

St. Mary's University
School of Graduate Studies



**The Assessment of Materials Management practice in Private
Business Firm: Case Study in Medhin Commercial PLC**

BY

Berhanu Zelalem

Advisor

Dr. Kassa Teshager

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the Requirements for the Degree of Masters in Business Administration

August, 2016

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School of Graduate Studies



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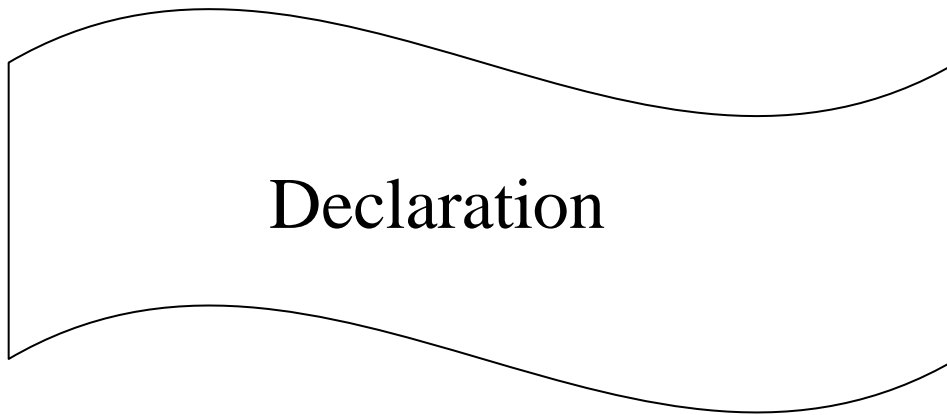
BY

Berhanu Zelalem

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Advisor	Signature	Date
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External Examiner	Signature	Date
4. -----	-----	-----
Internal Examiner	Signature	Date



Declaration

This thesis is my original work and has not been presented for a degree in any other university, and that all sources of materials used for the thesis have been duly acknowledged.

Name Berhanu Zelalem

Signature _____

Place St. Marry University

Master of Business Administration
School of Graduate Studies

Date of submission: August, 2016

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ABSTRACT

One of the problems facing integrated business making company is the growing trend towards the higher cost of materials and services and a down ward rocketing of business profit due to Material Mismanagement problem that leads toward total bankruptcy. The main objective of the study was to assess Material Mismanagement practice in Medhin Commercial PLC which has been running integrated business operations (Manufacturing, Merchandising and Rental business operation) under one umbrella of family business management system and the empirical study of the paper focused on this business firm. The researcher implemented triangulation research method based on Secondary data and primary data collection methods in this study. The target population of the study was 130 employees of Medhin Commercial PLC. A sample of 96 respondents were selected from this population using the purposive sampling technique out of three groups (6 managers, 20 store workers and 70 other employees) that directly or indirectly deal with materials management practice. Data was collected through a structured questionnaire, consisting mainly of closed ended and open-ended questions and analyzed through descriptive statistics such as frequency table and percentage. The study showed that the materials management practice in the company was poorly organized and led by unskilled manpower who made the company to incur unnecessary additional cost in its operations. The study recommended that Medhin Commercial PLC should adopt effective material management practice led by professionals to be sustainable and competitive in business.

Keywords: Material management, Inventory management, Material cost, Profitability, Integrated business activity

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LIST OF ABBREVIATIONS/ACRNOMYS

FSN	Fast, Slow and None moving Items
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R&D	Research and Development
SDE	Scarce, Difficult and easily available Goods
VED	Vital, Essential and desirable
WIP	Work in Process
HRM	Human resource Management
SPSS,	Statistical packet for social science

CHAPTER ONE: INTRODUCTION

1.1 Back ground of the study

Managers have many options to optimize profit. Some of these are directed to enhancing per unit profit, some enable to cut per unit cost, while still others focus on mixing the two. Cutting per unit cost through effective material management is possible by using motivated and empowered employees and boosting operational excellence on material management rather than trying to foster per unit revenue which has many competitions in the field these days (Arnold, Clive and Chapman, 2006).

In the early 20th century, there was no cut-throat competition in the market to sell the various consumer items manufactured by different industrial undertakings and the availability of materials to manufacture these items was not scarce. Therefore, materials management was not thought to be so important and its separate identity in the organization was not felt as a big issue. But today, it has become an important management activity to profit making organizations to think about (IBID).

Actually before the business begins it is necessary to ensure availability of all the types of materials needed to run operation and its supply at the various business centers. Planning, purchasing and scheduling are the main functions of materials management. It aims at improved productivity and profitability. It is used to reduce the cost, which increases profitability and streamlines the operation. Apart from management of material cost and its supply it helps in its proper utilization, transportation, storage, handling and distribution.

In the competitive business making environment, it is mandatory for the business firm to focus all the energies in the efficient and effective material management processes in the execution of all the activities involved in profit making enterprises (Such as manufacturing, merchandising and service rendering enterprises).

The material management effort as all resource managements require to apply the management philosophies that under goes planning, organizing, directing, controlling and evaluating material resource to get a better profit out of these limited (economic) resources. In competitive business making environment, a firm having the best material management policy gets good profit better than its competitors (Arnold, Clive and Chapman, 2006). Most companies in Ethiopia are making business without or with little knowledge of material management (the effective tool for profit optimization) by employing non-professionals serving as a custodian and running different activities jointly under one umbrella (such as manufacturing, merchandising and rental services) .Even though material management requires high proficiency and efficient management skills to run the operation that carries the majority of cost components which has a great cost portion in determining the profitability. Hence, this research paper is designed to assess the material management procedures in the selected company.

1.2 Statement of the Problem

Ineffective material management practice is the major problem to Medhin Commercial PLC as the company did not pay attention towards this issue except assigning the custodian who lacks or have little knowledge about material management philosophy. Even though it is a science that needs professionals in the field because of its multi facet activity goes beyond custodian work. Material management is a management system that integrates purchasing, shipping and material control from suppliers. As to Madhavi, Mathew and Sasidharan (2013), materials management is a process of planning, executing, and controlling the right source of materials with the exact quality, at the right time and place suitable for minimum cost in the process. Inability to coordinate and integrate purchasing, shipping and material control from suppliers due to lack of skilled manpower led the company to incur high cost. Poor management contributed for material stock overage and shortage, stock obsolescence, misplacement, stock damage, theft, etc. Due to these problems the company which has been doing business over 40 years is unable to be profitable. So, this research attempted to assess the material management practice problems of the company (purchasing, Storage and handling, Stock control, Distribution (Transportation), Scrap and Surplus Disposal management and the relation of material management with other departments) and recommended to alleviate such problems in the company.

1.3 Objectives of the Research

1.3.1 General objective

To study the material management practice of Medhin Commercial PLC by referring the previously written literatures on the subject and studying the current practices of the company. The research would suggest recommendations based on the outcome of the research.

1.3.2 Specific objectives:

- To investigate how the company's purchasing procedures are based on the five purchase principles.
- To examine the problems associated with storage and inventory control systems that affects the company from getting profit out of its resources.
- To assess how the company keeps materials free of misuses(such as deterioration, obsolescence and theft)
- To study how the company is managing scraps and surplus materials efficiently.
- To ensure how the relationships established between material management department and other departments is efficiently established to run the business properly.
- To assess how the material management is managed by professionals.

1.4 Research Questions

The fast and dynamic change of the world is creating many challenges for the business enterprise unless they cope up the momentum equally with the same pace with other competitors. One way of maintaining (curving means) this challenge is by ensuring effective material management policy in the company.

With respect to the objectives stated, the study seeks to provide answers to the following questions:

1. To what extent the company's material purchase procedures are based on 5R's of purchase?
2. How is the company's storage system established and organized to provide the necessary facilities for the integrated business operation?

3. How is material control mechanism established and organized in the company?
4. To what extent is scrap and obsolete materials being managed in the company?
5. How does the material management department co-ordinate and cooperate other departments so as to achieve the intended goal of the company?
6. To what extent is the company employing well qualified personnel to manage the material resources properly and efficiently?

1.5 Significance of the Study

This research is significant in that it may help Medhin Commercial PLC to alleviate its current material management problem in particular and for other business firms engaged in the integrated business operation in general to apply effective material management practices in their business operations while they purchase, produce, store and transport in business processes. In addition, this study intends to provide framework for the development of policies and rules in the material management practice in manufacturing, merchandising and rental service industries.

1.6 The Scope of the Study

This research was limited and focused on Medhin Commercial PLC which is working integrated businesses activities (Manufacturing, Merchandising and Rental Services) in Addis Ababa more than a decade and unable to manage materials under its business operation (purchasing, storing and handling). Surveys in the forms of questionnaires, site visit and personal interviews were conducted with the proponents who are undertaking the above mentioned business activities.

1.7 Limitation of the Study

Conducting research encounters many challenges to face. Among the challenges that the researcher had faced were the time allotted to this research was extremely short, limited data source of material management practice in the field and inconvenience respondents selection due to lack of available employee history data and lack of proper records in material management practice of the company .

These problems challenged the researcher to spend more money, time and energy to accomplish his work on time. As challenges contribute for the great success, the researcher had appreciated them and accomplished the task on time.

Organization of the Study

The Organization of the study is divided in different chapters, as follows:

Chapter 1(Introduction) elaborated a background of the topic researched in this study. The main idea of this chapter is to explain the background of the problem, the objectives and the contribution made by this research study; chapter 2(Literature Review) provided information about the main subjects of this thesis; assessment of material management and to Providing the practical suggestions and recommendations to upgrade the knowledge of material management and its problem alleviation techniques in Medhin commercial PLC. In addition, this chapter would provide a theoretical foundation with the formulation of some propositions, which are the basis for the methodological research; chapter 3(Methodology) the plan of the research. In other words, this section explained the research paradigm, approaches, strategies and data collection methods. In this project, a case study strategy was used to confirm or reject the propositions; Chapter 4(analysis and Discussions) provided the results from the case studies and analysis to make a comparison with the existing literature. In addition, these results were used in this section to see the way in which they help confirm or reject the hypotheses. On the other hand, this chapter also provided a critical evaluation of this work including the limitations of the research and lastly chapter 5(Summary, Conclusions and Recommendations): This section would summarize the main issues of this paper and it provided an overview of the main findings. It also concluded if the project met the proposed objectives and the way in which this study was useful to confirm or reject the hypothesis.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1 Introduction

The review has three sections: Section 1 presents theoretical review of material management; section 2 presents a review of the essential empirical evidences Material Management problem of business Enterprises. Lastly, conclusions and knowledge gap were presented.

2.2 Theoretical Literature

As to the International Federation of Purchasing and Materials Management accepted definition Material management is a total concept having its definite organization to plan and control all types of materials, its supply, and its flow from raw stage to finished stage so as to deliver the product to customer as per his requirements in, quality and required quantity and time. This process involves materials planning, purchasing, receiving, storing, inventory control, scheduling, production, physical distribution and marketing, and materials handling and traffic control. The materials manager has to manage all these functions with proper authority and responsibility in the material management department. The historical background about the materials management is as follows.

The concept of material management development goes to the year 1850 and developed by Charles Babbage (the material man) in his book published in 1832 that refers to the importance of purchasing function. The purchasing philosophy gained importance during World War I. After that Howard T. Lewis became a purchasing professional from 1905 to 1945 by developing a sound procurement importance to company operation.

Due to the scarcity of materials (which was felt during World War I) in USA to a very large extent and it has become difficult for production managers to supply the War goods, this has

created it necessary to organize the Materials Management department for managing large inventories in stores and to analyze the problems arising to control and economize inventory cost problems and shortage elimination and it was included as an important function of the management. With the development of principles of scientific management by F.W. Taylor in 20th century, the economic use of materials in all the organizations was critically felt to reduce the cost of production and material management widely spread during World War II.

