



**ST.MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**MANAGEMENT OF FIXED ASSETS: THE CASE OF DH GEDA
TRADE AND INDUSTRIES**

BY

EYOB DADI

JUNE, 2016

ADDIS ABABA, ETHIOPIA

**MANAGEMENT OF FIXED ASSETS: THE CASE OF DH GEDA
TRADE AND INDUSTRIES**

BY

EYOB DADI

ID NO. SGS/0012/2004B

**A THESIS SUBMITTED TO ST.MARY 'S UNIVERSITY, SCHOOL
OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF
MASTER OF BUSINESS ADMINISTRATION**

JUNE, 2016

ADDIS ABABA, ETHIOPIA

**ST.MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**MANAGEMENT OF FIXED ASSETS: THE CASE OF DH GEDA
TRADE AND INDUSTRIES**

BY

EYOB DADI

ID.NO SGS/0012/2004B

APPROVED BY BOARD OF EXAMINERS

Dean, Graduate studies

Signature & Date

Advisor

Signature & Date

External Examiner

Signature & Date

Internal Examiner

Signature & Date

TABLE OF CONTENTS

ACKNOWLEDGMENTS	iv
LIST OF ACRONYMS/ABBREVIATIONS	v
LIST OF TABLES	vi
LIST OF FIGURES	viii
ABSTRACT.....	ix
CHAPTER ONE	1
INTRODUCTION	1
1.1. Background of the study	1
1.2. Statement of the problem	3
1.3. Research Questions	4
1.4. Objectives of the study	5
1.5. Significance of the study.....	5
1.6. Scope of the study	6
1.7. Limitation of the study	6
1.8. Organization of the paper.....	7
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1. Introduction	8
2.2. Fixed Asset Management Cycle	9
2.2.1 Planning	10
2.2.2 Acquisition	15
2.2.3 Maintenance.....	17
2.2.4 Disposal	18

2.3. Fixed Asset Utilization and Monitoring.....	18
2.3.1 Concept of Internal Controlling.....	19
2.3.2 Internal Control Over Fixed Asset.....	22
2.4. Fixed Asset Management System.....	24
2.5. Fixed Asset Efficiency	25
2.6. Empirical Literature.....	28
2.7. Conceptual framework.....	29
CHAPTER THREE	30
RESEARCH DESIGN AND METHODOLOGY	30
3.1. Introduction	30
3.2. Research Design	30
3.3. Population and Sampling Technique	30
3.4. Data Gathering Tool	31
3.5. Methods of Data Analysis.....	31
CHAPTER FOUR	32
RESULTS AND DISCUSSION	32
4.1. Introduction	32
4.2. Profile of the Respondents	32
4.3. Analysis of the Study	35
4.3.1. Analysis of System Acquisition of Fixed Asset	35
4.3.2. Planning Schedule	36
4.3.3. Planning and Strategic Issues	37
4.3.4. Techniques of Efficient Utilization	38
4.3.5. Extent of Fixed Asset Utilization	39
4.3.6. Reason of Capital Investment & Techniques	40
4.3.7. Capital Budgeting Techniques	40
4.3.8. Fixed Asset Security	41

4.3.9. Insurance Coverage	42
4.3.10. Rules and Regulations	42
4.3.11. Maintenance	43
4.3.12. Maintenance Stage	43
4.3.13. Adequate Follow Up	44
4.3.14. Disposal Approval	45
4.3.15. How Disposal Practiced	45
4.3.16. How Often Inventory Made	46
4.3.17. Training on Fixed asset	47
4.3.18. Review of Fixed Asset Process	47
4.3.19. Use of Accounting Software	48
4.4. Secondary Data Analysis	49
4.4.1. Fixed Asset Turn Over Ratio	49
4.4.2. Ratio of Fixed Asset to Funded Debt	50
4.4.3. Ratio of Net Profit to Fixed Asset	51
4.4.4. Ratio of Fixed Asset to Capital Employed	52
4.4.5. Ratio of Fixed Asset to Total Asset	53
CHAPTER FIVE	55
CONCLUSIONS AND RECOMMENDATIONS.....	55
5.1.Introduction	55
5.2. Conclusions	55
5.3. Recommendations	58
References	61
Appendixes	
Declaration	
Endorsement	

ACKNOWLEDGMENTS

First of all I would like to express my praise to the almighty God. Without his helping hands, it wouldn't have been possible to finish this thesis.

Next I owe my special gratitude to my advisor Dr.Degefe Duressa for his guidance and precious comments throughout the progress of the paper.

I am grateful to all the respondents who were participated in filling the questionnaires and answering my interview questions.

LIST OF ABBREVIATION & ACRONYMS

ARR Accounting rate of return

FA Fixed Asset

NSW North South West

LIST OF TABLES

Table 1: Respondent by age bracket	32
Table 2: Respondent by gender	33
Table 3: Respondent by education level	34
Table 4: Respondents years of experience.....	34
Table 5: Analysis of system acquisition.....	35
Table 6: Planning schedule.....	36
Table 7: Planning align with strategic goals.....	37
Table 8: Techniques of efficient utilization.....	38
Table 9: Extent of Fixed asset utilization.....	39
Table 10: Reason of capital investment.....	40
Table 11: Capital budgeting technique.....	40
Table 12: Fixed asset security.....	41
Table 13: Insurance coverage.....	42
Table 14: Rules and Regulation.....	42
Table 15: How often maintenance occurred?.....	43
Table 16: Maintenance Stage.....	43
Table 17: Adequate Follow up.....	44

Table 18: Approval of disposal.....	45
Table 19: How disposal practiced?.....	45
Table 20: How often inventory is made?.....	46
Table 21: Training on Fixed asset management.....	47
Table 22: Review Fixed Asset process.....	47
Table 23: Accounting software.....	48
Table 24: Fixed asset turnover ratio.....	50
Table 25: Ratio of fixed asset to funded debt.....	51
Table 26: Ratio of Net profit to fixed asset.....	52
Table 27: Ratio of fixed asset to capital employed.....	53
Table 28: Ratio of fixed asset to total asset.....	54

LIST OF FIGURES

Figure 1: Stages of Maintenance.....	17
Figure 2: Asset Management system.....	24
Figure 3: Conceptual framework.....	29

ABSTRACT

Fixed asset plays an important role in company's goals and objectives. That supports the aim of the organization. One of the reasons for managing fixed asset through the best management system is to make the organization more profitable, because they are usually high value and need to be managed properly. It is the full life cycle management of fixed asset in order to maximize their contribution and "value add "that is from the initial planning stage through until assets need to be disposed or replaced. The purpose of this study is to assess the problems that relates to fixed asset management of the company and to analyze fixed asset efficient utilization of Dh Geda Industries. Descriptive method of research was used and data has been collected from primary and secondary sources. In obtaining information from the primary data questionnaire was developed. The study stratified in to three groups of population and purposive sampling techniques were used. The analysis of primary and secondary data shows that the company has been trying to adopt fixed asset management but seen a lot problems like Not well designed system of fixed asset management, lack of following maintenance stages and poor keeping of maintenance recording. However; the study concluded that the company has problems need to improve. So it is recommended to strength its fixed asset management system.

Key terms:*Fixed asset management, fixed asset utilization, internal control*

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Successes of an organization largely depend on how the organization manages its asset. Every business organization manage its affairs to maximize values by minimizing the possibilities of loses that comes as a result of inefficient operations, inappropriate utilization of assets including in the extreme cases minimizing thefts and misappropriation by establishing proper asset management system.

Management of assets includes proper planning, determination of level of investment, acquisition, and control of proper utilization of assets. In order to achieve the maximum return from an asset, organizations need to develop proper asset management system.

In this global world the competition has become stiff in every aspect that every organization must strive for internal efficiency because in today's world managing assets is one of the means to develop internal competitive advantages.

In Accountancy assets are classified in different groups like current, fixed and intangible assets. Such categories of assets are reported in the balance sheet of the company in a way the information content of the report adds value to the user in decision making.

Balance sheet is one of the financial statements showing asset, liability and owners' equity of the firm on specific dates (Glautier, et al., 1976). The asset side, liabilities and owners equities are the two sides of balance sheet. The two sides must agree based on the accounting equation asset is equal to liabilities and owners' equity.

Fixed Asset is assets of the organization, which are fixed or of relatively permanent nature, owned by a business enterprise. It is also possession or valuable belonging to business organization that is used over a long period. Example of physical fixed asset includes factory offices, machinery, trucks, company cars, office equipment's and computers (Warren, 1984).The term plant asset, plant and equipment, property, or fixed asset often is used to describe the tangible asset used by business enterprise in its operation (Mosich, 1976)

The main characteristics of fixed assets are that it is acquired for use in operation of the enterprise and that their usefulness will extend over a number of years. The cost of fixed asset is accordingly not charged as an expense in the year of acquisition, but it is spread over the year of their use.The cash paid out to acquire a fixed asset is not expenditure. It doesn't constitute cost; rather it is an investment (Lepani, 2008).

Fixed assets represent a large amount of funding, so it is important to have proper management in place to ensure they are used properly and for the business purpose of the organization. Fixed assets are characterized by the following features.

- They have a life of over 12 months and hence are carried forward to the next accounting period.
- They are open to misuse, abuse, theft and fraud.
- They need replacement that requires planning and financing
- They are usuallyof high value.

Due to the above reasons fixed assets should be

- Correctly recorded, adequately secured and properly maintained.
- Planning, acquisitions and disposals of fixed assets should be properly made and authorized.

- It should be appropriately depreciated.

In managing assets, two types of assets are of particular importance i.e. fixed and current assets. These two assets are applicable in all businesses. Fixed asset can be compared with current assets such as cash or bank accounts, which are described as liquid assets. In most cases, only tangible assets are referred to as fixed.

Long term asset are the productive asset of a business. They are generally more expensive and complex than short term assets and required several level of approval before acquisition.

1.2. Statement of the Problem

Now day's a world is full of change and dynamism. Globalization is one of the factors at the moment that affects the whole worlds. So Companies must adjust themselves by creating proper management system to be profitable and compete in the world market.

