



SAINT MARY UNIVERSITY

SCHOOL OF GRADUATE STUDIES

AN ASSESSMENT OF COST ALLOCATION SYSTEM

IN MANUFACTURING COMPANY

(IN CASE OF OROMIA PIPE FACTORY PLC)

BY

SENDEKU ZERIHUN

ID NO. SGS/0218/2014A

JUNE, 2023

ADDIS ABABA, ETHIOPIA

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FACTORY PLC)**

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**A THESIS SUBMITTED TO SAINT MARY UNIVERSITY,
SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF
BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE**

JUNE, 2023

ADDIS ABABA, ETHIOPIA

SAINT MARY UNIVERSITY
SCHOOL OF GRADUATE STUDIES
FACULTY OF BUSINESS

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DECLARATION

I, the undersigned, declare that the thesis in title an assessment of cost allocation system in manufacturing company (in case of Oromia Pipe Factory plc) is my original work, prepared under the guidance of Kiros Habtu (Ass. Professor). All sources of materials 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.

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ENDORSEMENT

The thesis in title an assessment of cost allocation system in manufacturing company (in case of Oromia Pipe Factory plc) has been submitted to Saint Mary University, School of Graduate Studies for examination with my approval as a University advisor.

Kiros Habtu (Ass. Professor)

Advisor

Signature

Saint Mary University, Addis Ababa, Ethiopia June, 2023

TABLE OF CONTENTS

Contents	Page
ACKNOWLEDGMENTS	ii
ACRONYMS AND ABBREVIATIONS	iii
LIST OF FIGURES	iv
<i>ABSTRACT</i>	v
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background of the study	1
1.2 Background of the company	2
1.3 Statement of the problem.....	3
1.4 Research question.....	4
1.5 Objectives of the study	4
1.5.1 General objective	4
1.5.2 Specific objectives	4
1.6 Significance of the study.....	5
1.7 Scope of the study	5
1.8 Organization of the paper.....	5
CHAPTER TWO	6
LITERATURE REVIEW	6
2.1 Introduction.....	6
2.2 Theoretical Review.....	7
2.2.1 The basics of cost behavior	7
2.2.2 Methods of Costing	8
2.2.2.1 Job order costing.....	8
2.2.2.2 Process costing	8
2.2.3 Types of Business Sector.....	8
2.2.4 Types of Inventory	9
2.2.5 Classification of Manufacturing Costs.....	9
2.2.6 Accumulation and Allocation of Overhead.....	10
2.2.7 Inventoriable Costs	10

2.2.8 Period Costs	10
2.2.9 Unit Costs	11
2.2.10 Cost Driver.....	11
2.2.11 Cost Objects.....	11
2.2.12 Prime Costs and Conversion Costs	11
2.2.13 Cost Allocation Challenges	11
2.2.14 Cost Management System	12
2.2.15 Cost-Volume-Profit Analysis	12
2.2.16 The Roll of Cost Information in Pricing Decisions	12
2.2.17 Pricing Decisions and Cost Management.....	13
2.2.18 Major Factors That Affect Pricing Decisions	13
2.2.19 Costing and Pricing for the Long Run	14
2.2.19.1 Market-based pricing	14
2.2.19.2 Cost-plus pricing.....	14
2.2.20 The roll of cost accountant	14
2.2.21 Product Diversity	15
2.2.22 Types of Cost System.....	15
2.2.22.1 Direct costing systems.....	15
2.2.22.2 Traditional costing systems	15
2.2.22.2 Activity-based costing systems.	17
2.2.23 Activity-based management (ABM)	20
2.2.24 Classification of activity levels	20
2.2 Empirical studies	21
2.3 Summary and Literature Gap	24
CHAPTER THREE.....	26
RESEARCH METHODOLOGY	26
3.1 Introduction	26
3.2 Research Design	26
3.3 Target Population and Sampling Technique	26
3.3.1 Target Population.....	26
3.3.2 Sampling Technique.....	26
3.4 Data Sources and Collection Instruments	27
3.4.1 Data Sources	27