Following the World War II, Materials Management became a key business function that is responsible for co-ordination of planning, sourcing, purchasing moving, storing and controlling materials in an optimum manner so as to provide a pre-decided service to the customer at a minimum cost (Arnold, Chapman and Clive, 1991).

Similarly Nair (2014) defined as Material management is the integrated functioning of the various sections of an organization dealing with the supply of materials and allied activities in order to achieve maximum co-ordination and efficient use of materials. Madhavi, Mathew, Sasidharan (2013) also elaborated that Materials management as a management system that is required in planning and controlling the quality & quantity of the material, punctual material placement, good price and the right quantity as required.

From the above definition and elaboration, one can deduce that Material management is a process of resource movement management system starting from supplier (source) to the customer (end user). The material manager is expected to ensure the availability at the right quality, at the right time, at the minimum cost through purchasing, shipping, storing and controlling until the materials are utilized in the business operation.

2.2.1 The Importance of Material Management in business organizations

Apart from management of material cost and its supply it helps in its proper utilization, transportation, storage, handling and distribution. Selection of personnel for marketing, purchasing, inventory control, stores management and materials handling and their training and placement is also to be seen by the materials management department. This indicates that it is

very essential to have a materials management department in any organization to support the management in the business activities. It also helps in the marketing, sales promotion and control of all the types of materials for its quantity, quality and cost. It is a huge operation that can affect profitability generating possibility of firms because it needs operational excellence rendered by highly motivated and empowered employees. Operational excellence can be obtained by highly qualified and experienced personnel of the field. Otherwise the insatiable greed for profit maximization can't be achieved through increasing revenue (sales) in the competitive environment. But it can be only by cost management of materials which hold the large expenditure of money in business operation (Madhavi, Mathew, Sasidharan, 2013).

Materials management is a fundamental issue in any business organization that needs a series attention as equal as other managements of a business regardless of the type of business organization as the firms' motive is to get profit from the operation of the business. To get the most value out of the economic resources, owners of these must design systematic processes that make productivity most efficient. Once the processes exist, managers need to manage their operation so they produce goods most economically. Managing the operation means planning and controlling the resources to be used in the process: labor, capital, and material. All are important, but the major way in which management plans and controls is through the flow of materials. The flow of materials controls the performance of the process. If the right materials in the right quantities are not available at the right time, the process cannot produce what it should; Labor and machinery will be poorly utilized. The profitability, and even the existence, of the company will be threatened (Arnold, Clive and Chapman, 2006)

2.2.2 Divisions of Material Management

Material Management has sub divisions based on the nature of businesses, such as manufacturing business, merchandising business and service business. In each category, material management follows its own philosophy of handling and controlling of material resources so as to be profitable because the misuse of materials in business organizations leads to the total shut down of the business. The common thing to all of the business firms is the field should be managed by well qualified personnel who have coordinate and co-operate ability vertically and horizontally in organizations. Although some companies in Ethiopia give less attention and while others

eliminate it from their organizational structures, establishing the department as a functional department is mandatory. Those companies paid proper attention for the field classify and manage their material resources as follows as per the objective of their set up.

Manufacturing companies classify their materials into raw materials, finished goods, semi finished goods and other stocks (such as tools, spare parts and production consumables spare parts) for effective material management purpose.

2.2.2.1 Raw Materials

Raw materials are component parts of the stock of inventories carried by a manufacturing firm at a given time. Every organization has inventories of some type and the economics and techniques of inventory management are critical for efficient operation, profitability and survival; especially in a highly competitive environment (Kros, Falasca& Nadler, 2006).

Raw Materials (inputs) in a factory are a big component of cost in the process of profit generating process because they are bought from other companies (some are imported by hard currency and some are locally bought). They are the major component of production inputs which consists of 40-65% of production costs. So, the controlling mechanism must be strong and serious since every company can't make profit without these items.

2.2.2.2 Finished Goods

They are 'goods' that have completed the manufacturing process but have not yet been sold or distributed to the end use. The finished goods (out puts) again can be further being divided in to perishable and non-perishable goods. This research covers the study in the producer of nonperishable products (goods). As the finished goods pass many stages until they reach the end users, they are exposed for many defects of quality of products which contribute for customer's dissatisfaction. It is clear that poor Material management in production process results cost increase and quality decrease. So the process management to this end must be series and lead by professional material management officers.

2.2.2.3 Work-in-process (WIP)

Inventory not only makes up a portion of the cost of goods sold but has to be purchased at the beginning of production to be processed into finished goods. This type of inventory is called work-in-process (WIP). WIP is a major investment for many companies and reducing the amount of time that inventory spends in production is a good way to reduce the costs associated with this investment. Labor, materials and overhead are applied to goods continuously throughout production and the value of the WIP is estimated to be one half the final values.

Most manufacturing companies have handling problems of work in process materials and a large volume of this category is wasted as scrap and put away from economical use. This category of materials (inventories) is the most common category for most of the business organizations which run manufacturing (production). The problem arises from handling and controlling aspect of these items. Most companies have put all items under one store and assign close relatives as custodians. But their set up of materials is very difficult even to check their existence in the store because material owners believe that assigning their close relatives mean the materials are saved. But the material management is to be found more of traditional rather than be modern and systematic that is exposed for theft, misuse, bad weather, Obsolesce and breakages that lead the company to incur more cost unnecessarily.

2.2.2.4 Merchandising Businesses

A product or merchandise is anything that can be offered to a market or to the customer that might satisfy a need or a want. The functions of procurement of merchandise are integral to the whole sale & retail organization and these functions revolve round planning and control. Planning is of great importance because it takes time to buy merchandise have it delivered, record the delivery in the company's records and then, to send the merchandise to the right stores (www.pastulamedia.com).

Retail Merchandising refers to the various activities which contribute to the sale of products to the consumers for their end use. Every retail store has its own line of merchandise to offer to the customers. The display of the merchandise plays an important role in attracting the customers

into the store and prompting them to purchase as well. Merchandising helps in the attractive display of the products at the store in order to increase their sale and generate revenues for the retail store.

Merchandising helps in the sensible presentation of the products available for sale to attract the customers and make them a brand loyalist. Merchandising is any practice which contributes to the sale of products to a retail consumer. At a retail in-store level, merchandising refers to the variety of products available for sale and the display of those products in such a way that it stimulates interest and attracts customers to make a purchase.

As the channel of the business passes many processes from the whole seller to each end user (customer), the materials are exposed for many problems such as unnecessary breakage, theft, misuse, etc. so the business should make effective material management procedure so as to deliver proper service to the customer and to be sustainable to stay in the competitive market ever strong and profitable throughout its activities.

2.2.2.5 Rental Materials (Goods)

These are goods produced or bought to rendered rental services for different events. To render the quality service to customers, the materials (inventories) should be available as per the desired quality and quantity. Otherwise, Customers have a plenty of choices towards this issue. The fastest supplier will have chance to provide this service earlier than the other. The late comer for the service will be out of the game or earn very little profit out of the materials it held. The materials held for rental purpose (Tents, chairs, tables' dishes and others) must be quality and competitive with other competitors of the field. Etc.). Such service business requires great attention towards customer satisfaction because the field is becoming full of competitions. So goods in this business must be fashioned, quality oriented, available in quantity and color when requested. To render fast and prompt service to the customer materials must be put in order scientifically and easy way to terrace them easily when they are needed by customers. Since materials are the out puts of another organization, each activity of getting them needs a through attention by material management professionals. Every activity in the material management

incurs cost which demines the livelihood of each business but most business firms should care are the following:

2.2.3 Key activities in Material Management

The basic functions (activities) of material management are grouped as primary and secondary functions. The primary functions of material management are efficient material planning, purchasing, procurement and receiving, storing and inventory control, supply and distribution, quality assurance, customer relation development and departmental efficiency. Secondary function of material management are efficient production scheduling, take make or buy decisions, Prepare specifications and standardization of materials, assist in product design and development, forecasting demand and quantity of materials requirements, Quality control of materials purchased Material handling, Use of value analysis and value engineering, developing skills of workers in materials management, facilitating the smooth flow of materials in and out of the organization. Hence, one can summarize the functions (activities) of material management in well organized company which is led by professionals as acquisition and purchasing, storage, control, distribution and scrap disposal management.

2.2.3.1 Acquisition and Purchasing Procedures

Business firm can't have all things of their own and they go somewhere to get what they don't have. The only way to do this is purchasing that follows many procedures and incurs cost. In the process of making efficient purchase and acquisition of materials, business firms should follow certain purchasing functions (such as requisition, selection proper supplier, negotiate price, quality assurance, set proper purchase policy and procedure). Even though purchasing process is exposed for many misuses in the field, business firms should develop efficient and effective purchasing policy and control procedure that can be lead by one material department in the organization.

Decisions on how much to buy and when to buy cannot be view in isolation; as it is being done in many quarters. The provision of safety stock (minimum stock level) on the other hand is a

kind of insurance and is largely influenced by the lead time required to procure the materials. It is obvious that any improvement in the lead time would necessitate a decrease in the volume of safety stock and thereby reduce overall capital lock-up in inventory (Saeed, 2008).

Ayoade (1986) pointed out that Economic buying is the aim of any firm but the cheapest materials may not necessarily be qualitative. Therefore, a material manager will strive for the cheapest and qualitative material. Materials acquisition function starts with the receipt of the purchase requisition from the store. The purchase order is therefore prepared based on the contents of the requisition. The most important thing to bear in mind while planning for profit is to procure the right quality at the right price. Procurement in highly technical areas required skill and experience on the part of the buying manager. Cost improvement is simply the result of learning effect among workers, reflecting the development of skill and dexterity that occurs when a task is performed repeatedly.

The acquisition circle consists of recognizing, defining and describing the need; transmitting the need, investigating and selecting the supplier, order, receipt and inspection of good supplied, auditing the invoicing and closing the order (IBID). As to Nair, Oberoi & Sharma (2008) noted that the purchase procedure should follow the 5 R's of material management rule (such as the right quality, the right quantity, from the right source, at the right price and at the right time) without compromising quality.

Ogbadu (2003) also stressed the processes of purchasing that a business manager should consider many factors when arriving at make or buy material decision.

- When it is cheaper to do so.
- Quantities required are too small for economic production.
- Spread of financial risk between customers and suppliers.
- When source of supply can no longer be guaranteed. On the other hand, the decision to produce raw materials can increase profitability when carried out under these circumstances:
 - Chance to use up idle capacity and resources.
 - Possibility of scrap utilization.
 - Greater purchasing power with large orders of a particular material.
 - Ability to manage resources

2.2.3.2 Receipt of Materials

One important aspect of receipt of materials is to check the good supplied and to ensure they conform to specification as contained in the purchasing order. Damaged and sub-standard materials are rejected thereby preventing the firm from incurring unnecessary cost and thus promoting profitability. The effect of inferior materials to both the machine and the profitability of the firm must be borne in mind as they because production held up which may result into substantial losses to the firm.

2.2.3.3 Documentations

Another important issue in material purchase is the matter of maintaining good systems and procedures and this calls for strict discipline in documentation. This implies that all related paper work are completed in time so as to generate the basic data and compile timely and reliable information for planning, follow-up and control. This seems mandatory, be it manual or computerized system. The success of the system calls for cooperation and understanding of all that are concerned for providing timely, the necessary data; in order to ensure that the information processed for action reflects the realities of the situation.

According to Nasiri, Davoudpour and Karimi (2010) resource planning and timely information for decision, action and control is possible today with the support of a computer system with the relevant application package and software. An integrated material management system with electronic data processing support avoids many of the common volume data in a short time span and checking the actual against the preset norms, so as to take quick preventive and/or corrective actions while receiving purchased materials.