Fixed asset are acquired with huge amount of capital. The responsibility of management is to ensure procedures in operation to safeguard and manage the asset of the company. Fixed asset management establishes policies; procedure to maintain strong control system. Efficient administration and accurate records helps to protect against fraud.

Fixed asset plays an important role in company's goals and objectives. It helps in building capacity of the firm. It supports the aim of the organization. So utilization of fixed asset should be proper, if not, it affects the overall strategies and goal of the company. In addition it has a major effect on firm's profitability and sustainability. (Clark,2002)

Companies invest their huge amount of money on fixed asset. Every year companies invest in addition of those assets. So the survival and other objectives of the company

depend on the performance of management i.e. efficient utilization of asset (Khan.et al, 2007).

It is obvious that a strong fixed asset management system and control is a means for company success, but if not, the consequence is great and a cause for company's failure.

Despite the importance of Fixed Asset management as stated above, the study on the subject is so far highly limited. There hasn't been any research work done in profitable business organization over the management of fixed asset except the one which was done previously by Praveen Irrinki(2012)"Fixed Asset Management at Kersom Cement in India".Irrinki study did not cover the necessary aspects of Fixed Asset management and didn't showed us how fixed asset management system such as planning, acquisition, maintenance and disposal are useful for the success of the organization. And the study fully depends on secondary data and thus did not focus on other aspects that could get from primary sources. Moreover, there is no such a study so far in Ethiopia.

So, the researcher needs to show clear system of fixed asset management and tried to fill the knowledge gaps by addressing how fixed assets are acquired,planned,and utilization to yield required level of return and safeguarding while in use.Therefore the main reason of this research is to assess the problems that relates to fixed asset management of the company.

1.3. Research Questions

By looking the above consideration the researcher tried to answer the fallowing research questions.

1. What specific factors are taken into account to determine the optimal fixed assets investment?
2. Do the company's business units have planned disposal or replacement schedules?

3. How is fixed asset management processes applied?
4. Do the business units apply capital budgeting techniques in acquisition, selection and replacement process?
5. How is the fixed asset utilization controlled? Is there any system of monitoring capacity utilization and efficiency control standards?
6. How is efficient asset utilization of the company evaluated?

1.4. Objectives of the Study

General Objectives

One of the reasons for managing fixed asset through the best management system is to make the organization more profitable, because they are usually high value and need to be managed properly.

So the overall objectives of the study are

- Assess the problems relating to fixed asset management of the company and analyzing the efficient asset utilization of the company.

The Specific Objectives

In addition to the general objectives, the researcher tried to answer the following specific objectives.

- To assess the factors that contributes to optimal fixed asset investment.
- To find out how fixed asset utilization are controlled and monitor.
- To evaluate companies fixed asset efficiency.

1.5. Significance of the Study

These days in competitive world, with the growth and expansion of the economy, companies must carefully and strategically select the competitive advantage.

In manufacturing sectors, huge amount of funds are invested on these assets. Moreover, every year companies invest additional directly or indirectly. In order to achieve their goals companies must look on internally, so it is important to have proper management and efficient utilization of fixed asset to ensure they are used properly and for the business purpose of the organization. Therefore it requires careful planning, acquisition and decision making.

1.6. Scope of the Study

To achieve the objectives, the scope of the study has limited to how fixed asset management system and fixed asset efficiency are being practiced at DHGeda group i.e. DhGedaBlanket and DhGedaDyeing. From the Dh Geda group, the two companies were selected because they usually use relatively huge investments on capital items and have large number of machineries for product processing than the other Dh Geda group sister companies.

1.7. Limitation of the Study

The following are the major limitation of the research to be noted possibly having considerable amount of impact on the outcome of the paper. The major limitation is the only similar previous research made at Kersom Cement fully depended on secondary data and there is no any other similar works in Ethiopia in the field of the study to enrich the paper. Second, the study is a case study of two companies, thus the observation and conclusion may not be generalized to Ethiopian manufacturing setup.

1.8. Organization of the paper

The paper contains five chapters. The first chapter elaborates on the background of the research and spells the problem under study. It sets out the objectives, justification, the scope of the study, significant of the study and limitations.

Chapter two provides an explanation of the key concepts and the literature review of the study. Chapter three states the research design and methodology.

The following chapter provides the data responses from the questionnaires and interviews and the interpretations from secondary sources and analysis and the last chapter makes the summary of all the findings, conclusions and recommendations.

CHAPTER TWO

REVIEW OF RELATED LITRATURE

2.1. Introduction

Asset management is the process of guiding, acquisition, use, safeguarding and disposal of assets to make the most of their service delivery potential and manage the related risks and costs over their entire life (AASHTO, 2002). In its broadest sense, asset management is defined as a systematic process of maintaining, upgrading, and operating assets, combining engineering principles with sound business practice and economic rationale, and providing tools to facilitate a more organized and flexible approach to making the decisions necessary to achieve the public's expectations (OECD, 2001).

Asset management is an emerging effort to integrate finance, planning, engineering, personnel, and information management to assist agencies in managing assets cost-effectively (AASHTO, 1997).

According to the North South West (NSW) government manual (2004) asset management process starts from acquiring and maintaining an asset to a more strategic planning approach includes the development of asset strategy, capital investment, asset maintenance and disposal.

Nair (2000) supports the view that assets are investments in the delivery of future services to communities. The management of an organization plans the way to acquire fixed asset and at the same time they should find alternative acquisition methods. Some of the alternatives are

- Leasing the assets

- Contracting out the delivery of a specific output that requires an asset to another person or organization who demonstrates the capability to deliver it more efficiently and effectively.

Woodhouse (2004) defines Asset management as a set of process, tools, performance measures and shares understanding that helps individual improvements or activities related to asset together. He formulated the definition, when applied to physical asset as the set of disciplines, methods, procedures and tool to optimize the whole life of business.

While according to Lepani(2008) it is the full life cycle management of fixed asset in order to maximize their contribution and "value add "that is from the initial planning stage through until assets need to be disposed or replaced.

Asset Management involves the process of planning and monitoring of physical assets during their useful lives. It requires an appropriate level of management interest concern and accountability that is maintained well beyond the stage of acquisition.

2.2. Fixed asset management cycle

The main objective of fixed asset management is to achieve the best possible match of asset with service delivery strategies and for assets made available to be given due care in order to maximize their service potential. And its life cycle consists of four phases which is planning, acquisition, maintenance and disposal or replacement stages (Lepani, 2008).

According to Clark (2002) physical asset and maintenance management involves the management, co-ordination and execution of all business activity and process required through the physical assets life cycle. The cycle includes from identification of business needs (planning) for physical asset, acquisition, operation, maintenance and disposal. (Pandy, 1999)

2.2.1. Planning

Planning is the first steps of the cycle before any purchase. It is the overall frame work of decision making within the organization. It is needed for fixed asset to acquire, replacement, and disposal. In fixed asset, planning for replacement should be very important; it should be planned at the time of acquisition and updated throughout the asset life.

In successful organizations, strategic planning guides the decision-making process for all spending. Leading organizations also use their strategic planning process to assess (1) the needs of their clients and constituents and (2) the political and economic environment in which they are operating.

A strategic plan defines an organization's general goals and objectives, while an annual performance plan describes in greater detail the specific processes, technologies, and types of resources, including capital, that are needed to achieve the performance goals.

Leading organizations use their strategic planning process to link the expected outcomes of projects, including capital projects, to the organization's overall strategic goals and objectives. The fixed asset requirements are planned separately but should align with strategic planning because it affects the company's goal and objectives. Fixed asset maintenance should also be planned; it considers maintenance cost and all maintenance stages (Lepani, 2008)

2.2.1.1. Investment in Fixed asset and Strategic Issues

Organizations have an obligation to ensure all assets are managed properly in efficient and effective manner, and decision regarding safety, procurement, maintenance and disposal of such assets are undertaken in an open and transparent way.

The decision to invest in fixed asset is on the assumption that the investor will get a continuous production outcome in the future. Some reasons for capital investments are replacement, expansion and development.

The choice of investment must fit with the companies' strategies and capabilities, then which are attractive and which will be based on the investment decision criteria. (Watson, 2011)

Organization begins the capital decision making process by defining the organization overall mission in comprehensive terms and result oriented goals and objectives. This enables the manager to identify the resource needed to satisfy the organization program requirements based on the program goals and objectives.

From the success point of view, there are five principles that leading organization used to make capital investment decision (GAO, 1998)

- Integrate organization goals in to capital decision making process i.e. manage and identify the current capabilities.
- Evaluate and select capital asset using an investment approach i.e. rank and select project based on criteria.
- Balance budgetary control and managerial flexibility i.e. considering budget
- Use project management techniques to optimize project success i.e. use cross functional teams to plan and manage projects
- Evaluates results i.e. evaluate results to determine if goal met or not.

Many organizations have invested their capital on fixed asset. So they have to adopt strategic approach to manage their assets. Management ensures that all physical assets are managed in a consistent manner that best support the organization aim with the optimum utilization of resources. This includes

- Supporting production goals
- providing an asset base that matches and support the business needs of the organization
- meeting obligation
- aligning asset operating costs with business planning and service delivery requirement
- Avoiding the acquisition of unnecessary assets
- Increasing the utilization of existing assets.

The item should be available on time and it should be the right tool. For any delay and misfit items, production is affected and the consequence is costly. So proper professional must manage all aspects of the asset to ensure their company achieves the maximum return on invested capital (Thompson, 2010)

Decision on fixed asset requirements, acquisition, use maintenance, replacement and disposal should be fully integrated not only with operational planning but also long term planning against strategic goals; this achieved by linking fixed asset with strategic (Lepani, 2008)

In terms of the choice of fixed asset, companies have to assess

- physical condition: safe to use the asset
- functionality: It is available in proper working condition
- Financial performance: whether the ongoing cost of repair and maintenance continues to be financially sensible, in the light of the investment required for its replacement (Hanna Schollova, et al., 2010).

2.2.1.2 Nature of capital Budgeting and investment decision making

Now a day's one of the greatest challenges managers faces in making capital investment decision. The term capital investment refers broadly to large expenditures made to purchase plant asset, develop new product line or acquire a subsidiaries companies.

Such decisions commit financial resource for large period of time and are difficult if not impossible to reverse once the fund are invested.

