies the company's warehouse have shown moderate effort exerted in shipping activity to satisfy their costumer on time.

4.3.6 Responses of Open Ended Questions

The respondent were asked to give response towards does the company use any computerized warehouse management system, majority of the respondents 78.8% stated that the warehouse doesn't apply any computerized warehouse management system to make the warehouse practice easy. The response for, I can't determine if the warehouse apply any computerized warehouse management system was found to 15.2%. The remaining respondents 6.1% state that the company implemented a computerized warehouse system. Indicates the company doesn't make use of computerized warehouse management system.

Table 4.9 Computerized Warehouse Management Systems

Responses	Frequency	Percent
Yes	2	6.1
No	26	78.8
I can't determine	5	15.2
Total	33	100.0

Source: Survey Result, 2020

Another question was raised to the respondents do you think computerized warehouse system can change the warehouse practice, many of the respondents said yes. *The use of automation in the warehouse will make the practice simple; also paper work will be eliminated, making the warehouse practice easier.*

As shown in the below table 4.8, 72.7% of the respondents responded the warehouse space capability is good, 21.2% responded the warehouse space capability is very good and the remaining 6.1% responded somehow poor. Indicate in the warehouse they don't have a shortage of space. Having capable space in the warehouse will improve the capacity of holding incoming items.

Table 4.10 Warehouse Space Capability

Responses	Frequency	Percent
Very good	7	21.2
Good	24	72.7
Somehow poor	2	6.1
Total	33	100.0

Source: Survey Result, 2020

4.5 Discussion of Findings

The result of the research shows, the majority of the respondents agreed there is a moderate receiving activity in the warehouse. However, most of the respondents agreed lack of good handling equipments for unloading and moving the items has been given not as much as attention. Literatures show that if we don't receive merchandise properly, it will be very difficult to handle it properly in put away, storage, picking, or shipping. If we allow damaged or inaccurate deliveries in the door, we are likely to ship damaged or inaccurate shipments out the door (Frazelle, 2002). Another literature shows that having more equipment would allow more operations to be performed at the same time (Komarova, 2016).

The majority of the respondents agreed that there is a plenty of space between the shelves to move the workers during put away activity which have a positive impact on the warehouse practice. According to Komarova (2016) a large area of the warehouse makes it easier and more rational to place storage equipment and technical means used. It indicates that there are opportunities to improve the level of mechanization. In the company warehouse items are not arranged by category, type or by expire date this affects the practice it has a negative impact. In general, majority of the respondents ranked put away activity moderate or a little bit below.

On the other side the company warehouse storage space is not utilized efficiently. Literature shows the warehouse storage must be maximized to use the entire area of the warehouse and total volume (Komarova, 2016). Removing unusable items frequently from storage area will avail space. In addition percentage of storage location is not checked constantly. This also affects the company warehouse practice. According to Richards (2018) poor security costs companies in lost inventory, higher insurance premiums and personnel turnover. Security of a warehouse can be achieved thorough good housekeeping, the use of security cages and carousels for storage, CCTV and thorough vigilance by staff. The majority respondents agreed the warehouse security is practiced above moderately in the warehouse.

As the result of the study indicates, order picking activity is done manually. According to De koster et.al (2007) order picking has long been identified as the most labor-intensive and costly activity for almost every warehouse; the cost of order picking is estimated to be as much as 55% of the total warehouse operating expense. Using manual order picking affects the company warehouse activity. However, the majority respondents responded the company order picking is moderate or little bit above. On the warehouse activity of the company, applying computerized warehouse system is very important for the company since it's identified that they don't employ automated warehouse system. According to A, N. Subramanya and M. Rangaswamy (2012) WMS aims to control the movement and storage of materials within a warehouse and process the associated transaction, including shipping, receiving, put away and picking. Majority of responded agreed the warehouse does not apply computerized warehouse management system. Another literature also shows that automation has naturally concentrated on reducing the human travel required to pick customer order (Bartholdi and Hackman, 2014).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

The warehouse practice of the company was assessed using questionnaires, interviews as well as observation. Based on the result of the study summary of findings, conclusion, recommendations and suggestion for further study are discussed in this chapter.

5.1 Summary

The study was intended to assess the current warehouse practice of Omedad in receiving, put away, storage, order picking and shipping. To describe the findings of the study descriptive research design was employed. This study was conducted using mixed approach. As a result, the research has come up with the following summary;

- ❖ Good handling equipments for unloading and moving the incoming goods; utilizing the warehouse space at the time of receiving, these activities are weekly practiced. Generally, shows that the receiving activity of the company is moderate practiced.
- ❖ Low effort has been exerted in arranging the items by category, type and expiry date by the warehouse. On the other hand, the study indicates there is enough space when the workers move between the shelves in the time of put away. In general, the warehouse put away activity is moderately or a little bit below practiced.
- ❖ Unusable products are stored in the warehouse, there are storage space occupied by unusable products. However, the design of the warehouse is easy to access products and is well-situated to load and unload. The company warehouse storage activity is moderately or a little bit above practiced.
- ❖ All most all of the activities of the warehouse are not automated, including order picking activity. However, the design of the warehouse is easy to access items free from damage at the time of order picking. The order picking activity is moderately or a little bit above practiced in the company warehouse.
- ❖ Delivering of items to the buyers with the right specification and without any damage is moderate or bit above. The company shipping activity in the warehouse is moderately practiced.