Dear (1989) also gave the following assertions that the most common reason by far for a manager becoming interested in material (inventory) documentation is when he finds out he has more of it than he should have. He went further that in a material operation, management became interested in the first place because the combined stockholding was in excess of budget. Over-

stocking as identified above is not the only problem in material management. Under-stocking could lead to a bigger problem as analyzed by other professionals.

2.2.3.4 Storage Procedures

According to Buffa and Salin (1987) there are several reasons for keeping inventory in the store. These include protection against variations in demand, maintaining smooth flow of production by providing a decoupling function between stages of production and lowering total material cost by taking advantage of quantity discounts.

The other reason it is used to facilitate proper material utilization and control in the business operation. Managers should know the consequences of carrying too much stock in the store that could result in funds tied up, Increased overhead costs, increase in holding cost, Increased risk of loss of market value, decreased inventory flexibility , Increased inventory shrinkage(suffer deterioration, obsolescence) and theft.. On the other hand, shortage of materials (carrying too little materials) can lead to interruption of products for sales; customer relations are hurt, other resources becomes underutilized.

Most materials are commonly wasted due to human and non-human elements that cause the majority of material lose. Companies don't pay attention for the internal and external factories which violate the market value of materials in the store or outside the store.

As to Goetschalckx: (2012), the performance of a storage system depends on four internal characteristics and their interrelations (such as storage capacity or equivalently storage density; ease of access to storage locations; complexity of the internal structure; and level of information technology).

Depending up on the technology availability companies may apply different material management systems to ensure their material storage efficiency. In selecting the type of material management techniques, it is the company's material nature that leads which system is favorable for which item management. Anyway, modern companies follow the most conducive material management system for efficient and effective way of handling materials in the store. To ensure

this efficiency, Goetschalckx (2012) advised the material management employees to follow certain points before purchasing and hording unnecessary materials in the store of business organizations as follows:

1. Manufacturing organizations should always determine the minimum level of stock to carry. This is to ensure that stock-out or sudden unavailability is forestalled. With the removal of stock-out, other banes such as loss of production time, low capacity utilization, and inability to meet production targets will be removed.
2. Manufacturing organizations make raw material plans and a schedule such that arrival of raw material and other inventories is programmed to ensure that there is no delay between requisition time and the time of supply. This will prevent production operations from being disrupted and as such low capacity utilization and inability to meet production targets will be addressed.
3. All slow-moving stock items should be identified; their time of need noted to ensure that the maintenance of such item stops immediately. All obsolete items should be sold to recoup capital lock up in them. Acquisition of obsolete items could be removed by being aware of trends in the technological and business environments. Over-stocking could be forestalled by having clear definition of maximum stock level. An adherence to recommendations on slow moving stock, obsolete items and over-stocking would ensure that tied-up fund that could be useful as working capital is available. In this way, liquidity positions of manufacturing organizations will be better.
4. Employment of stack illiterates as store workers should be stopped as it results in problems such as misplacement and dislocation of vital documents, files and stock items. In areas where higher stock management education is not required, (like stock keeping and records) employee should be given adequate orientation and training. There should also be training and retraining of employees to ensure that they are kept abreast of developments in the field.

5. The use of electronic data processing devices will go a long way in removing the problem of inability to use inventory models. Lack of knowledge of the use of quantitative values to produce information is the major hindrance in model application by store personnel.

2.2.4 Material Storage Procedures

Sometimes business firms are forced to hold materials due to unexpected occurrences for a long period and they may store them for later use. If materials are available due to the above cases, the commonly advisable storage systems as to (WWW.material management) are: cost wise arrangements (ABC), VED (vital, essential, and desirable) based on critical value), SDE (scarce, Difficult and easily available) based on availability and FSN (Fast moving, Slow moving and none moving) based on movements. The detail illustration is as follows.

A. Cost wise Storage(ABC) Analysis Method

This method was developed from the Pareto principle (also known as the 80-20 rule, the law of the vital few, and the principle of factor sparsely) states that, for many events, roughly 80% of the effects come from 20% of the causes and named after Italian economist VilfredoPareto who observed in 1906 that 80% of the land in Italy was owned by 20% of the population.

After that this method helps to exercise selective control when confronted with large number of items it rationalizes the number of orders, number of items & reduce the material inventory. He classified his method in to the following categories:-

- 10-70 method states that about 10 % of materials consume 70 % of resources (consists 10% of stock in volume that contains 70% cost of the inventory). In this method, materials with higher cost may be controlled seriously by store professionals (higher management) because any damage, misuse or theft costs the company too much.
- 20-20 method (intermediary group) consists about 20 % of materials volume consume 20 % of resources cost. This group needs an intermediary control and the activity done by the line managers.

- 70-10 method holds high volume of materials (70%) and 10 % of resources cost and grouped as the 3rd group. The controlling process is done by low level employees (store keepers).

B. VED Analysis(subjective Analysis)

Is based on critical value and shortage cost of an Item and items are classified as vital (V), essential (E) and desirable (D)

	V	E	D		Item	Cost
A	AV	AE	AD	Category 1	10	70%
B	BV	BE	BD	Category 2	20	20%
C	CV	CE	CD	Category 3	70	10%

Category 1: needs close monitoring and control

Category 2: needs moderate control

Category 3: no needs for control

C. SDE Analysis is based on availability

Scarce(S) –managed by top level management and needs to maintain available stock

Difficult (D) –maintain sufficient safety stock

Easily available (E) –maintain minimum safety stock

D. FSN-Analysis based on utilization(Fast moving , Slow moving and nonmoving or dead)

Whatever the arrangements we apply in the store, the store personnel follow particular care for particular system for each material depending up on its nature of handling.

This involves a careful handling of the stock and maintaining of an accurate control over them. Handling of material is one of the activities performed by materials management and can be an

effective tool for saving cost and holding up profit. Storage of materials depends on the nature and how they are used in the manufacturing process.

Generally, good performance can be achieved if managers effectively manage cost issues relating to stores location, layout and equipment inspection, protection of stores, issues to production, stock records and disposal of obsolete. Storage goes hand in hand with store recording. Good record keeping can detect theft and pilfering early enough. It shows how much materials are in the store and when to place order. The issue of materials from store to production department must be properly authorized and recorded.

2.2.5 Material (Inventory) Control

Inventory control is the science- based art of controlling the amount of stock held in various forms within a business (Lewis, 1970). Inventory control is a method of recording and reporting the movement of inventory materials within a company: from material stock room, through any of the manufacturing processes to the finished product stage. According to Sharif (2011) inventory management basically aims at providing both internal and external customers with the required service levels in terms of quality, quantity and order fill rate, to ascertain present and future requirements for all types of inventory to avoid overstocking and under stocking by establishing proper system to keep costs to a minimum. It is a fundamental procedure of Inventory Planning; establish order cycles, Balance Inventory Levels and Review Stocks.

However, most companies in Ethiopia pay an attention for the physical presence of materials in the store by assigning trustful store keepers, the bigger value loss of materials arise due to other factors such as environmental change, value deterioration (due to old, worn out, shopworn, obsolete, or the wrong sizes or colors), unnecessary breakage, Shrinkage, capital, tied up in their major asset, etc.).

Inventory control enhances profitability by reducing costs associated with storage and handling of materials. Inventory control is a means by which materials of the right quality and quantity are made available as when required with due regards to the economy of shortages, ordering cost, purchase price and working capital. Inventory control determines the extent of stock holding of materials. It equally makes it possible for material manager to carryout accurate and efficient

operation of the manufacturing organization through decoupling of individual segment of the total operation and it entails the process of assessing of stock into the store house and the issue of stock.

Three major approaches can be used for inventory control in any type and size of operation. The actual system selected will depend upon the type of operation or the amount of goods available. These approaches are the eye ball system, Reserve Stock (Brown Bag) System and Perpetual (book) Inventory Systems.

- **The Eye ball system (observation method)** - is the standard inventory control system for the vast majority of small retail and many small manufacturing operations and is very simple in application. The key manager stands in the middle of the store or manufacturing area and looks around. If he or she happens to notice that some items are out of stock, they are reordered. In retailing, the difficulty with the eyeball system is that a particularly good item may be out of stock for sometime before anyone notices.
- **Reserve Stock (Brown Bag) System**-is much more systematic than the eyeball system. It involves keeping a reserve stock of items aside, often literally in a brown bag placed at the rear of the stock bin or storage area. When the last unit of open inventory is used, the brown bag of reserve stock is opened and the new supplies it contains are placed in the bin as open stock. At this time, a reorder is immediately placed. If the reserve stock quantity has been estimated properly, the new shipment should arrive just as the last of the reserve stock is being used.
- **Perpetual (book) Inventory Systems**-include manual, card-oriented, and computer-operated systems. In computer-operated systems, a programmed instruction referred to commonly as a trigger, automatically transmits an order to the appropriate vendor once supplies fall below a prescribed level. The purpose of each of the three types of perpetual inventory approaches is totally either the unit use or the dollar use (or both) of different items and product lines. This information will serve to help avoid stock-outs and to maintain a constant evaluation of the sales of different product lines to see where the emphasis should be placed for both selling and buying.

2.2.6 Distribution (Transportation)

The traffic section, which is involved in the physical movement of materials throughout the entire business operation stages, is important for profitability and cost reduction. Materials movement could be in-house or external. The in-house are determined by the nature of the materials by the layout of the operation and by the type of product held. It makes use of such devices as cranes, pipelines, trucks, forklift, etc. one plant to another or from stores at the head office to a plant as well as moving finished goods from suppliers. It involves Shipways, Railroads, Road-trucks, Airplane, etc. During these processes materials misused, wasted or liable for theft, etc. For profitability it involves decisions made to the following areas: The route, the carrier, methods of shipments and rates scheduled.

2.2.7 Scrape and Surplus Disposal Management

Most business firms did not pay attention for scraps and surplus items as a material management duty but the effect of these items in profitability is very significant unless a serious measure is taken on them to avoid capital tied up and storage space problem in the company. The possible things companies can do is redesign or recycle if they do not have market value currently for the company.

This method will have an equal importance with acquisition, storing and distribution of material management procedures in business firms. Disposal of scrap and surplus are very important aspect of material management function, and if effectively done can contribute to the profitability of the firm. Scrap according to Carter (1982) is the residue of process materials left behind during production while surplus is the materials from purchases which were not wholly consumed in the production. To minimize cost of disposal, scrap and surplus materials, managers should return it to suppliers, selling to suppliers, selling to other firms or selling to other dealers.

Stock represents cash and any dead stock is un-productive capital and has thus to be turned productive. This is done by disposing off the surplus and obsolete items. In this respect, this organization will have the following responsibilities:-

- i) All items declared surplus/obsolete will be reviewed once in a year.
- ii) The items ultimately found surplus/obsolete will be collected at one place and will be disposed-off in a manner, as directed by the Board (IBID).

2.2.8 Functional Relations of Material Management with other Departments in a Business Firm

Materials Management Department plays a coordination and cooperation role in an organization and it has a strong relationship with other departments (operational departments). These relationships vary from department to department (Lemu, 2007). The departments that have functional relationships with material management horizontally are: Production, R&D, Quality control, and Marketing, Finance and Human resources departments. The functional relationships with each department are:-

2.2.8.1 Materials Management and Production Department

Materials Management is responsible for the purchase (supply) of all materials needed by the production department, and the storage and issuance of these materials and records keeping of material movements. Production department makes necessary requisitions for its needs to materials management department of the materials. Materials management department raises a local purchase order for such materials to the finance department (Rihinde, 2005).

2.2.8.2 Materials Management and R&D (Engineering) Department

In order to achieve the major objective of the organization, these two departments should cooperate on matters concerning production design, preparation of specification for the materials, parts and components. They should equally cooperate in the area of value analysis/ engineering and standardization of materials. Materials management may make useful suggestions of substitute materials that may cost less to the engineering department at the production design stage (Sanmath, 2013).