Capital budgeting decision pertain to fixed or long term asset which by definition refer to asset which are in operation, and yield a return over a period of time, usually exceeding one year. So it involved current expenditure to obtain a better benefit in the future.

Capital budgeting involves the evaluation of various expenditures which will be benefit in the future which is longer than one year. Such kind of evaluation decision affects the profitability of the firm in the future. If we do not select the best projects may be it leads to failure of the company. Thus companies stand to benefit from good capital investment or suffer from poor ones for many years (Meigs and Meigs, et al., 1996).

In every organization investment decision making is an important part of decision making. Successfulness of new project contributes to the growth of firms efficiently. On the contrary, unsuccessfulness leads to decline in efficiency and put in danger in the future.

Both depend on the quality of preparing, evaluating and choosing those projects. The quality of investment decision making is largely affected by many factor. The most important of them are the choice of criterion applied in evaluating and choosing investment project (Hanna Schollova, et al., 2010).

Fixed asset represents in a sense the true earning asset of the firm. They enable the firm to generate finished goods that can ultimately be sold for profit. But some difficulties exists because

- The benefits from investment will be received in the future, due to the fact that the future is uncertain with some risk elements involved.

- There are mismatch periods for cost incurred and the benefits we will get that mean the cost incurred period and the benefit we will get is in different time. So it has its own effect on the time value of money(PkJain, 2006).

These criteria vary depending on the type of business. So, for example, the goals of the information systems investments are mainly the following: a) Factors which will affect in a positive way the demand for the product obtained, b) Productivity increase, cut of expenses and increase of the company's value, c) Beneficial outcomes for workers, d) Positive impact on customers, e) Restructuring and change of the company's management (Ukai, 2005).

An investment decision is influenced by the motivation system. This distinction has to do with the expenditures of the following types of investments (Dean, 1991)

1. Replacement investments: replacement of the depleted or obsolete assets with new ones.
2. Extension investments: decision taking regarding the "expansion of the capital", so that the company's dynamic growth is facilitated.
3. Modernization investments: decision taking regarding the "thorough examination of the capital", so that the company's efforts to reduce the production cost are facilitated.
4. Strategic investments: investments which aim at cost reduction, productivity and sales increase.

The term Capital budgeting (or investment appraisal) is the planning process used to determine whether a firm's long term investments such as new machinery, replacement machinery, new plants, new products, and research development projects are worth pursuing. It is budget for major capital, or investment, expenditures. The main techniques of capital investment appraisal are

- Accounting rate of return
- Net present value
- Profitability index
- Internal rate of return (Alastair and Hutchison, 2005).

2.2.2 Acquisition

The cycle continues with the acquisition stages through purchase, gift or other, of an asset. Since the cost of fixed asset is huge, proper market assessment should be made to arrive on the right quality and price. And it also supports the management for the decision for expansion and constriction (Kimmel, et al., 1998)

2.2.2.1. Acquisition cost of Fixed Assets

Fixed asset are recorded at cost in accordance with the cost principle of accounting. Cost consists of all expenditure necessary to acquire the asset and make it ready for its intended use. For example, the purchase price, freight cost paid by the purchaser, and installation costs are all considered part of the cost of factory machinery.

The determination of which cost to include in plant asset account and which cost not to include is very important. If a cost is not included in plan asset account than it must be expensed immediately, such costs are referred to as revenue expenditures.

On the other hand costs that are not expensed immediately but are instead included in a plant asset account are referred to as capital expenditures. This distinction is important because it has immediate implications for the income statement.

Cost is measured by the cash paid in cash transaction or by the cash equivalent price paid when non cash assets are used in payment. The cash equivalent price is equal to the fair market value of the asset given up or the fair market value of the asset received, which ever, is more clearly determinable.

According to William and Merry (2011) the acquisition cost of fixed asset is measured by cash. It should be measured by actual cost, if the actual cost is not known it could be valued by estimated cost.

The acquisition cost is not only the purchase price of the item, but it includes freight and transportation charges, installation costs, site preparation expenditures, professional fee, legal fee and the like

Once cost is established, it becomes the basis of accounting for the plant asset over its useful life. Current market values are not used after acquisition (Kimmel, et al., 1998).

Payment is made as per the terms of the purchase order. The payment includes the acquisition cost, freight and all other costs to put the asset. Once the materials are purchased it is received by proper receiving documents identified by tagged, and recorded within the fixed asset register.

There are a certain guide lines for identification and tagging of fixed asset after the items are acquired

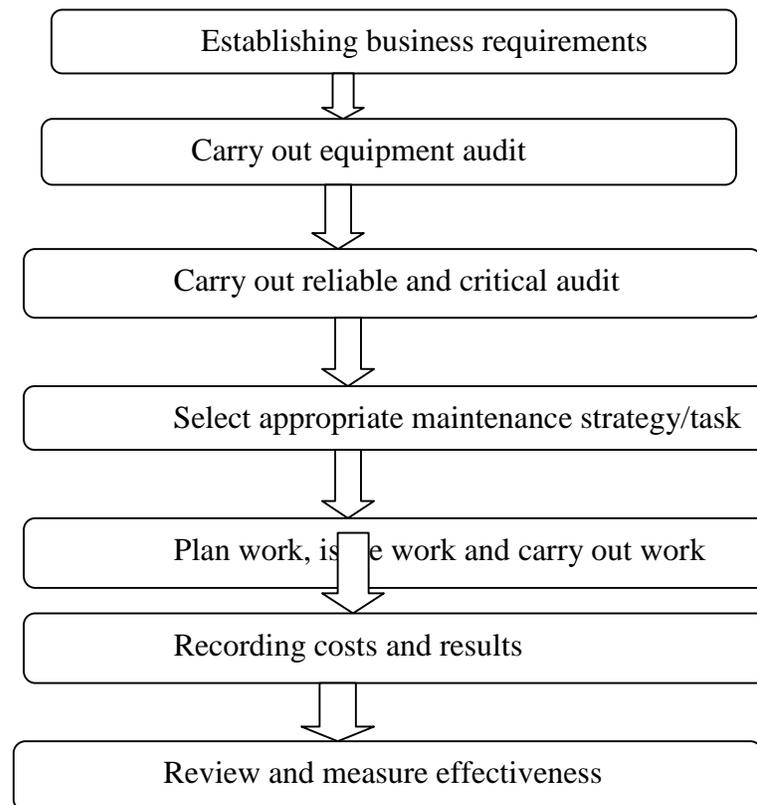
- It's the department responsibilities to assign, record and give Fixed asset identification number(tags) except vehicles
- All fixed asset and controlled items will be assigned an asset number up on receipt and before the item is placed in to service
- the department will give tag number to an asset in a conspicuous and convenient location
- Tags will remain on the asset throughout the life of the asset. Damaged tags will be replaced as needed.(Kimmel, et al, 1998).

2.2.3 Maintenance

To achieve cost effective maintenance, it is first necessary to implement a maintenance program. Without clear definition of requirements, achievements and feedback, measurement is not possible.

Measurement of effectiveness through monitoring key performance indicators is only possible if each stage has been completed. Without measurement, management and optimization is not possible. Stages of maintenance program are

Figure 1: Stages of Maintenance



(Simon, 2007)

2.2.4 Disposal

Plant asset that are no longer useful may be discarded, sold, or applied toward the purchase of other plant asset.

The details of the entry to record the disposal will vary but in all cases it is necessary to remove the book value of the asset from the accounts.

A plant asset should not be removed from the account only because it has been depreciated for the period of its estimated life. If the asset is still useful to the enterprise, the cost and accumulated depreciation should remain in the ledger. If any depreciable asset is disposed, discarded, destroyed, the net surplus or deficiency of material should be disclosed separately (Kimmel, et al,1998).

2.3. Fixed asset Utilization, Monitoring and Controlling

Productive capacity is the total level of output or production that it could produce in a given time period. Capacity utilization is the percentage of the firm's total possible production capacity that is actually being used

Calculated as: $\text{Actual output} / \text{Maximum possible out put}$

Underutilization means not utilizing to the fullest capacity. Under-utilization of resources has an impact on profits of the company and hence is a matter of concern for the management. Underutilization can be in terms of machines, labor, raw materials, etc. (Nelson, 1989)

Some of causes of underutilization are

- Market share is taken by competitor and
- Fall in market demand.

But full utilization also has drawbacks which may not be enough time for routine maintenance, employees work pressure, increase labor costs. But has positive factor to

minimize fixed costs. But in general it is advisable that business firms should be in between 80-90 percent capacity to meet new unexpected order, to carry out maintenance and training.

To arrive at the efficient utilization of fixed asset, first rate the asset and state the target. Monitoring is done to measure the extent of utilization of assets when compared to their targets. Any deviations below the expectation shall be addressed by taking the necessary steps.

However, based on the criticality rating of the assets or based on management decisions, other factors could be considered in monitoring. A score card could be used to measure and monitor utilization. The score card could contain the utilization trend and factors that influenced the utilization, either positively or negatively. This trend could help further in better decision making. The score card could be a completely manual or semi-automated process with some manual intervention. The other technique is ratio analysis. Ratio by far the most important tools to measure fixed asset utilization in figure and easy to understand.

Some performance ratios are defined for monitoring purposes (Nelson, 1989)

Some of them include,

- (a) Ratio of profiled assets vs. identified assets
- (b) Ratio of actual utilization and target utilization
- (c) Ratio of assets where targets are met when compared to others etc.

2.3.1 Concepts of Internal Controlling

Internal Control in organization affects the activities of the system in the organization. To handle such activities, organizations applied Accounting system to control business operations.

The main purpose of such Accounting Control systems assures all transactions are authorized, all transactions are recorded, access to assets is allowed only for authorized purposes and accounting records describe only real assets.

In addition the main objectives are to minimize losses by establishing strong internal control. With the growth of size of the organization and the increased relation of the fact that the primary responsibility of running an organization and preparing its account is that of the management.

The importance of constituting proper systems of controls within organization has received the attention of all concerned parties. The responsible parties are concerned the whole system of internal control in addition to checking one by ones (Prakash, 1976).