3.4.2 Data Collection Instruments	27
3.5 Methods of Data Analysis	27
3.6 Reliability and Validity	28
3.6.1 Reliability	28
3.6.2 Validity	28
3.7 Ethical Consideration	28
CHAPTER FOUR	29
RESULT AND DISCUSSION	29
4.1 Introduction	29
4.2 Descriptive Statistics	29
4.3 Demographic Characteristics of Respondents	30
4.4 Cost System Practice and Allocation Mechanism.....	32
4.5 Internal Control System	35
4.6 Change of Manufacturing Process and Cost	37
4.7 Staff Quality and Company's Capacity	38
4.8 Maintaining Database	40
4.9 Department's Involvement & Customer's Satisfaction on Pricing Decision	43
CHAPTER FIVE.....	45
CONCLUSIONS AND RECOMMENDATIONS	45
5.1 Summary of Findings	45
5.2 Conclusions	47
5.3 Recommendations	48
<i>REFERENCES</i>	50
Appendix A: Questionnaire	53
Appendix B: Focus Group Discussion	56

ACKNOWLEDGMENTS

The Lord is my shepherd; I arrived here safely through him. You are worthy, our Lord and God, to receive glory and honor and power.

I would like to express my gratitude to my advisor Kiros Habtu (Ass. Professor) for giving me her valuable time and assisted me in her knowledge and experience throughout this research thesis.

Finally, I would like to extend my gratitude for my family and friends for their unconditional love and support. In this respect, I am deeply grateful to my wife (Mushiraye) who covered my responsibility at home for I accomplished the paper freely.

God bless all of you.

ACRONYMS AND ABBREVIATIONS

ABC	Activity Based Costing
ABM	Activity Based Management
CA	Cost Allocation
CAS	Cost Allocation System
CVP	Cost Volume Profit
FGD	Focus Group Discussion
OPF	Oromia Pipe Factory
OWWCE	Oromia Water Works Construction Enterprise
PLC	Private Limited Company
S.Co.	Share Company
SPSS	Statistical package for Social Science
St.	Saint
Std.	Standard

LIST OF FIGURES

Contents	Page
Figure 1: UPVC pipe.....	58
Figure 2: HDPE pipe.....	58

ABSTRACT

The purpose of this study was to assess cost allocation system in Oromia Pipe Factory PLC for management decision making. The study focused on cost system practice and allocation mechanism, internal control system, change of manufacturing process and cost, staff quality and company's capacity, maintaining database and department's involvement & customer's satisfaction on pricing decision. The target population is focused on 25 employees of Oromia Pipe Factory PLC. Those are listed from general manager, deputy general managers, department heads, factory and administrative staffs. Purposive sampling technique is used to select respondents for questionnaire and focus group discussion on the bases of their expertise in the research study. The data collected was analyzed through qualitative approach for focus group discussion and Quantitative approach for questionnaire which put into SPSS and then analyzed by using descriptive statistical tools. The basic findings from the study revealed that the company uses process costing system and traditional costing method to allocate factory overhead costs, the company assigns factory overhead cost using units of production, and also the company has no capacity to implement modern cost allocation system,. The result concluded that traditional costing method is not effective in which providing inaccurate cost information and affecting performance of the company. In addition, there is shortage of man power and trained employees because of capacity building training in relation with cost system have not been provided for staffs. Therefore the study recommended that the company need to develop and adopt the new cost method that method is activity based costing system. Moreover, top management support is crucially needed to facilitate training for staffs and to improve capacity of the company.

Key words: Activity based costing, Cost Allocation System, Traditional costing method

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

No product can be produced without the incurrence of costs for material, labor, and overhead. At a minimum, no service can be produced without the incurrence of costs for labor and overhead; a cost for material may or may not be involved. Cost reflects the monetary measure of resources used to attain an objective such as making a good or performing a service. In a highly competitive, international corporate environment, cost accounting is a dynamic discipline that constantly adapts to manager's needs. To plan, carry out, and assess strategy, managers use data from cost accounting. In order to calculate product costs for internal management and external financial reporting, managers also need cost accounting measurements (Kinney and Raiborn, 2011).