2.2.8.3 Materials Management and Quality Control Department

Quality assurance is ensured by the two departments cooperate and relay useful information to each other by research and development. According to Marta (2008) quality control department usually inform materials management on the best method to be applied to incoming materials and also the criteria for acceptance and rejection of materials that are substandard. Quality control can equally advise materials management on condition under which some items should be stored to avoid deterioration in quality.

2.2.8.4 Materials Management and Marketing Department

Management and marketing department should cooperate in ensuring the profitability of the organization. Materials management ability to obtain the right quality materials at the lowest possible cost, will enable marketing maintain competitive advantage. Consequently there will be increased sales and profit. Marketing department is in position to report back to the materials management department on the customers' reaction to the quality of the product. Marketing is the magnifying lens for all departments by informing them their strengths and weakness how they are serving to their customers and more than their competitors to get excellent profit to the company (Sanmath, 2013).

2.2.8.5 Materials Management and Finance Department

Usually, finance department release fund to materials management (if there is no purchasing department or the purchasing unit is under materials management department) department for purchase of raw materials. Alternatively, payments are made directly to suppliers by the finance

department they have been cleared by materials management department. It is the responsibility of the finance department to audit all the necessary documents for purchase made to avoid fraud before payment is made.

2.2.8.6 Material Management and Personnel (HRM) Department

Both departments cooperate on matters relating to recruitment, training, motivation, promotion and development of staff in the materials management department as field needs highly interested and empowered people. HRM personnel department advises materials management department on the company's personnel policies, wages and fringe benefits. On the other hand, materials management is responsible for the procurement of stationery and office needs of the personnel department.

In a modern organizations, all departments work as one system to achieve the intended goal of the organization to win the game of competition in the free market (global economy). If all departments act as one unit, cost will be minimized and the optimal profit can be achieved successfully.

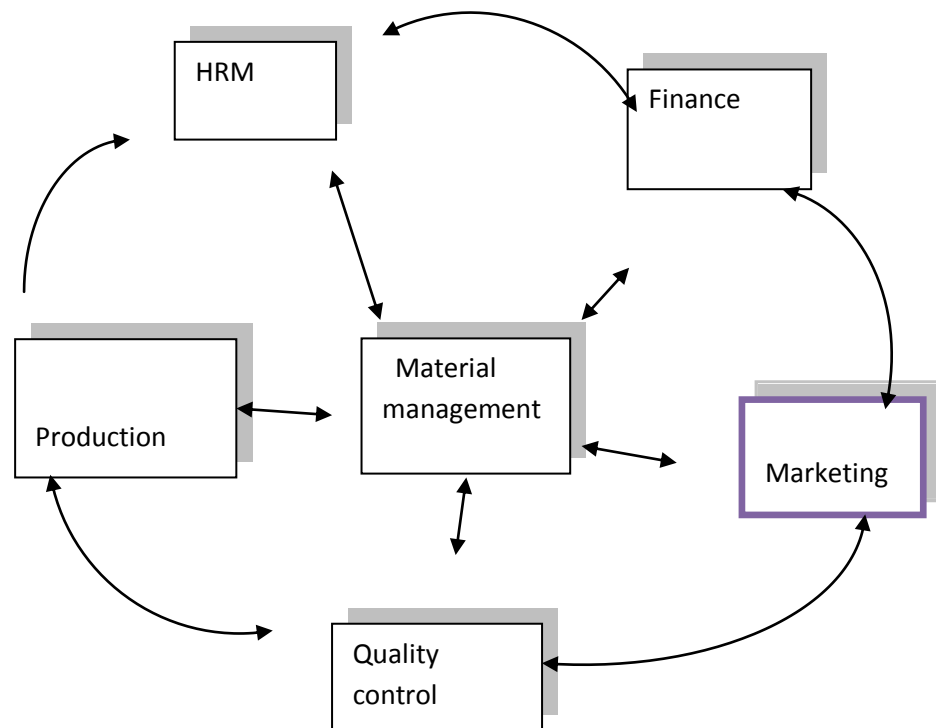


Figure 2.1 shows departmental relation

2.3 Empirical Evidence

Researches show that ineffective material management has a great impact on companies' profitability because it consists about 40-65% Of the total cost spent to run business Enterprises. Most of the time its effect leads companies to have short live in business and shut down.

Nigeria

The study made by (Akindipe, 2005), shows material management problems are as follows:-

1. The inefficient use of production time, labor and other resources due to delays or incessant short down and interruptions during production have become inherent part of operations in many manufacturing organization in Nigeria. This often led to inability to meet customers' order and eventual loss of market shares. Low capacity utilization and loss of revenue as consequence of these problems led to closure of many manufacturing firms in the country.

2. The poor liquidity position of many manufacturing concerns in Nigeria is a matter of concern to many shareholders and stakeholders alike. To hold too much stock than necessary will lead to capital lock-up in inventory of raw materials. The materials held idle in stores have values attached to them; and the likelihood is that the organization will never regain the money in them if they become obsolete and useless.
3. In many manufacturing concerns in Nigeria, there is inadequate provision of good quality manpower in stock maintenance and material management. This is indeed, a serious issue since employees are those charged with the responsibility of monitoring progress and reporting impending insufficiency. They are to ensure that stocks are properly kept and protected against fire and other disaster or loss. The “people” are to ensure efficient use of warehouse facilities and space; keep proper and adequate records (Akindipe, 2005).
4. Stock-out or sudden unavailability is forestalled, low capacity utilization, and inability to meet production targets common problems.
5. The problem of identifying slow-moving stock items; inability to sell obsolete items to recoup capital lock ,acquisition of obsolete items, etc
6. Employment of stack illiterates as store workers who results in problems such as misplacement and dislocation of vital documents, files and stock items.
7. The use of electronic data processing devices will go a long way in removing the problem of inability to use inventory models. Lack of knowledge of the use of quantitative values to produce information is the major hindrance in model application by store personnel.

Ogbadu(2009) also studied and found similar issues towards material management impact on profit on Benue Breweries Limited, Nigeria

His findings were:-

1. Lack of materials as a result of poor relationships with suppliers, the company is often out of stock. This is affecting profitability negatively.

2. There is a positive and significant relationship between materials management problems and the frequent breakdown of the plant.
3. Out-of-stock and lack of materials hinder profitability.
4. There is a problem of profitability achieved due to ineffective management of materials with lack of particular attention on sourcing, receiving, storing and issuing materials.
5. Absence of Prudent management of materials to reduce depreciation, pilferage and wastages.

Ghana

As to the research conducted in cocoa company by (Assiamah, Allotey and Hanson, 2008), most organizations especially in manufacturing and in production do not have materials management department. Management in those organizations are of the view that any department within could be a materials or purchasing manager. They assume that, it is a matter of making sure materials comes into the organization and are issued to production as and when it's needed.

Since there is an absence of materials management concept in these organizations, the departments that are in charge of materials handling report directly to accounts department. According to Carter et al (1993), "the materials management concept has often been neglected when it comes to involvement in forward planning discussions and meetings, and many companies have found to their cost the error of leaving out a major part of the organization so directly involved with operations".

Zenz (1996), explained that, management expect to find purchasing and materials personnel who have the expertise necessary to organize and administer all the activities involved in the materials management functions. He went on to state that but some may lack the in-depth knowledge of specific techniques, particularly in areas of inventory and production control.

According to Carter et al (1996) many organizations training is not seen in its invested light, rather as another cost which reduces profits ". The training must therefore be seen as investments in terms of time, money and energy on the part of the organizational and its management. He

also further explained that, this harmful mind-set is very common in relation to a material which is an indication of neglect by managers of materials as an important factor of the total operations.

India

As to the study of Nair, Oberoi and Sharma (2014), Material management assessment study shows that how materials can affect the company's profitability as it holds major composition of the total sales in the business enterprise.

S.NO	Industries	Average Expenditures on materials on average
1.	Electrodes, rubber goods, cotton and silk yarns, electric motors, sugar, jute, motor vehicles etc.	65-70%
2.	Cotton, textiles, cables, wires and utensils	60-65%
3.	Engineering goods and non-ferrous metals	55-60%
4.	Ship building, cement, chemicals and electricity	50-55%
5.	Pharmaceuticals and medicines	45-50%
6.	Aircraft, fertilizer and steel	40-45 %
7.	Other industries	40%

Kenya

Keitany, Wanyoike and Richu(2014) reviewed theoretical back ground and concepts of material management in their study as follows:-

Barker (1989), identified five key functional areas that materials management cuts across which include purchasing, production and inventory control, quality control, storage and warehousing and physical distribution. Other literatures(Donald, 1975; Why bark& William,1986; Linton et al.,2007) expanded the areas to include forecasting demand and quantity materials requirements, good supplier and customer relationship, indigenous source of supply for foreign materials, developing skills of workers in material management, improved departmental efficiency and

research and development(R&D) in material management. These activities are managed by the material management department. Selection of personnel for marketing, purchasing, inventory control, stores management and materials handling and their training and placement is also to be seen by the materials management department.

Materials are the lifeblood and heart of any manufacturing system and no organization can operate without them. They must be made available at the right price, at the right quantity, in the right quality in the right place and at the right time in order to co-ordinate and schedule the production activity in an integrative way for an industrial undertaking. A manufacturing firm will remain shaky if materials are under stocked, overstocked, or in any way poorly managed (Banjoko, 2000).

According to Navon&Berkovich (2006), the main logistic responsibility in any organization is to formulate master program for the timely provision of materials, components and work- in-progress. Stevenson (2001), explained that logistics, including materials and goods flowing in and out of a production facility as well as its internal handling has become very important to an organization to acquire competitive advantages, as the company's struggle to deliver the right product at the correct place and time. The main aim is to actually promote, with low cost, a flow whose velocity allows the execution of manufacturing process with expected satisfaction level.

Bowersox&Closs (2002), articulated that improvement in continuity of supplies with reduced lead times, will lead to improvement in cooperation and will also enhance cooperation's and communications with reduced duplication of efforts, reduction in material costs and improvement in quality control, which are the main benefits of materials management.

Concept of Materials Management

Materials Management is a tool to optimize performance in meeting customer service requirements at the same time adding to profitability by minimizing costs and making the best use of available resources. The basic objective of Materials Management as explained by Banjoko (2000) and Jacobs et al.,(2009), is to ensure that the right item is bought and made

available to the manufacturing operations at the right time, at the right place and at the lowest possible cost.

According to wild (1995), materials management is a concept which brings together the responsibility for determining the manufacturing requirement that is scheduling the manufacturing processes and procuring, storing and dispensing materials (wild, 1995; Ondiek, 2009). An integrated approach to material management defines it as the function responsible for the coordination of planning, sourcing, purchasing, moving, storing and controlling materials in an optimum manner so as to provide a predetermined service to the customer at a minimum cost.

Chase et al.,(2009), explained the concept of materials management brings in the total systems approach to managing the entire flow of information, materials and services from raw materials suppliers through factories and warehouses to the end user/customer. The study further confirmed that a firm's success depends on how they manage their materials effectively. They indicate that it is important to monitor inventory at each stage because it ties up resources. Therefore, effective materials management is fundamental to the survival of business, industry and economy. The study concluded that material management is necessary to develop skills, update their knowledge, and enhance New Product Development in an organization. Materials Management Department therefore should to support the management of an organization in the production activities such as marketing, selling, promotion and even control of all types of materials for its quantity, quality and cost.