Internal control includes all the policies and procedures adopted by the management of an entity to assist in their objective of achieving as far as practicable, the orderly and efficient conduct of the business, including adherence to management policies the safeguarding of asset, the presentation and detection of fraud and errors.

The accuracy and completeness of the accountings records and the timely preparation of reliable financial information we are all familiar with simple systems of internal control Therefore, the internal control can be classified into three broad categories: accounting controls, administrative control and physical control (Gebeyew, 1996).

2.3.1.1 Administrative Control

Administrative control relates to Operational efficiency and adherence to managerial policies. Includes but is not limited to, the plan of organization and the procedures and records that are concerned with the decision processes leading to management's authorization of transactions.

Such authorization is a management function directly associated with the responsibility for achieving the objectives of the organization and is the starting point for establishing accounting control of transactions

2.3.1.2 Accounting Control

Comprises the plan of organization and the procedures and records that are concerned with the safeguarding of assets and reliability of financial records and consequently are designed to provide reasonable assurance. Some points to consider are

- Transactions are executed in accordance with management's general or specific authorization.
- Transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles or any other criteria applicable to such statements and to maintain accountability for assets.

Due to the fact that, some organizations lack strong internal control due to lack of efficient use of resources and poor management decision.

2.3.1.3 Physical Control

It includes comparison of the results of physical inspection of fixed assets, cash investment and inventories with accounting records and limiting direct physical access to assets and records (Prakash, 1976).

2.3.2 Internal control over Fixed Assets

Fixed asset are those assets that have a useful life of more than one year and include land, buildings and building improvements, furnishings, vehicles and electric equipment such as computers.

Officials can fulfill this responsibility by adopting a capital asset policy that gets the duties records and control procedure required to adequately safeguard capital assets, appointing a property control manager with overall responsibility for tracking these assets and monitoring adherence to control procedures designed to protect fixed assets.

Fixed assets protection is enhanced by the maintenance of accurate and up to date asset records and the performance of annual physical inventories to monitor the accuracy of the records and determine the existence and condition of the assets inventory accountability is maintained by comparing these periodic inventory results to the official fixed asset inventory records.

The record for each asset should conclude a description it the item (including make model and serial number), the organization assigned identification, purchase data, and asset location. Asset items should also be lagged to make it easier to readily identify them (Gupta, 1991).

The most important features of internal control relating to fixed assets are as follows:

- All acquisitions of fixed assets should be properly authorized by a designated official.
- A policy requiring all purchases of plant and equipment to be handled through the purchasing department and subjected to standard routines for receiving, inspection and payment.
- A system of authorizations requiring advance executive approval of all plant and equipment acquisitions, whether by purchase, lease, construction

seriously numbered capital work orders are a convenient means at recording authorizations.

- A reporting procedure assuring disclosure and analysis of variance between authorized expenditures and actual costs.
- Depreciation rates and methods should be based on particular circumstances.
- Fixed assets withdrawn from use should be under strict control prior to disposal.
- Periodic physical inventories, designed to verify the existence location, and condition of all property listed in the accounts and to disclose and the existence to any unrecorded units.
- A system of retirement procedures, including seriously numbered retirement work orders, stating reasons for retirement and bearing appropriate approvals.
- Tagging and labeling of asset: assets are labeled so that they can be easily identified
- Insurance of asset: It's better to have insurance coverage for all fixed asset items. But practically most companies insured their vehicles only.
- Physical inventories of asset will be made at regular intervals at least once in a year.
- Fixed asset reconciliation: at time of inventory it's a must to reconcile the book record with that of financial records
- Plant register should be independently maintained by the chief accountant or company secretary these gives full details of asset in use including date and cost of acquisition, depreciation policy, annual depreciation changes, and final proceeds (if any) on disposal. (Robert, et al, 1999)

2.4. Asset Management system and technologies as competitive Advantage

An asset management system is not a system only, it is a combination of tools, process and people which works together to achieve organizational objectives. Tools are hardware and application of data base software that facilitates transaction. Process is Organization policies and procedures. Policies and procedures are must be defined, shared and clearly communicated throughout the organization. Appointed professionals who have best back ground in the fixed asset management and have a trend and best practice in the field of the area are also important for achieving goals.

Diagrammatically

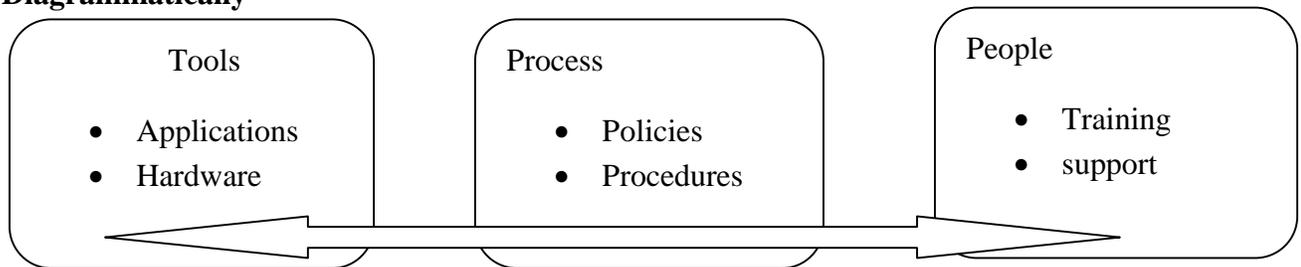


Figure 2: Asset Management System
(Thompson, 2010)

The above three factors are not separated, it is working together to deliver the value and strategic competitive advantages.

Choice of technologies is another very important point to be considered by all organizations. Companies which have new and better technologies will have so many advantages than the one which have old machines. And used as competitive advantages some of the advantages are

- helps to minimize wastage

- easy to control

By doing so, labor and production costs will be reduced. So Organizations can use information systems or technologies to fundamentally shift the cost of doing business (Booth, Roberts & Sikes, 2011) or reduce the costs of business processes to lower the costs of customers or suppliers, i.e., using online business to consumer & business to business models, e-procurement systems to reduce operating costs.

2.5. Fixed asset efficiency

A firm acquires plant and machineries and other fixed assets for the purpose of generating sales or profit. The efficiency of fixed asset should be judged in relation to sales.

Calculating firms fixed asset turnover ratio helps to know firms fixed asset efficiency. High turnover ratio indicates efficient utilization of fixed asset, while a low ratio indicates in efficient management and utilization of fixed asset. In general Fixed Asset turnover is calculated by sales divided in to net fixed asset (Okwo, et al., 2012).

Pandy (1999) defines fixed asset turnover ratio measures the efficiency with which a firm is utilizing its investment in fixed asset. Such as Building, Machinery, Furniture.

In general fixed assets are analyzed by:

a) Fixed Assets Turnover (b) Ratio of Fixed Assets to Funded Debt (c) Ratio of Fixed Assets to Capital Employed (d) Ratio of Fixed Assets to Total Assets (e) Ratio of Net Profit to Fixed Assets(Pandy, 1999)

2.5.1.Fixed Asset Turnover Ratio

Fixed Asset Turnover is a measure of the relation between sales and investments in long-lived assets. When the asset turnover ratios are low, relative to the industry or historical record, either the investment in assets is too heavy and/or sales are sluggish. There may,

however, be plausible explanations: the firm may have taken an extensive plant modernization (Kulshreshtha, 1990)

Dividing the amount of sales by the amount of fixed assets gives a ratio of fixed assets turnover, which can be read as the number of birr of sales for each birr invested in fixed assets.

"By comparison of the ratio from year to year, or with other company's ratio, the analyst can get an idea of how well the fixed investment is being used." The ratio also indicates the adequacy of sales in relation to the investment in fixed assets.

Generally, a high fixed assets turnover ratio indicates efficient utilization of fixed assets in generating sales, while a low ratio indicates inefficient management and utilization of fixed assets

Fixed Assets Turnover = Sales /Fixed Assets (Net)

2.5.2. Ratio of Fixed Assets to Funded Debt

The ratio of fixed assets to funded debts measures the security of fixed obligation when the long term debts such as mortgage loan, secured loans, mortgaged notes, bonds payable, are received by fixed assets. Usually the long term lenders give loans to a company against the security of the fixed assets of the company.

This ratio also indicates to some extent whether or not additional borrowed funds may be obtained by using the same security. This ratio should not be more than 1 time or 100 percent, in fact it should be substantially less than 100 percent.

If the ratio is less than 100 percent it will mean that the long term debts are more than the fixed assets and that the long term debts are also meant for use as working capital requirement:

Ratio of Fixed Assets to Funded Debt = Fixed Assets (Net)/ Funded Debts or Long Term Debts x 100

2.5.3. Ratio of Net Profit to Fixed Assets

The ratio of net profit after tax to fixed assets is used as a measure of profitability, which judges the returns on fixed assets. The main interest of the owners is to earn a good amount of profit i.e. to receive a satisfactory return on their investment. The investments have been taken as the amount invested in fixed assets. The return on fixed assets can be used to show the efficiency of fixed assets as a whole.

Ratio of Net Profit to Fixed Assets = Net Profit (Loss after tax)/ Fixed Assets (Net) x 100

2.5.4 Ratio of Fixed Assets to Capital Employed

The fixed assets to capital employed ratio shows the proportion of fixed assets in the capital employed. The capital employed of enterprises is divided into two parts i.e. in the fixed assets and in the working capital. A high ratio denotes the heavy investment in fixed assets and insufficient working capital. The ratio should be 67 percent so that an adequate amount is left for working capital. The ratio is calculated as follows

Ratio of Fixed Assets to Capital Employed = Fixed Assets /Capital Employed x 100

Net Capital Employed = Net worth + Long term borrowings

Net worth = Total Asset-Total Liability

2.5.5. Ratio of Fixed Assets to Total Assets

The ratio of fixed assets to total assets reflects the proportion of long term resources possessed by the concern. A reasonable relationship between total assets and fixed assets is necessary to be maintained to avoid miss-management of assets. Thus, the ratio of

fixed assets to total assets has been calculated to find the proportion of total assets invested in fixed assets (Kulshreshtha, 1990)

Ratio of Fixed Assets to Total Assets = Fixed Assets (Net) / Total Assets x 100

2.6 Empirical Literature

There was no sufficient previous research work studied regarding on fixed asset management but the only research finding was by Praveen Irrinki(2012) on titles “Fixed Asset Management” at KesoramCement in India. The major objectives of the study were to analyze fixed asset efficiency. The study was limited to only secondary sources and tried to analyze by using tables and graphs.