Yohannes (2005) explained that managers require information about the company in order to fulfill their planning, controlling, and decision-making duties. Managerial accountants emphasize costs incurred in the organization in a large portion of the data they supply.

Managers give most of their attention to conversion costs, which are the costs to convert direct materials into the final product. These are the costs for direct labor and manufacturing overhead. Managers who focus on conversion costs use a controllability argument: "we can manage conversion costs. Direct materials costs are mostly outside of our control (Lanen N., et al., 2014)."

Because erroneous product costs can mislead managers about the profitability of various items, managers want to allocate costs to cost objects appropriately. For instance, managers may unintentionally promote less profitable products over more profitable ones as a result of this (Rajan and Datar, 2018).

However, allocation of cost to cost objects is differed from company to company and it depends on the type and the nature of the business. As a researcher it is advisable to design effective costing system to fulfill the objective of the company.

1.2 Background of the company

Oromia pipe factory plc (OPF plc) was established as private limited company between Oromia Water Works Construction Enterprise (Government owned enterprise) and Golden Trade Company (American/Egyptian Company). The company is located on a strategically suitable area in Addis Ababa. The factory was inaugurated and started production on November, 2007 with three production lines. But since then the company undergone through steady growth and currently the company has six lines of uPVC and one corrugated PVC pipe production lines. In addition the company installed additional HDPE lines to meet the growing customer demand this will upgrade the capacity even further.

The total investment cost worth Birr 77 million. Accordingly, the share of the shareholders capital contributed for factory is:

- Oromia Water Works Construction Enterprise (OWWCE) Birr 53.9 million or 70%;
- Golden Trade Company (American/Egyptian Company) Birr 23.1 million or 30%;

Since its establishment OPF is able to manufacture and supply different size and pressure range quality uPVC pipes and HDPE pipes for various drinking water supply and irrigation projects throughout the Oromia region and other region as well. We have strong commitment to supply products to our valued customers and we will keep on striving to introduce new technologies and products to exceed customer expectations.

The vision as a Company that aspires to be one of the most high quality brand producer of plastic products; pipes, fitting and geo-membrane and ensuring consistent supply of water pipes for potable water and irrigated agriculture that are of good quality and competitive in the country and East Africa in the coming ten years.

To realize this Vision, the mission of the Company is employing a mix of strategies that involve renovation of the existing uPVC pipes and HDPE pipes production lines and launching new type of products. Together with this, the factory has set up high standards of performance and ethical behaviors, business values and principles, code of conduct and code of ethics that ensures the satisfaction of its customers with respect to quality of products, product availability and affordability of prices.

1.3 Statement of the problem

The corporate world is always changing. Regulations are constantly changing, global competition is getting more stronger, and technology is a perpetual source of change. Managerial accounting needs to keep evolving to give managers the information they require in this continuously changing world. In recent years, manufacturers and service providers have experienced tremendous change. Advances in computerized systems, technological innovation, global competition, and automation have changed the manufacturing environment drastically. As a result, the amount of direct labor used in many industries has greatly decreased, and total overhead costs resulting from depreciation on expensive equipment and machinery, utilities, repairs, and maintenance have significantly increased. When there is not a correlation between direct labor and overhead, it is inappropriate to use predetermined overhead rates based on direct labor. Companies that use overhead rates based on direct labor when this correlation does not exist experience significant product-cost distortions. To avoid such distortions, many companies now use machine hours as the basis on which to allocate overhead in an automated manufacturing environment. But even machine hours may not suffice as the only basis for allocating all overhead. In such situations, managers need to consider an overhead cost allocation method that uses multiple bases. That method is activity-based costing (Weygandt J., et al., 2012).

Now a day Oromia pipe factory plc produces different types of pipes in different product lines. If the company uses traditional cost allocation system (CAS) for product diversity it implies that the system creates inaccurate product cost information and managers make inappropriate decision.

Platt and Hilton (2017) stated that product cost information is critical of a company. Companies use this information to determine which products to produce, what price to

charge, and the amount to produce. It is also vital for effective evaluation of employee's performance as well as for making decisions about how much money to make.