2.4 Conclusion and knowledge gap

The review of the literature discloses the existence of gaps of knowledge in respect of the Impact of material management practice on profitability and the livelihood of business organizations. As per the knowledge of the researcher, there are studies in countries like Nigeria, Ghana, Kenya and India on material management practice problems. Those research findings showed that there is inadequate provision of good quality manpower, lack of knowledge of the use of information application by store personnel and absence of prudent management of materials to reduce depreciation, pilferage and wastage, scrape and surplus disposal management problems. . For instance, studies in Nigeria shows that the material management department is given little

attention (not organized as functional departments as its role played the significant impact on profitability). Finally, while the study is the assessment of material management practice in Medhin commercial PLC, Addis Ababa, Ethiopia, the issue perhaps works for other allied concerns.

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter includes the methodology used in this thesis work and provides information about the research strategy, research design, research location, case study, questionnaire design, questionnaire content, and tests of reliability and validity of questionnaire and the last thing is the process of data analysis.

4.1 The research Approach

The research problems along with the philosophy/methodology would guide the choice of the appropriate research approaches. So this research had used the triangulation approach of methodology (both qualitative and quantitative)

3.2 Research Design

Research design is the overall plan for obtaining answers to the questions being studied and for handling some of the difficulties encountered during the research process. Research design is an action plan for getting information from the sources and may be defined as the initial set of questions to be answered, and there is some set of conclusion (answers) about these questions. A number of major steps, including the collection and analysis of relevant data are taken in the process (Al-Moghany, 2006). The structured questionnaire is probably the most widely used data collection technique for conducting surveys to find out facts, opinions and views. Interviews can be classified according to the degree to which they are structured. In an unstructured or nondirective type of interview the interviewer asks questions as they come to mind. On the other hand, in the structured or directive interview the questions are specified in advance (Agyerum, 2012).

In a quantitative study, the steps involved in conducting an investigation are fairly standard (Al-Moghany, 2006). In this study, interviews, structured questionnaire and site visits were used in the gathering of data. The interviews were adapted to collect detailed information about respondents' experiences and impressions about material management problems in the company in the process of manufacturing, merchandising and rental service rendering. It was also used to collect first-hand information to help in structuring the questionnaires. The questionnaire survey was also adapted to get feedback on opinions of respondents' about material management problems that affect profitability in Medhin Commercial PLC in Addis Ababa.

The site visit observations where the researcher sought to find out how materials were stored and handled in the integrated business operations in the company. Fortunately the researcher was an employee of the company and got the chance to observe each and every function of material management problems in the company for consecutive eight months' time.

Only the warehousing (handling and storage) was supported with photographs due to their nature among the question items included in the questionnaire.

3.3 Sources of data

The study depended on both primary and secondary data. Primary data was made up of first-hand data collected by the candidate through the use of questionnaires, interviews and site visits

(observations). The secondary sources of data were obtained using relevant books, journals, magazines and research papers.

3.4 Research Instrument

The research data were collected mainly through interviews and questionnaires. Field observations through material operations visits were also employed to gather data on material management problems that affect profit optimization opportunity in the company.

3.4.1 Questionnaire Design

The questionnaire design was undertaken to determine the opinion of employees who justify the causes of material management problems in Medhin commercial PLC in Addis Ababa. The questionnaire consisted of two major sets of closed-ended and open questions on the sources and causes of materials management problems. Interviews and site visit were also used to obtain specific information about the problems of the subject under study.

3.4.2 Structure of questionnaire

The questions were constructed using the Likert scale. The respondents were asked to rank on a scale of 1-3 factors that cause materials management problems in the company where Poor =1(one), medium = 2(two) and Good=3(three).

3.4.3 Interview

The structured personal interview was employed because it is simple and economical to collect data from respondents.

This method of collecting information through personal interviews is usually carried out in a structured way based on predetermined questions and of highly standardized techniques of recording (Kothari: 2014).

The purpose of adding interviews is helpful that sometimes problems may be obscure from investigation and they may be easily identifiable through interviews.

3.5 Target Population

The term population refers to the aggregate or totality of all the objects, subjects, or members that conform to a set of specifications. In quantitative studies, the researcher identifies the population to be studied during the planning phase. A smaller population can be studied more extensively at a fixed cost than a larger population, so it is important to decide what population is really of critical importance (Kothari, 2014).

The population of this research included functional 6 managers, 20 store keepers and 70 other employees of the company in three groups to get diversified and trustful information.

3.6 Sample Size Determination

Sampling is the process of selecting representative units of respondents of the study in research investigation. The advantage of using a sample is that it is more practical and less costly than collecting data from the total population (employees). The risk is that the selected sample might not adequately reflect the behaviors, traits, symptoms, or beliefs of the participants (Al-Moghany, 2006).

The sample representatives were selected on 6 departmental managers and 20 store keepers and 70 other employees who have directly or indirectly have participation in Material Management of the integrated business operation (manufacturing, merchandising and Rental service operations).

Therefore, the sample selection was done through purposive selection based and due to their experience and qualifications managers were taken totally(6), store keepers 20(twenty) store keepers as they do have direct involvement with the materials movement and 70(seventy) other workers who are working in production ,distribution and warehousing processes. So, the total sample size is 96(Ninety six) out of the total population of 130 workers of the company. The reason of not using the total number of population is due to inability to respond (34 other workers) the basic functions of Material Management procedures either in the form of questionnaire or interview. So the researcher used in selecting the sample of respondents based on purposive sampling method which covers to the above mentioned numbers.

3.7 Selected Sample respondents

Based on the sampling method and criteria cited above, the researcher selected 96 (ninety six) employees who are working in Medhin Commercial PLC.

3.8 Data Collection

In this research, methods of data collection include questionnaire with personal interview and site visits. The site visits involved observations where the researcher sought to find out how materials were passed the proper material management stages in the process of the company's operations. The case studies spent time (6 months) on the company and observed the flow of material management activities.

The questionnaire survey consist three groups which address causes of materials management issues in the company (procurement and acquisition, storage and warehousing, distribution and control, and scrap and surplus disposal. (The questionnaire is included in appendixes).

3.9 Data Analysis

The sample (96) for this study is reasonable for the total population (130) and to get acceptable responses for questions raised about the company's material management issues. As a result, the analysis had combined all potential groups of respondents (managers, store keepers and other workers) in order to obtain significant results. Data was analyzed by calculating mode, frequency and percentage.

The levels of response are:-

Poor (1), Medium (2) and good (3) Each level only shows the ordinary scale.

The research methodology used in this study was discussed as above. A description of how the questionnaire was administered and the various sections in the questionnaire were highlighted. Subsequently, the statistical tools for data analysis were discussed. With this background, statistical results obtained from the data are discussed in chapter four.

CHAPTER FOUR: ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter reports and discusses the survey findings. After the questionnaire survey was carried out, statistical analyses were undertaken on the responses using various methods described in the research methodology.

4.2 Case study

The use of multiple sources of evidence makes the case study design one of the most powerful research designs. Both primary and secondary data were used for the study. As a primary source, Questionnaires and interviews were administered to employees of Medhin commercial PLC to elicit their views on the Material Management procedures. Secondary data relevant to the study were obtained from books, journals, article reports, internet, thesis as well as working papers.

This case study focused on a private business firm (Medhin Commercial PLC) working integrated business activities under on family management in Addis Ababa more than a decade and which has Material Management problem. . In this part, the respondents were asked to identify and rate the main causes of material management problems. Therefore, 6 managers, 20

store keepers and 70 other workers were participating to respond the questionnaires out of total population (130 employees).

Table 4.1: case study information

It is not uncommon issue that business owners run profit generating activities under one management system by categorizing their cost centers for each business unit. The management of such business is led by highly qualified and well experienced people. If this is done simply by the so called business owners, the management of resources causes a great deal of problem that decline profitability of business firms. So, Medhin Commercial PLC is not exceptional to these problems. Any way the company’s current operations are summarized as follows

Table 4.1 Case study information

Business Firm: Medhin commercial PLC		
Operational Activities		
Manufacturing	Merchandising	Rental service
<ul style="list-style-type: none"> - Ceiling production -Vertical blinder -Frame 	<ul style="list-style-type: none"> -OfficeEquipment sales -Electronic material sales -House hold materials sales 	<ul style="list-style-type: none"> -Palace rental service -Tent rent -Feast item rent -Special Occasions preparation services

4.3 Results

This section describes the results that have been obtained from ninety six (96) respondents through questionnaires. Analysis has been made using Excel and statistical package for social sciences (SPSS). The results are prepared to present the information about the sample size, response rate and the business firm characteristics. It also included the analysis of factors affecting the material management problems based on their frequency, Mode and percentage.

4.4 Part 1: General Respondents Information

4.4.1 Classification of sample size

Table 4.1 shows the characteristics of the sample size for the respondents. The sample consists of managers (6.25 %), store keepers (20.8 %) and other workers (72.9%).

Table 4.1 Respondents' sample size

S.No.	Respondents	Number	Percent
1.	Managers	6	6.25%
2.	Store Keepers	20	20.8%
3.	Other workers	70	72.91%

4.4.2 Response rate

Out of the 96 questionnaires distributed on the company employees, 80 responses were received with 83.33% return rate in this study. The other 16 questionnaires as follows: 9 (9.3%) have not been received, 2(2.08%) are uncompleted and 5 (5.20%) are illogical or incorrect responses, see table 4.2.

Table 4.2: Response rates among the groups of Respondents

Typeof respondents	Responded	Not-been received	Uncompleted	Incorrectly responded
Managers	6	-	-	-
Store keepers	18	2	-	-
Other workers	56	9	2	3
Total	80	11	2	3

Source: Survey data, 2016

Table 4.2 showed the response rates among the groups respondents, these rates are 100% managers , 90% Store keepers, 20% other workers are returned. 10% of store keepers, 12.85% of other workers did not return. 2.85% and 4.28% of other workers gave uncompleted and incorrect

responses. The reasons of not returned, uncompleted and incorrect responses are seen from the low level educational level respondents who lack the knowledge of importance of it. So the result would be good because the researcher had found 83.33% responses for his inquiry from the respondents.

4.4.3 Respondents Gender

The composition of all genders' issue is very essential for the reliability of responses. The research process addressed respondent genders are 45(56.25%) male respondents and 35(43.75%) female respondents as table 4.3 showed. The majority of the respondents were male respondents.

Table 4.3: Respondents Gender

Respondents	Frequency	Percent
Male	45	56.25%
Female	35	43.75%

Source: Survey data 2016

4.4.4 Respondents' experience

Table 4.4: Respondents' Work Experience

Experience(in years)	Frequency	Percent
0-2	20	25%
2-4	25	31.25%
4-6	15	18.75%
Above 6	20	25%

Source: Survey data 2016

About 25% of respondents have 0-2 years of experience and 31.25 % of them have 2- 4 years of experience and while 43.75 % of them have above 4 years of experience.

4.4.5 Respondents' Educational Level

As to the respondent's educational level, 6(7.5%) are diploma and degree holders in managerial level, 18(22.5%) are store workers with educational level of grade 12 and

certificates, 56(70%) are other workers having different educational levels as table 4.5 shows. This showed that the company is using low level qualification especially in the material management department which requires the higher qualification to manage resources wisely and efficiently.

Table 4.5 respondents' Educational Level

Respondents	12 Grade	Certificate	Diploma	Degree holder	Total
Managers	-	-	2	4	6
Store keepers	12	6	0	0	18
Other workers	36	15	5	0	56
total	48	21	7	4	80

4.5 Assessment of Material Management

Factors that hinder business firms from optimizing their profits are multifaceted and the sources of them are some internal (possible to manage by effective management) and others are external (needs more effort to manage). But the Material Management problems are most of the time are the internal problems that can be raised due to inefficient Material Management capacity in business organizations. As discussed in the literature review problems can be raised in six categories of material management issues and assessed by this research paper as follows:

Theme 1: Purchase and acquisition issues

Respondents were asked to respond purchase related factors which are considered to be cause of material management problem arising from purchase and acquisition issues by using likert scale (based on ordinal scale). The argument of the data analysis is based on poor (1) and (2) Medium good (3) towards each factor of purchase and consequently has influence on material management of business organizations.