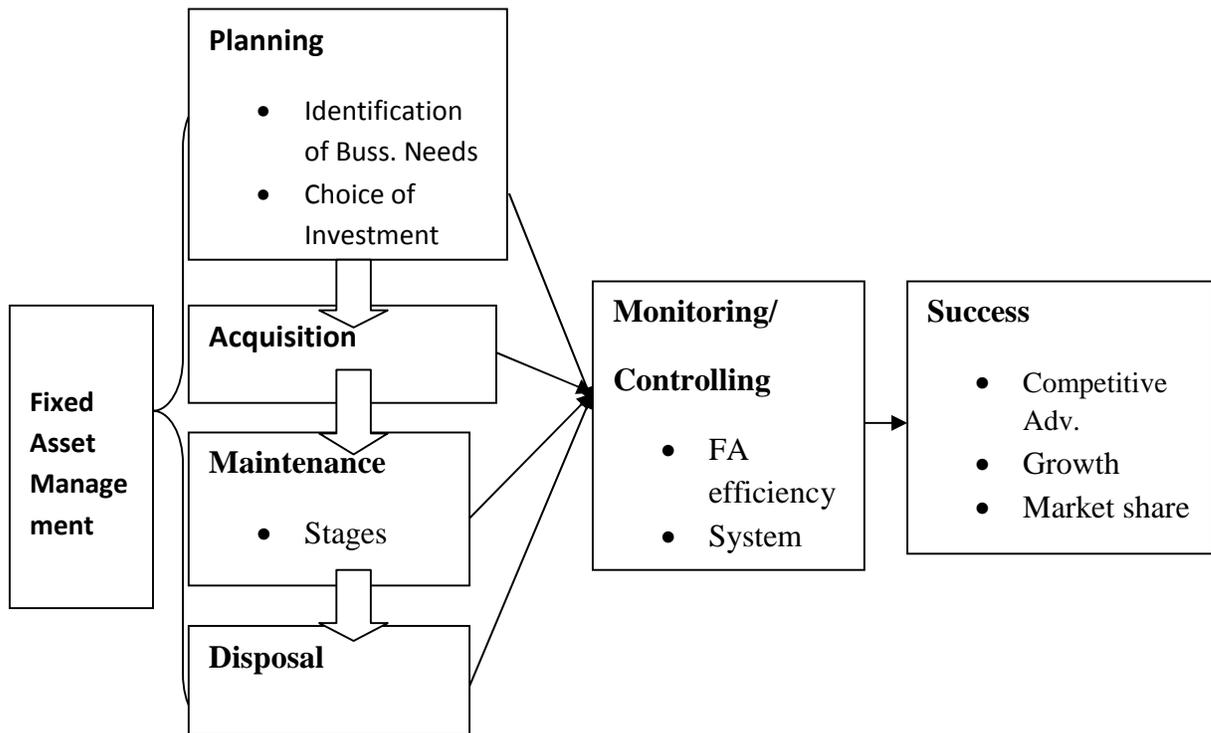
After evaluating financial statements, the researchers conclude (2012:65) that the overall fixed asset management of the company appears to be more than satisfactory.

It is believed that the only previous research work on this area did not cover the necessary aspects. So on this thesis the researcher tried to fill the knowledge gap and believed the paper will be the begging for the future researcher.

Conceptual framework of the Study

The Conceptual framework indicates the crucial process, which is useful to show the direction of the study. The study revealed on fixed asset management by taking fixed asset management process and fixed asset efficiency.

Figure 3: conceptual framework



Lepani(2008)

CHAPTER THREE

RESEARCH DESIGN AND METODOLOGY

3.1. Introduction

The purpose of this research is to assess the problems relating to fixed asset management and to analyze the efficient asset utilization of the company. This chapter deals with the research design and methodology of the study. It includes research design, population, sample size, data collection instrument and data analysis.

3.2. Research Design

To arrive at the objectives the researcher used descriptive research design. The reason for using this design is that it enables to describe the results of the study.

3.3. Population and Sample Size

The target population of the study is Finance, Administration and planning and Technique departments of the selected two sister companies which have around 60 employees in number.

The employees have different skills; personality and educational background. The study was stratified into three groups by purposive sampling method and 20 employees each were taken from Finance and Technique department and 10 employees were taken from Administration & Planning department which is totally 50 employees as the sample size. Related Questionnaires for the study is distributed for each employee. It is designed in both in Amharic and English.

3.4. Data Gathering Tool

Data were collected from both the primary and secondary sources to attain the objective of the research. Primary data were collected through structured questionnaire, interviews and observation. Fifty questionnaires were distributed among selected Finance, Administration and technique department employees. It is prepared both in open ended and cloth ended questions.

Secondary data were collected through documents and financial reports of DhGeda Blanket and DhGeda Dyeing. Three year data from financial reports were gathered to evaluate fixed assets efficiency.

3.5. Methods of Data Analysis

Subject of the study were finance, Administration and technique departments of the two DhGeda sister companies. These departments are selected because the researcher believed that the employees in the departments are well known and close related with the subject study. With 50 structured questionnaires were distributed and 50 were returned complete. That yields 100% of the respondent's size.

Descriptive analysis is used to present and interpret the data collected on various variables of the fixed asset management. Frequency tables along with percentage and tabulation also employed.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1. Introduction

This chapter focuses on the presentation, analysis & interpretation of data based on the information gathered through questionnaire, interview and secondary data's. It consists of two parts; the first one is about the general characteristics of the respondents while the second part analyzed the major objective of the research. The result of the data collected are presented and analyzed as below.

4.2. Profile of the Respondents

In this section information concerning personal and professional characteristics of respondents like age, gender, educational level, and length of service in the organization were summerized. The purpose is to shown the general characteristics of the respondents.

4.2.1. Respondents back ground

Table 1

Analysis of respondent by age bracket

Age Group	Respondent	
	Frequencies	Percentage
20-25	1	2
26-35	22	44
35-40	21	42
Above 40	6	12
TOTAL	50	100

Source: own survey

There was a total sample of 50 employees, who participated in the study from various work unit of the company. As can be seen from the table above, it shows that 22(44%) of the respondents ranges from 26 - 35, 21(42%) of the respondents ranges from 35 – 40, 6(12%) of the respondents have an age bracket above 40 and there is only 1(2%) of the respondents ranges from 20-25. Maximum numbers of the employees are in between the age 26-35. This shown that the majority of the respondents are young. Due to the fact that, they are energetic, productive and eager to work. Moreover, they are flexible to accept the process.

Table 2

Analysis of respondent by gender

Gender	Respondent	
	Frequencies	Percentage
Female	13	26
Male	37	74
TOTAL	50	100

Source: own survey

As depicted on table 2, 37(74%) of the respondents are male and 13(26%) of the respondents are female. This showed us the majority of the respondents are male.

Table 3

Respondents by education level

Respondents Qualification	Respondent	
	Frequencies	Percentage
Diploma	7	14
1 st Degree	42	84
2 nd Degree	1	2
TOTAL	50	100

Source: own survey

As it is shown in table 3 above, the educational level of the respondents range from Diploma 7(14%) to 2nd degree 1(2%) in the field of accounting, Management and engineering respectively. There are also 42(84%) respondents who have 1st degree. It is clearly seen from the table that most respondents are degree holders, which confirms the respondents have good educational background which is very important to understand and analyze the process.

Table 4

Employee's years of experience

Years of service	Respondent	
	Frequencies	Percentage
<1 years	10	20
1-3 years	13	26
3-5 years	10	20
Above 5 years	17	34
TOTAL	50	100

Source: own survey

With regard to work experiences of the respondents, the table indicated 10(20%) are staying less than one year, 13(26%) employees are staying in between 1-3 years,10(20%) employees have 3-5 years of experience and 17(34%) are served above 5 years. From the data the majority of employees are staying above 5 years which implies these employees seem to have good knowledge and experience regarding the company process.

4.3. Analysis of the Study

Table 5

System acquisition of fixed asset

Is there any need assessment before acquisition	Respondent	
	Frequencies	Percentage
Yes	43	86
No	7	14
TOTAL	50	100

Source: own survey

As it is described in table 5, 43(86%) of the respondents responded that adequate market need assessment is made before acquiring fixed asset and determining capacity of production while 7(14%) of the respondent responded that adequate market need assessments were not be made before acquiring and set production. This generally showed that the company has enough information which is important for optimal investment, sales forecasting, decision making and acquiring of fixed asset.

Table 6

Planning schedule for acquisition, maintenance & disposal

Is there any planning?	Respondent	
	Frequencies	Percentage
Yes	14	28
No	34	68
I don't know	2	4
TOTAL	50	100

Source: own survey

Analysis

From the above table, it is clear that there is no planning practice for acquisition, maintenance and disposal that consists of 34(68%) of the respondents, the other 14(28%) respond that the company have planning schedule but the remaining 2(4%) of the respondents has no information regarding on this question. From the questionnaire the researcher observed that all employees of Administration and Planning department replied “No” for the question.

From the analysis we can clearly observe that acquisition, maintenance and disposal of fixed asset are made as the company needed. There is no schedule set. Due to lack of planning schedule the management cannot able to manage resources properly. And has faced problems on decision making because planning is the overall frame work of decision making within the organization. Moreover, it is difficult to control the cost of maintenance and the income generated from the sales of disposal which can directly affect the financial report.

Table 7

Planning align with strategic goals

Is planning defines strategic goals?	Respondent	
	Frequencies	Percentage
Yes	15	30
No	32	64
I don't Know	3	6
TOTAL	50	100

Source: own survey

Table 7 indicated that 15 (30%) of the respondents believe that planning of the company defines strategic goals while 32(64%) of them didn't believe that planning is coincides with strategic goals. The remaining 3(6%) of the respondents said "I don't know" for the question. From the questionnaire the researcher observed that all employees of Administration and Planning replied "No" for the question.