- ❖ Absence of Computerized Warehouse Management System or ICT software. The company carries out warehouse activities manually. Which results in unnecessary time lose, labor cost, reduce productivity etc.

5.2 Conclusion

Based on the result of the study and the summary findings, the following conclusions have been given.

- ✓ The study used primary data, by using questionnaire, interview and observation to assess the warehouse practice of Omedad. Data analysis was done by the use of SPSS. Percentage and descriptive statistics were used to analysis the data.
- ✓ From the study findings, can be concluded that Omedad plc has been working for more than 25 years. Yet the company is still on manual system when it comes to operating the warehouse activities. The data analysis shows that major problem noticed in the receiving activity is the lack of good handling equipments for unloading and moving the items. Having a lack of good handling equipments will create high unit items handling costs, will add to the time for unloading and moving the items and injuries to staff may also occur due to lack of handling equipments. This implies the fact that lower efforts have been exerted by the company to improve the handling equipments. Majority of respondents agreed there is a moderate receiving activity in the warehouse.
- ✓ Analysis of warehouse practice in the case of put away activity showed that lower effort have been exerted to store the items by their type, expire date and category. Items that are similar by their type, expire date and category should be stored together in the same area. Another put away activity which showed lower effort exerted is scanning of the record storage location. Scanning the items location enhances warehouse personnel to speed up the put-away and picking process. The company warehouse put away activity is moderate or a little bit below, it is exposed for different challenges and lower effort has been exerted to improve the activity.

- ✓ The finding of storage activity shows that, a moderate or a little bit above effort has been exerted by the company when it comes to the design of the warehouse to access products easily and well-situated to load and unload. Additionally the security issue in the warehouse has been given above moderate effort. However, it was noted that unusable products utilize storage space, the warehouse are not organized to the intended purpose to keep the item and available storage location are not constantly checked, this is a very important activity as it will improve the warehouse practice. Most of the respondents evaluated the storage activity as moderate.

- ✓ The study observed the company warehouse activity is performed manually by the use of labor force including order picking activity. Applying warehousing automation will transform the picking activity, improve accuracy also enhance productivity not only in order picking also to the rest warehouse activities. The company has exerted lower effort to transform manual warehouse system into automate warehouse system. In general, the company's order picking activity is moderate or a little bit above.

- ✓ The shipping activity of the company was implemented at above moderate extent. However, the study indicated poor space utilization despite of having enormous warehouse space. As indicated in the findings of the study the applicability of ICT software or WMS is nonexistent in the warehouse. Adapting ICT software help to enhance productivity, will create efficiency, labor cost will reduce etc.

5.3 Recommendation

Based on the findings and conclusion, the researcher recommends the following;

- The warehouse items should be grouped based on their type, by expire date, by their characteristics and based on the frequency they are required. Therefore, time spent searching for item will be reduced.
- In order to successfully practice the warehousing activities, the company needs to give attention in purchasing warehouse good handling equipments.

The warehouses have limited number of good handling equipments. Availing enough good handling machinery which fit in the warehouse, will certainly affects the warehouse practice in positive way.

- The researcher recommends implementing ICT software for the warehouse activity since the warehouse activity is operated manually. In order to improve in warehousing activity advancing in ICT software is important, without difficulty the exact amount of quantity of item kept in the warehouse can be known, the right type of item, better space utilization, reduce error and damage. Applying ICT software will result in efficient warehouse activity, increase delivery time and reduce work place accidents, securing items and equipments in the store. To stay competitive in the market and to improve the warehouse activity it is important for the company to apply ICT software. When applying warehouse management system the company should train the employees in detail how to use it effectively.
- The items need to be packed with proper packaging material during shipping activity to prevent damage. Sufficient equipments are needed to carry out shipping activity appropriately. Purchasing packaging materials frequently in order to prevent the items from damage. Items that are unusable damaged and products that are expired should be eliminated so as to make best use of the storage space for new arriving products. The company should have regular inspection for discarding unusable items.

5.4 Suggestion for Further Study

The major limitation of the study is that the scope was limited to a single company. In order to get a comprehensive view the warehouse practices of various companies can be incorporated. Moreover, the view point of the customers can be incorporated to assess their satisfaction regarding delivery time and shipping activities. The proposed study focused on the assessment of warehouse management practices. Further studies can incorporate issues regarding warehouse management system and the effect of ICT application on warehouse activities.

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Appendixes

I. Questionnaire

ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE
MA LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Dear respondents:

My name is Hiwot Geremew I'm a graduate student at Addis Ababa University School of Commerce, pursuing a Masters of Arts Degree in Logistics and Supply Chain Management. I'm conducting a research entitled **“Assessment of Warehouse practice: Omedad plc.”** for the partial fulfillment of academic requirement. The purpose of this questionnaire is to gather primary data for proposed study. You are kindly requested to spend a few minutes on to answer the question.