Table 4.6 shows the frequency distribution and percentage of all the 8 causes of material management problem given to be evaluated by the respondents of the company. This means that all the eight factors are considered as causes of material management problems due to purchase and acquisition procedures.

Table 4.6 Purchase and Acquisition issues

Purchase and acquisition issues:	Poor(1)		Medium(2)		Good(3)	
	No.	%	No.	%	No	%
The company's material management to fulfill the basic needs of adequate materials on hand when needed ,with the lowest possible cost	48	60.00	10	12.5	22	27.5
The effort exerted by material management department directing and organizing to the material resources effectively and efficiently	65	81.25	10	12.5	5	6.25
The capacity of the purchasing department to achieve the company's intended goal	77	96.25	3	3.75	-	-
To what extent the company's purchasing department is systematic (system based on purchase of raw materials, merchandise and rental goods etc)	74	92.50	2	2.50	4	5.00
To what extent the purchasing department has a knowledge of store information such as minimum stock level, lead time requirement to procure materials, Economic buying requirements and free of capital lock up inventory problems, etc	80	100.00	-	-	-	-
To what extent the purchasing department made purchases based on the principles of 5R's	70	87.50	3	3.75	7	8.75

The extent of purchase documentation when materials purchased ,stored, used or moved from one place to another	73	91.25	-	-	7	8.75
The relation of purchase department with store	71	88.75	5	6.25	4	5.00
Total	558	87.18	33	5.15	49	7.65

Source: Survey data 2016 by the researcher

With respect to the question exerted to respondents to rate the company's material management department how to fulfill the basic needs of adequate materials on hand when needed, with the lowest possible cost, the majority 48(60%) rate as poor,10(12.5%) medium and the lowest number of the respondents 22(27.5%) rated as good. This implies that the material management department is poor in doing so.

The question which was extended to know how Material Management department could direct and organize the material purchase effectively and efficiently, the respondents replied as 65(81.25%) poor, 10(12.5%) medium and 5(6.25%) good.

For the question the capacity of purchase department to achieve the company's intended goal, 77(96.25%) responded as poor, 3(3.75%) medium and none of the respondents rated as good. The implication of this indicated that the purchase department was unable to achieve the intended target of the company properly.

To what extent the company's purchasing department is systematic (system based on purchase of raw materials, merchandise and rental goods etc), 74(92.5%) poor, 2(2.5%) medium and 4(5%) good.

Looking at the question requested the respondents to rate whether purchasing department has a knowledge of store information such as minimum stock level, lead time requirement to procure materials, Economic buying requirements and free of capital lock up inventory problems, etc, they unanimously replied as poor 80(100%).

A further result shows that 70(87.5%) poor ,3(3.75%) medium and 7(8.75) good for the question extended to what degree the purchasing department makes purchases based on the principles of 5R's(the right price, the right quantity, the right quality, on the right time, the right place or sources).

The extent of purchase documentation when materials purchased, stored, used or moved from one place to another, the majority of respondents 73(91.25%) responded as poor and the remaining 7(8.75%) rated as good documentation.

Finally, the relation of purchase department with store was rated as 71(88.75) poor, 5(6.25%) medium and 4(5%) good respectively. As the result of each inquiry from table 4.1 shows, the purchase procedures of the company is poor and unorganized.

Business firms should make economical purchase because it helps for avoiding production inefficiency, increase financial risk sharing between customers and suppliers, increase ideal capacity and resources utilization, increase possibility of scrap utilization and ability to manage resources (Obgsdu, 2003) but the research result should that the company’s purchase procedures were rated as poor by the majority (87.18%) and 5.15% and 7.65% medium and good respectively. The indication of this result showed that the company’s purchase was disorganized and system less which was exposed for misuse of resources.

Theme 2: Storage procedures issues

Business firms may not consume all materials at a time and they are forced to hold them for certain periods for later consumption or sells. In the case of this, the storage procedure needs professionals to arrange them accordingly. Business firms might not give attention for this issue as the main activity of the business knowingly or unknowingly. The consequence of poor storage system forces business firms to incur high cost from their earnings due to damage and other factors. To know how the company under study is processing the storage of materials in its activities, certain questions were asked to confirm or reject by the respondents the above mentioned problems in the company.

Table 4.7 shows that rating of respondents of the 11 factors that causes material management problems for an integrated business firm as follows:

Table 4.7 Storage Procedure issues

Storage Procedures issues:	Poor(1)		Medium(2)		Good(3)	
	No.	%	No.	%	No.	%
The extent of the company storage policy(system) to manage maximum and minimum stock level handling	53	66.25	27	33.75	-	-

The characteristics of storage capacity, ease of access to storage location, the complexity of internal structure and the level of technology	77	96.25	-	-	3	3.75
Over stocking problem handling policy	44	55.00	16	20.00	20	25.00
Under stocking problem solving capacity	10	12.50	-	-	70	87.50
Obsolete items handling procedures	80	100.00	-	-	-	-
The extent of Storage and store records go hand in hand	69	86.25	11	13.75	-	-
The extent of material handling in the store	79	98.75	1	1.25	-	-
The proper authorization of material receipt and issuance from store	74	92.50	3	3.75	3	3.75
Stock holding procedures for conducive ordering size, ordering time, quantity left ,etc at a given time	70	87.50	3	3.75	7	8.75
The fitness of store people to avoid misplacement and dislocation of vital documents ,files and stock items	55	68.75	18	22.50	7	8.75
Categorical storage of materials such as ABC (cost wise) system or movement wise arrangements.	80	100.00				
total	691	78.52	79	8.90	110	12.50

Source: Survey data 2016

The research result shows that the extent of the company storage policy (system) to manage maximum and minimum stock level handling was rated as poor 53(66.25%) and medium 27(33.75%) . For the question, the characteristics of storage capacity ease of access to storage location, the complexity of internal structure and the level of technology, the response result shows 77(96.25%) poor and 3(3.75%) good. As to Over stocking problem handling policy the responses were 44(55%) poor, 16(20%) medium and 20(25%) good. Under stocking problem solving capacity of the company was rated as good 70(87.5%) and 10(12.5) rated as poor. So, the company's under stocking problem is said to be minimum

As the research result shows the company's obsolete items handling procedures, in addition to the observation of the researcher, views' of respondents were gathered and the result approved that 80(100%) rated as poor or the company's store is found as full of obsolete items which carried high cost.

For the equation exerted to the respondents how the storage and its records is going, the questionnaire result shows that 67(86.25%) as poor and 11(13.75%) medium. Even though up-to-date store record is very essential for business firms for effective material control purpose, the

storage and its records doesn't go together in one way another. The extent of material handling in the store was rated as poor by 79(98.75%) and 1(1.25%) as medium. It is possible to say that the material handling in the store is discouraging issue in the company.

For effective material management control purpose, the receipts and issuance of materials should get proper authorization. To this end an equation was extended to respondents to give their agreements or disagreements, the result shows that 74(92. 5%) as poor and 3(3.75%) medium and 3(3.75%) good.

Stock holding procedures for conducive ordering size, ordering time, quantity left, etc at a given time, the response rates were 70(87.5%) as poor, 3(3.75%) medium and 7(8.75%) good. The fitness of store people to avoid misplacement and dislocation of vital documents, files and stock items, 55(68.75%) gave their responses as poor, 18(22.5%) medium and 7(8.75%) good.

The last equation was asked how materials are stored, their response for Categorical storage of materials such as ABC (cost wise) system or movement wise arrangements (fast, slow and nonmoving items) arrangements or other systems shows the company doesn't have such procedures. The result of the research equation shows all argued that it is poor 80(100%) and none of the respondents rate as medium and good.

The total evidence collected from each inquiry (78.52%) the responses showed that it is poor and inefficient while others 8.9% and 12.5% confirmed medium and good respectively. The implication of the research result assured that the company's storage organized unsystematically and not supported by information technology. .

Theme 3: Stock control issues

Stock control is needed to ensure that the business firm has the right goods on hand to avoid stock-outs, to prevent shrinkage (spoilage/theft), and to provide proper accounting. Many businesses have too much of their limited resource, capital, tied up in their major asset. To assess how the company is running the stock control system, the following questions were raised to the respondents to rate accordingly. Their responses are scored as follows (table 4.8):

Table 4.8: shows the respondents' rate of responses on stock control issue due to material management

Table 4.8 Stock Control Issues

Stock Controlling procedures issues:	Poor(1)		Medium(2)		Good(3)	
	No.	%	No.	%	No.	%
The extent of the company's stock control system is conducive for optimal stock level handling that can contribute for cost reduction and profitability.	58	72.50	17	21.25	5	6.25
The rationality of the company's stock control system that avoids stock holding cost , obsolescence , theft, etc.	80	1000	-	-	-	-
The contribution of stock control for demand variation protection, maintaining smooth flow of production and service providing	62	77.50	18	22.50	-	-
total	200	83.33	35	14.58	5	2.08

Source: Survey data 2016

58(72%) respondents rated the extent of the company's stock control system that contribute for optimal stock control system which contribute cost reduction as poor ,17(21.5%) medium and 5(6.25%) rated as good. The rationality of the company's stock control systems that avoid stock holding cost, obsolescence and theft 80(100%) responded poor. On the other hand for the request of the contribution of stock control for demand variation protection, smooth flow of production and service providing 62(77.5% responded as poor and others 18(22, 5%) rated as medium. The overall study result (83.33%) approved that the company's store control is poor and inefficient. The effect of this, strongly affected the company's profitability and efficient utilization of its resource at optimal point.

Theme 4: Scrape and surplus disposal management issues

Disposal of scrap and surplus are very important aspect of material management function, and if it is effectively done can contribute to the profitability of the firm as equal as purchases' contribution to profit. Scrap according to Carter (1982) is the residue of process materials left behind during production while surplus is the materials from purchases which were not wholly consumed in the production. To minimize cost of disposal, scrap and surplus materials, managers should return it to suppliers, selling to suppliers, selling to other firms or selling to other dealers. Regarding this issue, certain questions were raised to employees and their responses showed in Table 4.9 as follows:-

Table 4.9: Scrape and surplus disposal management issue

Scrape and surplus disposal management issues:	Poor(1)		Medium(2)		Good(3)	
	No.	%	No.	%	No.	%

The company's policy to manage scrape , surplus & disposal of materials	71	88.75	5	6.25	4	50.00
Dead stock accumulation management in the company	78	97.50	2	2.50	-	-
The trends of the material management to declare materials are evaluated to be surplus and obsolete periodically (such as monthly, quarterly, semiannually or annually)	50	62.50	10	12.50	20	25.00
The role of the material manager to submit the reports of surplus and obsolete materials to board to get the approval to dispose	50	62.50	17	21.25	13	16.25
The company's tradition to recycle the scrapes and defected materials in the production process effectively and efficiently	55	68.75	15	18.75	10	12.50
The company's potential to recycle and reuse the scraps to minimize cost	45	56.25	25	31.25	10	12.50
Total	349	70.83	74	15.41	57	11.87

Source: Survey data 2016

Among the questions raised to respondents regarding to scrape and surplus disposal management of the company, the result obtained showed from each question such as the company's policy to manage scrap and surplus disposal management 71 (88.75%) responded as poor and 5(6.25%) medium and the other 4(5%) good to this issue, to the request of dead stock accumulation management 78(97.5%) rated as poor and 2(2.5%) medium; periodic evaluation of materials to be surplus and obsolete 50(62,5%) poor,17(21.25%) medium and 13(16.25%) good; recycling scraps and surplus effectively and efficiently 55(68.75%) rated as poor,15(18.75%) medium and 10(12,5%) good.