The decision to invest, maintenance and disposal of fixed asset should align with company's strategies and capabilities. If not the manager fail to identify the resource needed to satisfy the organization program requirements based on the program goals and objectives. The choice of investment also fit with the company's goal which could be attractive and selective based on the criteria. From the analysis the researcher observed that there is no linkage between fixed asset planning and strategic goals.

Table 8

Techniques of efficient utilization

Technique to arrive efficient utilization	Respondent	
	Frequencies	Percentage
Rating System	5	10
Score Card	5	10
Ratio Analysis	38	76
I don't Know	2	4
TOTAL	50	100

Source: own survey

As showed from the above table 8, ratio analysis is the main techniques to arrive efficient utilization; it consists of 38(76%) of the respondents. While the rest techniques consists of 5(10%) each. The no of respondents who didn't know concerning this question is 2 (4%).The two employees has totally has noinformation. The researcher tried to focus separately what the Finance and Administration (Planning) replied, and they said ratio analysis is the way currently used.

Ratio analysis is an easy, simple to understand and measure clearly the company's asset efficient utilization. The information also very needed by the management to review the machine capacity and to increase production. From the analysis the company adopts ratio analysis techniques to know fixed asset efficiency.

Table 9

Extent fixed asset utilization

To what extent fixed asset is utilized?	Respondent	
	Frequencies	Percentage
Adequately utilized	8	16
Optimally Utilized	34	68
Under Utilized	2	4
Not Utilized	6	12
TOTAL	50	100

Source: own survey

As it is shown in table 9, 2(4%) of the respondents responded that the company fixed asset capacity is underutilized, 34(68%) of the respondent said the company is optimal utilized, 6(12%) of them believed fixed asset are not utilized, while 8(16%) of them respond the company adequately utilized the fixed asset.

Since there are large market demands for the products and have great market shares, the company optimally utilized the capacity. Due to the fact that fixed costs are not high. But sometimes it has consequence effects that labor costs like overtime is increased due to overwork to satisfy new unexpected customer order. On this time staffs feel work pressure, leading to mistakes, absentee and turnover.

Table 10

Reason for capital investment

Reason for capital investment	Respondent	
	Frequencies	Percentage
Expansion	40	80
Development	10	20
Others	0	0
TOTAL	50	100

Source: own survey

From the above table it clearly indicated that 40(80%) of the respondents believe that company expansion is the main reason for capital investment whereas 10(20%) of the respondents said the reason is development.

To meet the customer demands the company targeted expansion by investing large capital items.

Table 11

Capital budgeting techniques

Techniques for capital budgeting	Respondent	
	Frequencies	Percentage
Payback period	40	80
ARR	7	14
Other ratio	3	6
TOTAL	50	100

Source: own survey

From the above table, the company used Payback period for techniques of capital budgeting. It consists of 40(80%) of the respondents. While only 7(14%) said the company used ARR. The remaining 3(6%) said there are other techniques used.

The analysis indicated the owners ranked and selected based on the criteria. From the analysis, Payback period is the main criteria. The main reason is they eager to know the amounts of time that it takes for a capital budgeting project to recover its initial cost.

Table 12

To what extent fixed assets are secured

Is there any physical security	Respondent	
	Frequencies	Percentage
Yes	43	86
No	7	14
TOTAL	50	100

Source: own survey

As showed on the above table, the capital items are well secured in the company. From the total respondents 43(86%) said the company capital items are well secured, while 7(14%) said the company has poor physical security.

It shows that fixed assets are fully secured, which is good. Moreover, the company needs to give similar attention if the number of capital items increased by expansion.

Table 13

Insurance coverage

Is there any Insurance coverage	Respondent	
	Frequencies	Percentage
Yes	48	96
No	2	4
TOTAL	50	100

Source: own survey

Table 13 shows that whether there is adequate insurance coverage for the fixed assets or not,48(96%) said “Yes’ and 2(4%) said “No’ to the question.

This shows that fixed asset of the company have insurance coverage which is encouraging.

Table 14

Rules and regulations of fixed asset

Is there any formal rules and regulations	Respondent	
	Frequencies	Percentage
Yes	38	76
No	12	24
TOTAL	50	100

Source: own survey

Table 14 indicated that,38(76%) of the respondents responded there is formal organizational rules & structure defining the responsibility of purchasing, receiving,

approving and performing physical inventory and only 12(24%) responds there are no formal rules and regulations. This shows that there are formal rules and regulations to handle the process.

Table 15

How often maintenance occurred?

Is there any frequent maintenance?	Respondent	
	Frequencies	Percentage
Yes	8	16
No	42	84
TOTAL	50	100

Source: own survey

As depicted on table 15, 8(16%) of the respondents responded that there is frequent maintenance and checkup while 42(84%) responds that there is no frequent maintenance.

Frequent checkup enhances the machinery life and efficiency. But from the analysis there is no frequent maintenance due to lack of time. But machine breakdown hinder customer order.

Table 16

Maintenance stages?

Do they follow the stages of maintenance?	Respondent	
	Frequencies	Percentage
Yes	0	0
No	20	100
TOTAL	20	100

Source: own survey

Since the question is more of technical, the researcher limited the question to only the technique department. From the table it indicated that 20(100%) of the respondents responded that there is no way to follow stages of maintenance while 0(0%) of the respondents said the company follows maintenance stage.

The companies didn't know past best strategies, history and resources needed to maintain. Because they didn't capture historical costs and ignore to follow maintenance stages.

Table 17

Follow up and controlling

Is there any adequate follow up of Fixed Asset	Respondent	
	Frequencies	Percentage
Yes	31	62
No	19	38
TOTAL	50	100

Source: own survey

Table 17 showed,31(62%) of the respondents responded that there is adequate follow up of fixed asset while 19(38%) of the respondents said there is no clear fallow up to control fixed asset.

The company informally follows up the capital item. But they didn't have formal schedule to check up the item with the record. Moreover, missed items are not investigated on time.

Table 18

Disposal approval?

Is disposal approved by proper person?	Respondent	
	Frequencies	Percentage
Yes	40	80
No	10	20
TOTAL	50	100

Source: own survey

Table 18 shows, 40(80%) of the respondents responded that all disposal of property approved by designated person with proper authorization. The remaining 10(20%) said “No” to the question.

From the finding we can observed that there is clear procedure on who will approve the disposal. But the problem is they didn’t dispose on time.

Table 19

How Disposal practiced?

How is Disposal practiced?	Respondent	
	Frequencies	Percentage
By committee	9	18
By assigned persons/staffs	41	82
TOTAL	50	100

Source: own survey

Table 19 showed that 41(82%) of the respondents responded that fixed asset is disposed by assigned person, while only 9(18%) responded it is disposed by assigned committee.

This showed that the company is not giving much emphasis on disposal which is very important procedure of handling fixed assets. Instead it's better to dispose by formal committee to minimize miss use and fraud.

Table 20

How often inventory is made?

How often assessment (inventory) is made?	Respondent	
	Frequencies	Percentage
Yearly	9	18
When required	41	82
TOTAL	50	100

Source: own survey

Table 20 showed that 41(82%) of the respondents responded that fixed asset is assessed (counted) when needed by the management, while only 9(18%) responded it is assessed once in a year.

Taking physical inventory at least once a year is a must. It can be possible to say that the internal control system for safeguarding of fixed asset seems not good and there are things to be change to make it more effective.

Physical inventory of the fixed assets should be taken at least annually and reconcile the actual count with the ledger records. If not, it is difficult to manage and has its own effects on financial position of the company.

Table 21

Is there any training on fixed asset?

Is there any training provided on Fixed asset?	Respondent	
	Frequencies	Percentage
Yes	2	4
No	48	96
TOTAL	50	100

Source: own survey

As it is analyzed on table 21 the majority of respondents responded that there is no training provided to employees to implement new system and make more effective, it accounts 48(96%) while 2(4%) of the respondents said that there is a training facility.

Employees' of the companies cannot update themselves to implement new system and make more effective management of fixed asset.

Table 22

Does Management review FA process?

Does Mgt. Review FA process?	Respondent	
	Frequencies	Percentage
Yes	11	22
No	39	78
TOTAL	50	100

Source: own survey

As it is analyzed on table 22, 11(22%) of the respondents responded that managements of the company review the process of the fixed assets, while the other 39(78%) responded ‘No’ to the question.

This shows that management is not following up and review the control mechanize of the fixed asset which is very important for effective growth of the company.

Table 23

Idea–To analyze if the company uses Accounting software

Is there any Accounting Software used to handle Fixed asset?	Respondent	
	Frequencies	Percentage
Yes	4	8
No	46	92
TOTAL	50	100

Source: own survey

Table 23 indicated that 4(8%) of the respondents responded that there is accounting software designed or well management of fixed asset while the remaining 46(92%) responded ‘No’ to the question.

This showed that there is no software designed for effective management and control of fixed asset of the company.

In general from the overall findings, the company fixed asset process needs to be improving. The process starts from planning and ends to disposal. Planning is the first steps of the cycle before any purchase. It needs proper planning. Because, planning is the

overall frame work of decision making within the organization.(DrLepani, 2008) But from the beginning the companies didn't apply good planning experience.

4.4. Secondary Data Analysis

Ratio is a powerful technique to analyze financial data's. And it defines as the relationship between two or more variables. Via the analysis large data's will be simplified and put in to easy form. Fixed asset efficiency measured by different ratios. By comparison of the ratio from year to year, or with other company's ratio, the analyst can get an idea of how well the fixed investment is being used. The researcher analyzed by taking three years data for two company's i.e. Dh Geda Blanket and Dyeing.

4.4.1. Fixed Asset turnover Ratio

The efficiency with which a firm is utilizing its fixed assets is generally measured by fixed assets turnover ratio. Dividing the amount of sales by the amount of fixed assets gives a ratio of fixed assets turnover.