The title in assessment of cost allocation system is also done to contribute on providing better financial reports and economic benefits for Oromia pipe factory plc. And the researcher is initiated to assess and address the gap of company's CAS for the purpose of identifying cost information problem and proposing the possible recommendation.

1.4 Research question

Specifically, the study is designed to answer the following basic questions:

- What is the current cost allocation system (CAS) practiced in the manufacturing company?
- What level of factory overhead costs is contributed to product cost?
- Does current CAS show actual cost information?
- How cost information helps manufacturing company's managers for decision making to improve and implement relevant CAS?

1.5 Objectives of the study

1.5.1 General objective

The general objective of this study is to assess CAS in Oromia pipe factory plc for management decision making.

1.5.2 Specific objectives

- To assess the manufacturing company's existing system of cost allocation.
- To determine the level of factory overhead costs contribute to the cost object.
- To assess whether the current CAS displays actual cost data.
- To examine whether cost information aids managers of manufacturing company in their decision-making to enhance and adopt relevant CAS.

1.6 Significance of the study

- The study will be an eye-opening of managements by showing and creating awareness about CAS.
- The finding of this research will provide a guide for the future decision making by providing actual cost information on which and how CAS is applied.
- Apart from being obligatory requirement for fulfillment of this thesis, the research also gives necessary recommendation to have relevant information to improve company's managements on CAS.
- Moreover, the study serves as a secondary data for further study scholars that want to conduct other similar investigation.

1.7 Scope of the study

The topic of this study is delimited in assessing CAS. The study is presented and analyzed using primary source from structured questioner and focus group discussion. Cost data were examined using secondary source from financial reports obtained from Oromia pipe factory plc. The sample respondents were selected from departments of the company through purposive technique. The researcher employed quantitative and qualitative approaches to accommodate the analysis of the study. And also the survey study is presented by descriptive statistical tools such as SPSS (Statistical package for social science), tables and percentages.

1.8 Organization of the paper

This research paper is organized in five chapters. Chapter one discusses the introduction part states statement of the problem, research question, objectives and significance, chapter two deals with review of related literature which consists theoretical and empirical studies, chapter three presents research methodology, chapter four contains data presentation, analysis and interpretation, and finally, chapter five describes summary, conclusion and recommendation of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews both theoretical and empirical studies on cost allocation system. The theoretical section includes the basics of cost behavior, methods of costing, types of inventory, classification of manufacturing costs, accumulation and allocation of overhead, cost driver, major factors that affect pricing decision and types of cost system. The empirical section reviews numerous studies in the area of cost allocation system. And finally, the important findings from the literature are summarized in the literature summary and research gap.

Weygandt et al. (2012) defined that cost accounting involves measuring, recording, and reporting product costs. Companies determine both the total cost and the unit cost of each product. The accuracy of the product cost information is critical to the success of the company. Companies use this information to determine which products to produce, what price to charge, and the amount to produce. Accurate product cost information is also vital for effective evaluation of employee performance.

Hansen and Mowen (2007) explained most of the product-costing and management accounting procedures used in the 20th century were developed between 1880 and 1925. Prior to 1914, many of the early developments concerned product costing tracing a firm's profitability to individual products and using this information for strategic decision making. By 1925, most of this emphasis had been abandoned in favor of inventory costing assigning manufacturing costs to products so that the cost of inventories could be reported to external users of a firm's financial statements.

Financial reporting becomes the driving force for the design of cost accounting systems. Managers and firms were willing to accept aggregated average cost information about individual products, as they did not feel the need for more detailed and accurate cost information about individual products. As long as company had relatively homogeneous products that consumed resources at about the same rate, the average cost information supplied by a financially driven cost system was good enough.

Furthermore, for some firms, the cost of a more detailed cost system apparently exceeded its benefits.

Some effort to improve the managerial usefulness of conventional cost systems took place in the 1950s and 1960s. Users discussed the shortcomings of information supplied by a system designed to prepare financial reports. Efforts to improve the system, however, essentially centered on making the financial accounting information more useful to users rather than on producing an entirely new set of information and procedures apart from the external reporting system.