The company's potential to recycle and reuse the scraps to minimize cost, the response rates were 45(56.25%) poor, 25(31.25%) medium and 10(12.5%) good. The total response of the respondents' approved that company's disposal and surplus management practice was responded as poor by the majority of respondents (70.83%) and it is possible to deduce that the company did not benefit on this issue as its contribute for cost reduction is less.

Theme 5: Distribution (Transportation)

Employees of the company were asked to respond to the distribution (transportation) facilities of the company. The frequency response of each sub-factors of the distribution and practices group, which causes material management problem, is presented in Table 4.10.

Table 4.10: Distribution (Transportation)

Distribution(Transportation) Issues:	Poor(1)		Medium(2)		Good(3)	
	No.	%	No.	%	No.	%
The extent of the company's material distribution processes not liable for misuse, wastage or theft.	45	56.25	27	33.75	8	10.00
Minimizing effort of the company on cost of distribution (transportation) to the company's profitability	60	75.00	17	21.25	3	3.75
The transportation facilities to transfer materials from one operation to another operation safe fully and smoothly	47	58.75	25	31.25	8	10.00
Total	152	63.33	69	28.75	19	7.90

Source: Survey data 2016

From the results of the score, it is possible to understand that 45(56.25%) rated as poor, 27(33.75%) medium and 8(10%) good for company's material distribution process not liable for misuse, wastage and theft ; The minimizing effort of the company on cost issues 60(75%) rated as poor, 17(21.25%) medium and 3(3.75%) agreed as good. For the transportation facilities to transfer materials from one operation to another safe fully and smoothly, the respondents rated as 47(58.75%) poor, 25(31.25%) medium and 8(10%) good. The distribution system of the company was rated by the total respondents as poor (63.33%), medium (28.75%) and good (7.9%). The implication of this result showed that the traffic (movement) of goods from one unit to another was not well established and its contribution to the profit of the company was insignificant.

Theme 6: Departmental Relation Factors

Relation of material management with other departments issues:	Poor(1)		Medium(2)		Good(3)	
	No.	%	No.	%	No.	%
How do you rate the relationship the material management to supply the required materials of the right quality and quantity on the right time to other departments?	24	30.00	35	43.75	21	26.25
How fast the material management is to respond the production department's request on time?	77	96.25	3	3.75	-	-
How fast the finance department to fulfill the material managements request?	66	82.50	11	13.75	3	3.75
How do you rate the interdepartmental relationships of the company?	57	71.25	17	21.25	6	7.50
The relationship b/n material management						

and marketing(the magnifying lens)	35	43.75	35	43.75	10	12.50
total	259	64.75	101	25.25	40	10.00

Source: Survey data 2016

A role plaid by the material management department in organizations as a coordinating and cooperating role is unquestionable to companies which run the integrated business activities. Questions raised to the respondents to rate the supply of quality materials on right time, 24(30%) of the respondents responded as poor, 35(43.75%) medium and 21(26.25%) good.

How fast the finance department to fulfill the material management's request, the response rates was 66(82.5%) poor, 11(13.75%) medium and 3(3.75%) good. For the equation asked to know the interdepartmental relations, 57(71.25%) rated as poor, 17(21.25%) medium and 6(7.5%) good.

For the last equation asked to know the relationship b/n material management and marketing (the magnifying lens for all departments by informing them their strengths and weakness how they are serving to their customers and more than their competitors to get excellent profit to the company), 35(43.75%) rated as poor, 35(43.75%) medium and 10(12.5%) good.

The overall response result showed that 64.75% of respondents rated as poor, 25.25% medium and 10% good respectively. So, it is possible to say that the departmental role of material management was poorly organized and did not play its functions as coordinating and cooperating role even though it had a great impact on profitability of the company.

4.6. Assessment of Material Management problems through observation and respondents' interview

Based on site visits and interviews , Material Management issues in the company is infective and exposed for many factors that hinder profit optimization. Ineffective material management procedures in the company as per observation and the interviews are many folds even though the respondents gave controversial response through questionnaires. The photographs taken during observation approved this situation.

4.6.1 Storage and handling of materials

Materials manager is responsible for storage location, layout and equipment, mechanical handling, stores classification, coding and cataloguing, receipts of purchased items, inspection of materials, protection of stores, issue of production, provision of cost data, stock records and disposal of obsolete goods as its primary role. But the result of observation shows the reverse of this statement.

During observation, materials are stored all together in one store which is difficult for identification and controlling purposes. The storage problems of the company are critical and difficult to manage as per the systematic approach of material management. Materials are stored everywhere without the advisable systems of material arrangement policies of the business concern. One can conclude that company doesn't have proper storage place for each business unit separately.

From manufacturing plant unit

A) Production Floor is used as a storage area – in these area materials (finished goods, raw materials and semi finished goods may store until the next process begins but the company is using as a permanent store and delivery to customers and branches are made here. During the researcher's observation, materials (finished goods and raw materials) are stored in the walk ways, veranda and everywhere that is difficult to manage and control as a business operation. When materials are audited the quantities purchased must be reconciled with quantities consumed and on hand. To do this proper record of stock movement must be there recorded either manually or computer aid mechanisms. When the company's material management is observed, Materials are put in mixed condition and one can't identify which material is used for which purpose. The contribution of material management in this company is ignored and run by non professional employees. As materials need to be put systematically for sorting, identifying and controlling, accountability, they should have proper place rather than putting them in production floor, walk ways and at verandah.

B) Vertical Blinder production floor is used as a storage area of many materials (such as finished goods, raw materials, rental goods and other unnecessary goods with the department).

C) Plastic scrap materials are very important in plastic production because they are recyclable for reuse if they are used properly and wisely but the company's material

management to this end gave little attention even though plastic raw materials are imported from abroad by hard currency. As scraps are very essential to minimize production cost, it must be stored properly and wisely.

D) Rental business is another income generating unit and many materials are being used to render the service to customers as equal as other service providers. But the company's decoration items are stored all together without coding and becoming difficult to easily identify for rendering service

E) The Rental rendering service (the white Engle palace) was also observed as rental service providing unit and it was found that it was providing mixed services for the owners of the business. As observed by the researcher, the service of the palace is shifted to multi-dimensional purposes (it serves as manufacturing plant, residential and Storage area of many items inside). Its verandah is being used as finished goods and scrap material storage area.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter includes the results of the research and core findings of the Material Management practice problems of the Medhin Commercial PLC. Questionnaires were distributed for 96 employees to rate the material management practice (purchase, storage, stock control, distribution, disposal and surplus management and departmental relations among functional units). The results of the finding were summarized, concluded and recommended as follows:

5.1 Summary of Findings:

- A) The findings showed that the company's purchase procedure was rated as poor and inefficient by the majority (78.52%) of respondents which lack systematic purchase policy and guideline internal control to avoid misuse of material resources.
- B) 83.33% of the respondents conformed that the storage procedure of the company system less and unorganized for effective utilization and identification of materials availability and misuse as it lack proper documentation procedures.
- C) Due to lack of systematic storage and recording procedure in the company, materials are not easily traceable. The company is exposed for stock tied up cost, obsolete items and that lead the company for high material cost holding.
- D) The investigation of the study assured that the company did not use the economical benefit of scrapes and surplus materials for cost reduction except hording them in store as their impact on the economy and society are so influential..
- E) The coordinating and cooperating role of the material management department in the company is rated as dissatisfactory by the majority of respondents (70.83%) due to lack of experienced people assigned to run the material department effectively and efficiently.

5.2 Conclusion

Based on the above summary of the research results, the following conclusions are made:

- ✚ The material management practice of Medhin Commercial PLC (purchase and acquisition procedures, storage procedures, stock control, distribution, disposal and surplus management) was inefficient even though it plays the major role in profitability.
- ✚ As efficiency of material management practice could be achieved by skilled and professional manpower assignment in the department, the company was not doing this. Rather the company's employees engaged in material management activities are low skilled and retired who lack the basic knowledge of material management practice principles. Consequently, these problems might lead the company not be profitable and incompetent in the business world.

5.3 Recommendation

Based on the above summary and conclusion, it is advisable to recommend the company to improve its material management practice problems.

Material Management activities are multifaceted (all sided) which cover the materials requirements planning, purchasing, material planning, storage, inventory control, materials supply, transportation and materials handling.

Materials handling, packaging, warehouse planning, accounting, scrap, surplus and obsolete materials disposal, finished goods safety and care are also the activities managed by the materials management department.

Therefore, the following recommendations have been made to improve the application of material management practices in the company and in similar other companies.

- ✚ The company should improve the purchase procedures so as to make economical purchase that is based on 5R's principle to determine the minimum stock level of raw materials; to carry the production process continuously and to avoid low capacity utilization, inability to meet production targets.
- ✚ As integrated business organization, the company should ensure efficient use of warehouse facilities and space to each business activities so as to provide reliable service

to customers that excel from its competitors instead of hoarding all items in one storage area that is difficult to identify in their presence and misuse.

- ✚ For materials Management purpose, the company is advised to prepare separate storage place for raw materials, finished goods and rental goods for efficient stock controlling purpose. Each store employee should be accountable for misuse, breakage and theft.
- ✚ For the purpose of cost reduction and environmental protection, company should recycle scrapes and dispose obsolete materials. The research result showed that the company is poor in doing so in this issue and advised to improve such situations in the business operations as they contribute for storage space shortage and incur additional cost to manage them accordingly.
- ✚ As the distribution (transportation) net work of the company was rated as poor by the majority of respondents and it might be exposed for materials misuse, breakage and unnecessary loss during distribution to each business outlet due to little attention given to materials management role in distribution, the company should prepare safe transportation facilities to deliver items without any problem to the customer otherwise customers will go elsewhere.
- ✚ It is advisable to the company to reorganize the material management practices by employing professionals or giving intensive training for the existing employees so as to render effective and efficient material management practice in all its business operations.

5.4 Implications for further study

There are a number of issues which deserve further research study. This thesis focused on the assessment of material management practice in private company (Medhin Commercial PLC). The relevance of the findings perhaps is limited to certain issues of one company working with low level skilled manpower without system established. So this issue needs further study on the governmental institutions and its impact on country's economy.

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Appendix: I

St. Mary University
School OF GRADUATE STUDIES

Questionnaire

Assessment of material management problem in private firms: A case study in Medin commercial PLC

Dear Sir/Madam,

I, Berhanu Zelalem, am currently doing my master's degree in Business Administration at St. Mary University. My research title is the assessment of Materials Management problems of Business Firms: The Case of Medin Commercial PLC. The purpose of this questionnaire is to get views of respondents on how the company's Materials management is being conducted. All the information collected through this questionnaire will be used for the research purpose only and treated with at most confidentiality. It has no any administrative values and/ or will not be used for decisions that might affect your personal life. Therefore, your genuine, honest and prompt response is a valuable input for the quality and successful completion of the research project.

General Instruction

- There is no need of writing your name
- Please encircle your answers from given alternatives in the Likert scale for part II.

Part I: Background Information

1. Sex: _____

2. Work experience: _____

3. Qualification: _____

4. Position: _____

Part II: Materials Management Related Issues

Please indicate the extent to which you agree or disagree with each statement by encircling a correspondent number :Poor (1), Medium (2), Good (3).