- ✓ You do not need to write your name
- ✓ Indicate your answer with a check mark (✓) on the appropriate cell both for Part A and part of Part B. All of the questions need to be responded by you.
- ✓ If you need further explanation please do not hesitate to contact me through my personal phone +251951067322 or in person.

Please note that the information will be treated with utmost confidentiality & used only for academic purpose.

Thank you in advance for your support & participation!

Part A: General profile of the respondents

1. Age: ☐ 18-25 years ☐ 26-35 years ☐ 36-45 years ☐ above 45 years
2. Sex: ☐ Male ☐ Female
3. Educational Qualification: ☐ Below college diploma ☐ College diploma
☐ First Degree (BSc, BA) ☐ Second Degree (MSc, MA) ☐ PHD and above
4. Your current working position_____
5. Year of service in the company: ☐ Below 1 year ☐ 1 to 2 years ☐ 2 to 5 years
☐ Above 5 year

Part B:

6. Please read the listed points and indicate your choices by marking (✓) on the appropriate cell that best describes your opinion. To what extent do you agree about the following statements regarding the indicators of warehouse performance in your company?

Key: 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

No.	Warehousing activities	Score				
		1	2	3	4	5
Receiving activity						
6.1	There are guidelines that provide instructions for receiving items in our warehouse.					
6.2	In our warehouse pre notification of new arrivals to be received is mostly in place for warehouse managers.					
6.3	In our warehouse we check incoming products by using check list for quantity, type, for any damage and expiry date.					

6.4	Most of the time our warehouse personnel utilizes a reasonable warehouse spaces at the time of receiving.					
6.5	In our warehouse the shelves/pallets for the received items are appropriate to store.					
6.6	There is lack of good handling equipments for unloading and moving the incoming goods.					
Put away activity						
6.7	In our warehouse fast moving items are put away in the most accessible locations.					
6.8	Our warehouse personnel arrange the products by category, type and expiry date before moving them from receiving area to storage area.					
6.9	Do the warehouse personnel know what storage locations are available, how large they are, how much weight they can bear and so on before putting away the items?					
6.10	In our warehouse when a product is put away the storage location is scanned to record where the product is placed.					
6.11	The space between shelves in our warehouse is enough to move the workers.					
Storage activity						
6.12	Our warehouse personnel use warehouse spaces properly.					
6.13	Our warehouse design is easy to access products and well-situated to load and unload.					
6.14	Expired, damaged and quality defect products are frequently separated from useable items to use storage space efficiently.					
6.15	The entire warehouse is organized into sections according to the intended purpose of the items kept in them.					

6.16	Our warehouse personnel constantly check the percent of available storage location that are taken.					
6.17	There are no security issue raised in the warehouse.					
Order picking activity						
6.18	Our warehouse design is easy to pick items free from damage during order picking activity.					
6.19	Our warehouse system is designed properly to improve customer service and remove errors in order picking process.					
6.20	Items are picked from storage area correctly mentioned on the issue order i.e. right items, in the right quantity, right expiry, from the right location of storage area and then placed into the right truck.					
6.21	Our warehouse personnel's performs order picking activity manually by the use of labour force.					
6.22	Most of the times our company order picking system try to maximize the service level.					
Shipping activity						
6.23	Items are delivered to the buyer according to the order, right quantity, and right quality without any damage.					
6.24	Our warehouse personnel serve our customer on the reasonable time starting from order received until the order is shipped to the client					
6.25	In our warehouse there is enough shipping area.					
6.26	When order is received the items are packed into the correct sized boxes to prevent damage.					

7. Does the company use any computerized warehouse management system?

If “Yes” Specify the types of software uses? _____

8. Do you think computerized warehouse system can change the warehouse practice?

If “yes” how

9. How do you judge the warehouse space capability of company?

A) Very good B) good C) Somehow poor D) poor

10. Do you think there is strength in the company warehouse practice?

If “yes” list the strength

11. What are the overall current problems facing in managing warehouses in your organization?

12. Write if you have additional comments or ideas about the warehouse practice of the company.

Interview II

Part A: General profile of the respondents

1. Age: ☐ 18-25 years ☐ 26-35 years ☐ 36-45 years ☐ above 45 years
2. Sex: ☐ Male ☐ Female
3. Educational Qualification: ☐ Below college diploma ☐ College diploma
☐ First Degree (BSc, BA) ☐ Second Degree (MSc, MA) ☐ PHD and above
4. Your current working position _____
5. Year of service in the company: ☐ Below 1 year ☐ 1 to 2 years ☐ 2 to 5 years
☐ Above 5 year

Part B:

1. What are the main problems in the warehousing process?
2. What is the challenge of operating warehouse activity manually?
3. Do you think applying warehouse management system make the activities easier?
4. What is the weakness of warehouse practice in the company?

THANK YOU!!!