In the 1980s and 1990s, many recognized that the traditional management accounting practices no longer served managerial needs. Some claimed that existing management accounting systems were obsolete and virtually useless. More accurate product and resource costing were needed for managers to improve quality and productivity and to reduce costs. In response to the perceived failure of the traditional management accounting system, efforts were made to develop a new management accounting system that would satisfy the demands of the current economy environment.

2.2 Theoretical Review

2.2.1 The basics of cost behavior

Hansen and Mowen (2007) stated that Cost behavior is the general term for describing whether costs change as output changes. Costs react to output changes in many different ways. We will begin by looking at the simplest possibilities-fixed costs, variable costs, and mixed costs.

Fixed Costs: A cost that stays the same as output changes is a fixed cost. More formally, a fixed cost is a cost that, in total, remains constant within a relevant range as the level of activity output changes.

Variable costs: While fixed costs remain unchanged as output varies, variable costs do change as output changes. A variable cost is a cost that, in total, varies in direct proportion to changes in output. That is, a variable cost goes up as output, and it goes down as output goes down.

Mixed costs: A mixed cost is a cost that has both a fixed and a variable component. For example, sales representative are often paid a salary plus a commission on sales.

2.2.2 Methods of Costing

The methods or types of costing refer to the techniques and process employed in the ascertainment of costs. Several methods have been designed to suit the needs of different industries. The method of costing to be applied in a particular concern depends upon the type and nature of industry. Basically, according to Arora (2004), there are two methods of costing.

2.2.2.1 Job order costing

Job-order costing relates to a costing system that is required in organization where each unit or batch of output of a product or service is unique. This creates the need for the cost of each unit to be calculated separately. The term 'job' thus relates to each unique unit or batch of output.

2.2.2.2 Process costing

A process costing system is used in industries where masses of similar products or services are produced. Products are produced in the same manner and consume the same amount of direct costs and overheads. It is therefore unnecessary to assign costs to individual units of output. Instead, the average cost per unit of output is calculated by dividing the total costs assigned to a product or service for a period by the number of units of output for the period. Industries in which process costing is widely used include chemical processing, oil refining, food processing and brewing. For example, one liter of beer that is produced is identical to another liter so the cost of one liter is identical to another.

2.2.3 Types of Business Sector

Arora (2004) defined three sectors of the economy and provide examples of companies in each sector.

1. Manufacturing-sector companies purchase materials and components and convert them into various finished goods. Examples are automotive companies such as Jaguar, cellular phone products such as Samsung, food-processing companies such as Heinz, and computer companies such as Lenovo.
2. Merchandising-sector companies purchase and then sell tangible products without changing their basic form. This sector includes companies engaged in retailing or wholesaling.
3. Service-sector companies provide services (intangible products) for example, legal advice or audits to their customers.

2.2.4 Types of Inventory

A manufacturing business reports three types of inventory on its balance sheet as follows. Warren et al., (2009).

1. Materials inventory (sometimes called raw materials inventory). This inventory consists of the costs of the direct and indirect materials that have not entered the manufacturing process.

Examples for legend Guitars: Wood, Guitar strings, glue, sandpaper

2. Work in process inventory. This inventory consists of the direct materials, direct labor, and factory overhead costs for products that have entered the manufacturing process, but are not yet completed (in process).

Examples for Legend guitars: Unfinished (partially assembled) guitars

3. Finished goods inventory. This inventory consists of completed (or finished) products that have not been sold.

Example for Legend Guitars: Unsold guitars

2.2.5 Classification of Manufacturing Costs

Brewer et al., (2012) stated that, Most companies separate manufacturing costs into three broad categories: direct materials, direct labor, and manufacturing overhead. A discussion of each of these categories follows.