The ratio also indicates the adequacy of sales in relation to the investment in fixed assets. Generally, a high fixed assets turnover ratio indicates efficient utilization of fixed assets in generating sales, while a low ratio indicates inefficient management and utilization of fixed assets

It formulated as:

Fixed Assets Turnover = Sales/ Fixed Assets (Net)

Table24

(Ratio in times)

Companies	2003	2004	2005	Average
Blanket	6.83	7.11	4.88	6.27
Dyeing	7.99	14.43	18.80	13.74

Source annual report from 2003-2005

Analysis and Interpretation

The above table 24 shows fixed asset turnover of the companies under study. For the first company the ratios fluctuate from year to year which is an average 6.27. Where as for the second company it is an increasing trend of fixed asset turn over which is an average 13.74. The lower fixed assets turnover fixed for Dh Geda Blanket shows that the fixed assets were not being utilized efficiently in comparison to the second companies. While the higher fixed asset turnover for the second companies is due to increase in the sales which implies fixed asset were utilized efficiently.

4.4.2. Ratio of Fixed Assets to Funded Debt

The ratio of fixed assets to funded debts measures the security of fixed obligation when the long term debts such as mortgage loan, secured loans, mortgaged notes, bonds payable, are received by fixed assets.

This ratio should not be more than 1 time or 100 percent, in fact it should be substantially less than 100 percent. If the ratio is less than 100 percent it will mean that the long term debts are more than the fixed assets and that the long term debts are also meant for use as working capital requirement

The ratio formulated as

Ratio of Fixed Assets to Funded Debt = Fixed Assets (Net) /Funded Debts or Long Term Debts x 100

Table 25

(In Percentage)

Companies	2003	2004	2005	Average
Blanket	81.95	131.32	105	106.09
Dyeing	78.71	35.1	45.29	53.03

Source: annual report from 2003-2006

Analysis and Interpretation

It can easily identify from the above table 25, the ratio of fixed assets to funded debts for Blanket is fluctuating trend. The ratio increased to 131.32 percent during 2004 and again decreased to 105 percent during 2005. But it exceeds 100 percent. A ratio above 100 percent shows that the long term creditors had sufficient security of fixed assets for their claim but it also denotes a great amount of dependence on borrowed funds.

But for dyeing it decrease to 35.1 percent during 2004 and increased to 45.29 during 2005 but it remained 53.03 percent on average which is less than 100 percent. It shows that the remaining long term funds were utilized by the company for working capital and the long term creditors of this company were secured only to the extent of fixed assets.

4.4.3. Ratio of Net Profit to Fixed Assets

The ratio of net profit after tax to fixed assets is used as a measure of profitability, which judges the returns on fixed assets. The main interest of the owners is to earn a good amount of profit i.e. to receive a satisfactory return on their investment. The investments have been taken as the amount invested in fixed assets. The return on fixed assets can be used to show the efficiency of fixed assets as a whole.

Ratio of Net Profit to Fixed Assets = Net Profit (Loss after tax)/ Fixed Assets (Net) x 100

Table 26

(In Percentage)

Companies	2003	2004	2005	Average
Blanket	80	38	42	53.33
Dyeing	104.92	171.71	194	156.81

Source: annual report from 2003-2005

Analysis and Interpretation

From the above table the ratio of net profit to fixed asset for the under studied companies are different. For blanket the ratio shows a decreasing trend which varies from 80 percent to 38 percent but the average is 53.33 percent. While for dyeing it is an increasing trend ranges from 104.92 percent to 194 percent. The declining ratio for blanket is due to decrease profit for the period.

For dyeing the ratio is above 100 percent for all year. The average is 156.81 percent which is satisfactory position.

4.4.4. Ratio of Fixed Assets to Capital Employed

The fixed assets to capital employed ratio shows the proportion of fixed assets in the capital employed. The capital employed of enterprises is divided into two parts viz. in the fixed assets and in the working capital. A high ratio denotes the heavy investment in fixed assets and insufficient working capital. The ratio should be 67 percent so that an adequate amount is left for working capital. The ratio is calculated as follows

Ratio of Fixed Assets to Capital Employed = Fixed Assets /Capital Employed x 100

Net Capital Employed = Net worth + Long term borrowings

Net worth = Total Asset-Total Liability

Table 27

(In Percentage)

Companies	2003	2004	2005	Average
Blanket	28.07	35.82	43.21	35.7
Dyeing	19.54	11.24	13.39	14.72

Source: annual report from 2003-2005

Analysis and Interpretation

During the study, for Dh Geda Blanket, the ratio of fixed asset to capital employed is increasing trend it ranges from 35 to 43.21 and the average ratio is 35.7. So the working capital of Blanket during the years has been less than the fixed assets which shows that liquid funds are less with the company. More over in the case of Dyeing the average ratio is very low which is 14.72, this indicates the fixed asset capital employed is very low than the working capital.

4.4.5. Ratio of Fixed Assets to Total Assets

The ratio of fixed assets to total assets reflects the proportion of long term resources possessed by the concern. A reasonable relationship between total assets and fixed assets is necessary to be maintained to avoid miss-management of assets. Thus, the ratio of fixed assets to total assets has been calculated to find the proportion of total assets invested in fixed assets (Kulshreshtha, 1990)

Ratio of Fixed Assets to Total Assets = Fixed Assets (Net) /Total Assets x 100

Table 28

(In Percentage)

Companies	2003	2004	2005	Average
Blanket	18	24	25.75	22.58
Dyeing	10.23	7.29	5.59	7.70

Source: annual report from 2003-2005

Analysis and Interpretation

From the above table, it is clearly observed that the ratios of fixed asset to total asset for DhGeda blanket seems increasing and for the last two years are almost similar. The averages of ratios are 22.58 percent which is better than the second company. This shows that the company has been increasing the investment in the fixed assets.

For Dyeing the ratio of fixed asset to total asset showed a decreasing trend. The ratio is varied from 10.23 to 5.59 percent. And the average is 7.70 which are very low. This indicates that a major part of the total assets was in the form of liquid assets not in the form of fixed asset.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter focused on conclusion and recommendations that the company to concenter ongoing change programs.

The study aimed at assessing the problem relating to fixed asset management and to analyze fixed asset efficiency. Moreover to suggest ways of improving its performance So that fixed asset management of the companies will be improved in the future. So to meet the objective of the study and comeback with the research question descriptive type of survey was used.

5.2. Summery and Conclusion

The company uses a variety of fixed assets to run its day to day business operations but, the process and follow up of fixed asset aren't designed even if they have good rules, regulations and full security of items. A well designed fixed asset accounting and management system enables to facilitate financial statement information, insurable values, control and accountability, maintenance scheduling and cost analysis, accounting for depreciation, and preparation of capital and operating budget. Failing to do so will lead to wrong decision.

Utilization is controlled through different techniques. Ratio analysis is the major techniques they used. Due to high market demands and market shares they optimally utilized the capacity but frequent maintenance was not made to increase the life of the asset. So sometimes machines were break down and order would be delayed. Even at time of maintenance they ignore maintenance stages and had no recorded information

about the capital items. Moreover, employees feel pressure and tired when unexpected extra order came from the customer.

From the finding the company's planning exercise on fixed asset management is not good and no linkage to the strategic goals. So that the manager fails to identify the resource needed to satisfy the organization program requirements based on the program goals and objectives. More over there is no planning set for acquisition, maintenance and disposal. But they made market analysis and need assessment to have enough information about the acquired item and optimal investment.

In every organization investment decision making is an important part of decision making. Successfulness of new project contributes to the growth of firms efficiently. On the contrary, unsuccessfulness leads to decline in efficiency and put in danger in the future. Since the company eager to know the amount of time it takes to pay back the investment they used payback period than the other as investment decision criteria.

Internal control over fixed asset is very important for safeguarding of assets prevention and detection of frauds and errors, to have correct and complete records of all transaction on each balancing of the books of accounts. This may enable to prepare reliable balance sheet and income statements on timely bases. The company secured fully the capital items and has insurance coverage's for all. But they didn't formal schedule to follow up, review and count the item. Beside this there was no formal committee established to dispose the items and disposal is not made on time.

It is true that inventorying is necessary for accountability and control through the establishment of a direct relationship between actual and recorded fixed assets. For such purpose taking physical count once a year is not enough to make effective internal control especially for such very big company.

There was no training provided to employees to update regarding on fixed asset management and process. The emphasis of staff training is to proceed with the current system and new techniques. Moreover there is no software designed for effective control of fixed asset of the company. It is obvious that a well-designed fixed asset accounting and management system enables to facilitate financial information well.

After analyzing efficiency of fixed asset, the following conclusions are drawn.

- Regarding to fixed asset turnover ratio, it is a fluctuating trend from year to year for Dh Geda Blanket which is an average of 6.27 where as it is increasing for Dh Geda dyeing which is an average of 13.74. This shows satisfactory position for the second company.
- Regarding fixed asset to funded debt, for Blanket is fluctuating trend. But it exceeds 100 percent. Which has its implication of long term creditors had sufficient security of fixed assets for their claim but it also denotes a great amount of dependence on borrowed funds. On the contrary for DhGeda dyeing it is under 100 percent.
- Regarding ratio of net profit to fixed asset it is observed that the trend is decreasing for Dh Geda Blanket which is an average of 53.33 whereas increasing for Dh GedaDyeing an average of 156.81 which is satisfactory.
- The ratio of fixed asset to capital employed for Dh Geda Blanket is 35.7. Indicates the fixed asset capital employed is very high than the working capital. On the other hand for dyeing it is low which an average of 14.72, means fixed asset capital employed is very low.
- The ratio of fixed asset to total asset for Dh Geda Blanket is more than of Dh GedaDyeing. Which is an average of 22.58 & 7.7

5.3 Recommendations

As a concluding remark, the researcher would like to forward some recommendations on the management of fixed asset of Dh Geda Blanket and Dyeing.

- An efficient and proper fixed asset management is required by setting clear, transparent rules, regulations and company's goal. It should be shared to all to understand who will do, when, and how will do.
- It is good if all the companies plan their fixed asset requirements i.e. acquisition, maintenance and disposal a head of time and acquire what they need through the normal budget purchase so that idle and obsolete assets can be discarded. Besides, their normal purchasing request may be entertained by means of special approval as and when the need arise. Planning is needed for every process to control resources and costs. It should align with strategic goals of the companies. This helps the manager to identify the resource needed to satisfy the organization program requirements based on the program goals and objectives. And also helps the manager by giving clear frame works for decision making.
- It's advisable to have 80-90 percent capacity utilization because there must be some time left for unexpected customer order and machine maintenance. More over employees should have some time to rest. This could minimize employee's pressure, absenteeism and turnover.
- The company should have maintenance and disposal program. Without clear definition of requirements, achievements and feedback, measurement is not possible. Measurement of effectiveness through monitoring key performance indicators is only possible if each stage has been completed. Without measurement, management and optimization is not possible. So they should follow maintenance stages. (Simon Mills, 2007). And they have to record every historical information when they maintain because the information is very needed

for the future life of asset. Moreover old and obsolete fixed items should be avoided on time.