I	Purchasing Issues:	Please encircle your answer!		
1.1	The company's material management to fulfill the basic needs of adequate materials on hand when needed ,with the lowest possible cost	1	2	3
1.2	The effort exerted by material management department directing and organizing to the material resources effectively and efficiently	1	2	3
1.3	The capacity of the purchasing department to achieve the company's intended goal	1	2	3
1.4	To what extent the company's purchasing department is systematic (system based on purchase of raw materials, merchandise and rental goods etc)	1	2	3
1.5	To what extent the purchasing department has a knowledge of store information such as minimum stock level, lead time requirement to procure materials, Economic buying requirements and free of capital lock up inventory problems, etc	1	2	3
1.6	The relation of purchase department with store	1	2	3
1.7	To what extent the purchasing department made purchases based on the principles of 5R's(the right price, the right quantity, the right quality, on the right time, the right place or sources)	1	2	3
1.8	The extent of purchase documentation when materials purchased ,stored, used or moved from one place to another	1	2	3
II.	Storage procedures:			
2.1	The extent of the company storage policy(system) to manage maximum and minimum stock level handling	1	2	3
2.2	The characteristics of storage capacity, ease of access to storage location, the complexity of internal structure and the level of technology	1	2	3
2.2	Over stocking problem handling policy	1	2	3
2.3	Under stocking problem solving capacity	1	2	3

2.4	Obsolete items handling procedures	1	2	3
2.5	The extent of Storage and store records go hand in hand	1	2	3
2.6	The extent of material handling in the store	1	2	3
2.7	The proper authorization of material receipt and issuance from store	1	2	3
2.8	Stock holding procedures for conducive ordering size, ordering time, quantity left ,etc at a given time	1	2	3
2.9	The fitness of store people to avoid misplacement and dislocation of vital documents ,files and stock items	1	2	3
2.10	Categorical storage of materials such as ABC(cost wise) system or movement wise arrangements(such as fast, slow and nonmoving items) arrangements or other systems	1	2	3
III.	Stock control:			
3.1	The extent of the company's stock control system is conducive for optimal stock level handling that can contribute for cost reduction and profitability	1	2	3
3.2	The rationality of the company's stock control system that avoids stock holding cost , obsolescence , theft, etc	1	2	3
3.3	How do you rate the company's material control system that contribute to supply the market new ,fashionable and color full materials for the market more than its competitors	1	2	
3.4	The contribution of stock control for demand variation protection, maintaining smooth flow of production and service providing	1	2	
3.5	How do you rate the company's material control systems with other that you know before?			
3.6	How do you rate the company's stock control system that can provide the material management department to guide what, when, how much to buy of each color, size and price?	1	2	
IV.	Scrape and surplus disposal management:			
4.1	The company's policy to manage scrape , surplus & disposal of materials	1	2	3
4.2	Dead stock accumulation management in the company	1	2	3
4.3	The trends of the material management to declare materials are evaluated to be surplus and obsolete periodically (such	1	2	3

	as monthly, quarterly, semi annually or annually)			
4.4	The role of the material manager to submit the reports of surplus and obsolete materials to board to get the approval to dispose	1	2	3
4.5	The company's tradition to recycle the scrapes and defected materials in the production process effectively and efficiently	1	2	3
4.6	The company's potential to recycle and reuse the scraps to minimize cost	1	2	3
V.	Distribution(Transportation) procedures:			
5.1	The extent of the company's material distribution processes not liable for misuse, wastage or theft.	1	2	3
5.2	Minimizing effort of the company on cost of distribution (transportation) to the company's profitability	1	2	3
5.3	The transportation facilities to transfer materials from one operation to another operation safe fully and smoothly	1	2	3
VI	Relation of material management with other departments:			
6.1	How do you rate the relationship the material management to supply the required materials of the right quality and quantity on the right time to other departments?	1	2	3
6.2	How fast the production department is to respond the material management's request on time?	1	2	3
6.3	How fast the finance department to fulfill the material managements request?	1	2	3
6.4	How do you rate the interdepartmental relationships of the company?	1	2	3
6.5	The relationship b/n material management and marketing (the magnifying lens for all departments by informing them their strengths and weakness how they are serving to their customers and more than their competitors to get excellent profit to the company)	1	2	3

Part III. Open Ended Questions:

7. Give the shortest answer for the following open ended questions

What are the basic material management problems of the company?-----

8. What solutions do you suggest if the company has material management problems that hinder profitability? -----

Thank you very much!

ሀ	ግዥን በተመለከተ(Purchase):	አባዘዎ መልሱን በመጠቀም ለመጠቀም ለመልሱ		
		1	2	3
1	የንብረት አስተዳደሩ መሠረተዋ ገቢዎችን በተመጣጣኝ ዋጋ የማቅረብ አቅም	1	2	3
2	የንብረት አስተዳደሩ ድረጅቱ ትረፍ አንዲያገኝ ዕቅድ የማውጣት፣ የመምራት እና የማደራጀት አቅም	1	2	3
3	የንብረት ግዥ ክፍል የድረጅቱን አላማ የማሳካት አቅም	1	2	3
4	የግዥ ክፍል ጥሬ ዕቃን፣ ለሽያጭ አገልግሎት የሚውሉ ዕቃዎችን እና ለክራይ አገልግሎት የሚውሉ ዓቃዎችን በወቅቱና ዕቅድ በተሞላበት ሲስተም ተመሥርቶ የመግዛት አቅም	1	2	3
5	የግዥ ክፍሉ አዋጭ ግዥዎችን ለመፈጸም መቼ ምን መግዛት እንዳለበት እና ያለአስፈላጊ የንብረት ክምችት የአንድ ዕቃ ስንት በመጋዘን መግዛት እንዳለበት እና ያለአስፈላጊ የንብረት ክምችት አንዳይኖር ለማድረግ ያለው ዕውቀትና ኢንፎርሜሽን	1	2	3
6	የግዥ ክፍሉ ከመጋዘን ሐላፊው ጋር ያለው የሥራ ግንኙነት ሂደት መጠን	1	2	3
7	የግዥ ክፍል ዕቃዎች ሲገዙ በትክክለኛው ዋጋ፣ ጥራት፣ መጠን እና ቦታ የማስገዛት ችሎታ	1	2	3
8	የድረጅቱ ንብረት አስተዳደር ክፍል ዕቃዎች ሲገዛለት እና ሲከዘን ፡ ከቦታ ቦታ ሲያንቀሳቃስ ያለው የንብረት ጥንቃቄ	1	2	3
ለ	የንብረት አቀማመጥን በተመለከተ(storage)			
9	የድርጅቱ ንብረት አስተዳደር አንድ ንብረት በመጋዘን ውስጥ ሲቀመጥ ከፍተኛና ዝቅተኛ መጠን የማዎቅ ክሎት	1	2	3
10	የድርጅቱ መጋዘን ንብረት የመያዝ ዐቅም፡ በቀላሉ አቃዎችን ለማግኘት አመችነቱ ፡የውስጥ አደረጃጀቱ አመች መሆን እና የሚጠቀምባቸው ተክኖሎጂ ለሥራ አመች መሆን፡	1	2	3
11	በግዥ መካከን ውስጥ ያለው ያለአስፈላጊ ንብረት ክምች ያለው ተጽኖ	1	2	3
12	የድርጅቱ ንብረት ክፍል ለደንበኞች ተገቢውን አገልግሎት ለመስጠት ያለው የንብረት አቅርቦት አቅም	1	2	3
13	በድረጅቱ የንብረት አስተዳደር ያረጁና ያፈጁ ንብረቶችን በወቅቱ ከመጋዘን አንዲወገዱ የማድረግ ተነሳሽነት	1	2	3
14	የድርጅቱ መጋዘን አያያዝና የንብረት አመዘጋገብ በጥምር የማስኬድ ሁኔታ	1	2	3
15	የድርጅቱ መጋዘን ንብረቶችን በተገቢው መንገድ ለማስቀመጥ ያለው አደረጃጀት	1	2	3
16	የድርጅቱ ንብረቶች ወደ መጋዘን ሲገቡም ሆነ ሲወጡ በሚመለከተው ሃላፊ ተፈርመው አንዲወጡ ያለው የአሰራር አደረጃጀት	1	2	3
17	የድርጅቱ መጋዘን ንብረቶችን በመጠን በጊዜና ቀሪ ንብረቶችን በተገቢው	1	2	3

	ስዓት ለማወቅ የሚያስችል የአደረጃጀት አመችነት			
18	በንብረት አስተዳደር ክህሎት ችግር ምክናየት የንብረት ዶክመንቶችን፣ ንብረቶችን ለማግኘት ያለው ችግር ተጻኖ	1	2	3
19	የድርጅቱ መጋዘን ንብረቶችን በዋጋ እና ባላቸው አንቅስቃሴ አደራጅቶ ለመያዝ ያለው አመችነት	1	2	3
ሐ	የንብረት ቁጥጥርን በተመለከተ: (Stock Controlling)			
20	የድረጅቱ የንብረት ቁጥጥርና ክትትል ዘዴ ንብረቶችን በተገቢው መንገድ አደራጅቶ ለመያዝ የሚያስችል መሆኑ	1	2	3
21	የንብረት ቁጥጥርና ክትትል ዘዴው ንብረቶችን ለአላስፈላጊ ክምች ፣ ብልሽትና ብክነት የማይጋልጥ መሆኑ	1	2	3
22	የንብረት ቁጥጥርና ክትትል ዘዴው የፍላጎትን ለውጥ የማስተናገድ፣ ለተሰማሚ ንብረት አንቅስቃሴ አመች መሆኑና ተገቢ አገልግሎት መስጠቱ	1	2	3
23	በድርጅቱ ውስጥ ያሉ ተረፈ ምረትና ያለአስፈላጊ ንብረቶች በትረፍ ላይ ያለው ተፀኖ	1	2	3
24	የገበያ ዋጋ ፣ የሌላቸውና የማይንቀሳቀሱ ንብረቶች በድርጅቱ ትርፍ ላይ ተፀኖ አንዳይመጡ የንብረት አስተዳደር ያለው የክትትል አቅም	1	2	3
25	የንብረት አስተዳደር የማይፈለጉ ንብረቶች ከመጋዘን እንዲወገዱ ከሚመለከተው የሥራ ሃላፊ ማረጋገጫ ለማግኘት የሚያደረገው ጥረት	1	2	3
26	<input type="checkbox"/> ረጅቱ <input type="checkbox"/> የፋብሪካውን ተረፈ ምርቶችን(scrap) አንደገና የመጠቀም (recycle) የማድረግ አቅም አንዲገለብት የንብረት አስተዳደር አስተዋፅኦ	1	2	3
27	የንብረት አስተዳደር ክፍሎች አቻ የሥራ ክፍሎች ጋር ያለው የሥራ ግንኙነት	1	2	3
27	የንብረት ክፍሉ የንብረት ዕንቅስቃሴዎችን በወቅቱ ተከታትሎ ፈጣን አንቅስቃሴ ያላቸውን ከማይንቀሳቀሱት ለይቶ ለገበያ ጥናት ክፍሎች <input type="checkbox"/> ማሳ- ቅ ሀቅም	1	2	3

ክፍል ሦስት: ለሚከተሉት ጥያቄዎች ያለዎትን አስተያየት በአጭሩ ::

28. የድርጅቱ ዋና ዋና የንብረት አስተዳደር ችግሮች

29. በተራ ቁጥር 28 ለገለጽላቸው ችግሮች መፍትሄዎች ምን ምን ሊሆኑ ይችላሉ ብለው ያምናሉ በአጭሩ ::

□

አመስግናለሁ::

A) Interview guidelines(for Managerial level)

- ✓ In comparison with other rental service organization, how is your company working on?
- ✓ Does the manufacturing plant stop production due to raw material shortage?
- ✓ What are the basic problems of the company storage? Is lack of qualified manpower or space?
- ✓ Why is the company using rental palace for other purpose? Manufacturing, storage and residential place out of its objective?
- ✓ Do you think the company has established proper Material Management policy?
- ✓ Do you think the company's material management is being led by professionals?
- ✓ Why is the white Engle palace built to give rental service is being used as residential. Manufacturing unit, storage place for many items which decrease its attractiveness to be rented by customers?
- ✓ Do you have another important issue that you recommend for the improvement of Material Management of the company?

Thank you very much for staying with me!