- The companies should frequently follow up and review the items to ensure adherence to fixed asset process, internal policies, to Prevent and detect fraud and errors, to Safeguards of asset, to Secure, as far as possible, the completeness and accuracy of the records, to Secure the timely preparation reliable financial information, generally it assures validity, authorization, completeness valuation, classification, timing and separation of custody and recording
- It is good to know that a well-designed fixed asset accounting and management system enables to facilitate financial statement information insurable values, control and accountability, maintenance scheduling and cost analysis, accounting for depreciation and preparation of capital and operating budgets. So it is recommended that software should be implemented to make more effective the controlling of the fixed assets.
- Due to this fact, developing a standardized procedure is of paramount importance for the appropriate handling of fixed assets that can support the company's mission, goals and objectives
- It is recommended it all companies units should take physical inventory of their fixed assets at least semiannually and reconcile the actual count with the ledger records.
- Training and development is crucial for every employee to aware them with current situation. If not employees' of the companies cannot update themselves to implement new system and make more effective management of fixed asset.
- Fixed asset turn over can be increased by improving sales volume.
- Ratio of fixed asset to funded debt, ratio of fixed asset to capital employed and ratio of fixed asset to total asset can be increased by heavy investment of fixed asset.

- Ratio of net profit to fixed asset should be improved by increasing profit of the year or reducing costs. So the management needs to reduce the cost of sales in order to arrive reasonable figure of profit.

References

AASHTO, (1997) *Transportation Asset Management Guide*. American Association of State Highway and Transportation Officials, Washington, D.C.

AASHTO, (2002) *Transportation Asset Management Guide*. American Association of State Highway and Transportation Officials, Washington, D.C.

AbdellaGebeyaw. (1997) *A control over purchase and inventory manual*.

Alastair, A. & Hutchison, N. (2005), "The reporting of risk in real estate appraisal property risk scoring", *Journal of Property Investment & Finance*,

Anthony Robert N, David F. Hawkins, Kenneth A. Merchant. (1999) *Accounting Text & cases* 10th Edition, Newyork:McGraw Hill Higher Education

Clarke, P, (2002) *Physical asset management strategy development and implementation*, proceedings, ICOMS

Dean, J. (1991). *Managerial Economics*. Englewood Cliffw: Prentice-Hall Inc, New Jersey (USA)

GAO/AIMD. (1998) *Leading practice in capital decision making manual*,AIMD publishing(USA)

Glautier, W.M.E. and under down, B.(1976) *Accounting Theory and Practice*. Pitman International Edition, London (England)

Gupta.(1991)*Contemporary Auditing*.5thedition.Tata McGraw Hill Publishing Co.
Brian Jenkins,Indian

Kimme, Paul D. I, Jerry J.Weygandt.(1998) *Tolls for Business making*. NewYork:
Donald E. Kieso Wiley

Kulshreshtha N.K.(1990)‘*Theory and Practice of Management Accounting*’. 2nd
edi, NavmanPrakashan, Aligarh, India p. 236, 1990

LepaniWagatakierwa *Fixed Asset Management Manual*, 2008
NevmanPrakashan,Delhi

Meigs and Meigs, Bettner, Whittington. (1996) *Accounting the basis for business
decision*.7thed.NewYork:McGraw Hill

Mosich A.N. (1976) *Intermediate Accounting*.6th edition.NewYork:McGraw Hill

Nair, J. (2000), *the structuring of the Treasury regulations*. The IPFA Journal,

Nelson, R. & Wohar, M.E. (1983). Regulation, scale economies, and productivity
in Steam-electric generation. International Economic Review.

NSW. (2004) Government Asset Management, *Total asset management
manual*,New South West Tresury,USA

OECD, (2001), *Asset Management for the Road Sector*. Organization for
Economic Co-Operation and Development, Paris

Okwo, et al. (2012) *European Journal of Business Management*, Vol 4, No.20.

Prakash Jagdish. (1976) *Audit Principles Practice and Problems*. Kalyani Publishers LyallBk Depot, Newdelhi

Pandy, I'm. (2007) *Financial Management*. 9th editions. New Delhi, India Vikas publishing house Pvt Ltd

Pk Jain. (2006) *financial management*. 5th edition, Published by Tata McGraw-Hill Education Pvt. Ltd. India

Scholleova Hanna, et al. (2010) *Investment decision making criterion in practice*, 15, ISSN

Simon Mills, (2007) *cost effectiveness maintenance manual*, SLN, USA

Thompson, Brian E. CPPM, CF, (2010) *Journal of property and asset management* V.1, No.1.

Ukai Yasuharu. (2005) *Economic Analysis of Information System Investment in Banking Industry*, Springer, Tokyo (USA)

Watson David (2011), *Strategic Fleet Management plan*, Aurora Energy, USA

Warren & Fess, P. &. (1984) *Accounting Principle*. 16th edition. Cincinnati: South Western Publishing

William and Merry, (2011) *Fixed asset procedure manual*, Vegina Institute of Marine, USA

Woodhouse J. (2004) *Asset management-an introduction manual*, institute of asset management (IAM)

APPENDIXES

QUESTIONNAIRE

ST. MERRY UNIVERSITY

SCHOOL OF GRADUATE STUDIES

This questionnaire is filled by finance department, purchasing and technique department. The purpose of this questionnaire is to seek answers for questions related to fixed assets management in a case of Dh Geda Blanket and Dh Geda Dyeing to arrive at best solutions.

In order to achieve the planned goal, your genuine cooperation to answer the following questions is substantial. Please attempt all questions with great attention.

Objective of the Study

The overall objectives of the study are

- Assess the problems relating to fixed asset management of the company and to analyze the efficient asset utilization of the company.

The questionnaire is prepared to answer the first objective that is to assess the problems relating to fixed asset management of the company. And the second objective analyzed by taking secondary data.

Guideline: please put a tick mark in the box of your choice and not down your supplementary response on the space provided.

Thank you in advance for your genuine response.

Part I General information

1. Age 20-25 1 26-35 2 35-40 3 above 40 4

2. Sex M 1 F 2

3. Education background

Diploma 1 First Degree 2 Second Degree 3

4. How many years have you been working in this company?

Less than a year 1

From one to three years 2

From three to five years 3

More than five years 4

Part II. Issues Related to the topic

5. Is there any adequate market assessment before fixed asset is acquired?

Yes 1 No 2 I don't know 3

6. If 2 is chosen in question (5) why? -----

7. Does the company plan for acquisition, maintenance and disposal of fixed asset?

Yes 1 No 2 I don't know 3

8. If 1 is chosen in question (7), how does plan fixed asset requirement?

9. Does the planning coincide with strategic goals of the company?

Yes 1 No 2 I don't know 3

10. What are the techniques that the companies used to reach efficient utilization?

Rating system 1 score card 2 Ratio analysis 3 others 4

11. To what extent fixed asset are utilized? If underutilized why?

Optimal utilized 1 adequately utilized 2 derutilized 3
Not utilized 4

12. What is the main reason for capital investment of the company?

Replacement 1 expansion 2 development 3 others 4

13. If 1, 2, 3, or 4 is chosen in question 12, which techniques of capital budgeting were employed?

Payback period 1 ARR 2 NPV 3 IRR 4 Profitability Index 5

14. Why they preferred?

15. Is there adequate physical security for fixed asset items?

Yes 1 No 2 I don't know 3

16. If 1 is chosen in question (15), what kind of security?

17. Is there adequate insurance converge for the capital assets?

Yes 1 No 2 I don't know 3

18. Is there a formal organizational rules and regulations defining the responsibility of purchasing, Receiving, approving, and performing the invent.

Yes 1 No 2 I don't know 3

19. Is there any frequent maintenance service to enhance productivity?

Yes 1 No 2 I don't know 3

20. Does the company follow maintenance stages?

Yes 1 No 2 I don't know 3

21. Is there any adequate follow up or action taken by management in respect to damaged, obsolete and missed fixed asset?

Yes 1 No 2 I don't know 3

22. Are all disposal of property approved by designated person with proper authorization?

Yes 1 No 2 I don't know 3

23. How is disposal of fixed asset a practiced?

- By committee 1
- By assigned personnel or staff 2
- Any other 3

25. How often inventory is made?

- Yearly 1
- when required 2
- Any other 3

Part- III other questions

24. Are there any training provided to related employees to improve their knowledge for well management of fixed asset?

Yes 1 No 2

25. Does the management periodically review fixed asset management process to recommended charges needed for improvement?

Yes 1 No 2

26. Is there accounting software designed for well management of fixed asset.

Yes 1 No 2

27. If 1 is chosen in question (26), what type of accounting software the company used?

28. How does fixed asset management applied?

Thanks for your cooperation

Eyob Dadi

Secondary Data's(,000)

Blanket	2003	2004	2005
Sales	58,433	83,415	87,226
Fixed Asset	8,556	11,739	17,886
Long tem debt	10,441	8,939	16,999
Net Profit	6,834	4,428	7,570
Capital employed	30,484 30,484	32,773 32,773	41,386
Total Asset	48,052	48,810	69,469
Dyeing	2003	2004	2005
Sales	75,546	121,131	143,998
Fixed Asset	9,455	8,392	7,659
Long term debt	12,011	23,905	16,909
Net Profit	9,920	14,401	14,863
Capital employed	48,369	74,665	57,213
Total Asset	92,371	115,086	137,033

DECLARATION

I, the undersigned, declared that this thesis is my original work, prepared under the guidance of my advisor, Degefe Duressa (PHD), and all resources of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Name

Signature & Date

ENDORSEMENT

This thesis has been submitted to St.Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Advisor

Signature & Date

St.Mary's University, Addis Ababa June, 2016