1. Direct materials: The materials that go into the final product are called raw materials. This term somewhat misleading because it seems to imply unprocessed nature resources like wood pulp or iron ore. Actually, raw materials refer to any materials that are used in the final product; and the finished product of one company can become the raw materials of another company.
2. Direct labor: Direct labor consists of labor costs that can be easily (i.e., physically and conveniently) traced to individual units of product. Direct labor is sometimes called touch labor because direct labor worker typically touch the product while it is being made.
3. Manufacturing Overhead: Manufacturing overhead, the third element of manufacturing cost, includes all manufacturing costs except direct materials and direct labor. Manufacturing overhead includes items such as indirect materials; indirect labor; maintenance and repairs on production equipment; and heat and light, property taxes, depreciation, and insurance on manufacturing facilities.

2.2.6 Accumulation and Allocation of Overhead

Any cost incurred to make products or perform services that is not direct material or direct labor is overhead. Overhead costs are incurred both in the production area and in selling and administrative departments. Manufacturers traditionally considered direct material and direct labor as the primary production costs, and overhead was often an “additional” cost that was necessary but not of an exceptionally significant amount. However, many manufacturing firms have begun to heavily invest in automation, which has increase the cost of manufacturing overhead.

Direct material and direct labor are easily traced to a product or service. Overhead, on the other hand, must be accumulated throughout a period and allocated to the products manufactured or services rendered during that period. Cost allocation refers to the assignment of an indirect cost to one or more cost objects using some reasonable allocation base or driver. Cost allocations can be made across time periods or within a single time period. For example, in financial accounting, a building’s cost is allocated through depreciation charges over its useful or service life. This process is necessary to satisfy the matching principle. In cost accounting, production overhead cost are allocated within a period through the use of allocation bases or cost drivers to products or services. This process reflects application of the cost principle, which requires that all production or acquisition costs attach to the units produced, services rendered, or units purchased. Kinney & Raiborn (2011).

2.2.7 Inventoriable Costs

Arora (2004) stated that, inventoriable costs are all costs of a product that are considered assets in a company’s balance Sheet when the costs are incurred and that are expensed as cost of goods sold only when the product is sold. For manufacturing-sector companies, all manufacturing costs are inventoriable costs. The costs first accumulate as work-in-process inventory assets (in other words, they are “inventoried”) and then as finished goods inventory assets.

2.2.8 Period Costs

Period costs are all costs in the income statement other than cost of goods sold. Period costs, such as design costs, marketing, distribution, and customer service costs, are treated as expenses of the accounting period in which they are incurred because managers expect these costs to increase revenues in only that period and not in future

periods. For manufacturing sector companies, all nonmanufacturing costs in the income statement are period costs.

2.2.9 Unit Costs

A unit cost, also called an average cost, is calculated by dividing the total cost by the related number of units produced. In many decision contexts, calculating a unit cost is essential.

2.2.10 Cost Driver

A cost driver is a variable, such as the level of activity or volume, which causally affects costs over a given time span. An activity is an event, task, or unit of work with a specified purpose for example, designing products, setting up machines, or testing products. The level of activity or volume is a cost driver if there is a cause-and-effect relationship between a change in the level of activity or volume and a change in the level of total costs.

2.2.11 Cost Objects

Drury (2018) who pointed out that, a cost object is any activity for which a separate measurement of costs is desired. In other words, if the users of accounting information want to know the cost of something, this something is called a cost object. Example of cost objects include the cost of a product, the cost of rendering a service to a bank customer or hospital patient, the cost of operating a particular department or sales territory, or indeed anything for which one wants to measure the cost of resources used.

2.2.12 Prime Costs and Conversion Costs

You are likely to encounter the following two categories of costs in manufacturing companies: prime costs and conversion costs. Prime costs are the direct costs, namely, direct materials and direct labor. Conversion costs are the costs to convert direct materials into the final product. These are the costs for direct labor and manufacturing overhead. Lanen et al., (2014).

2.2.13 Cost Allocation Challenges

Datar & Rajan (2018) argued that, managers want to assign costs accurately to cost objects because inaccuracy product costs will mislead managers about the profitability of different products. This could result, for example, in managers unknowingly promoting less-profitable products instead of more-profitable products.

2.2.14 Cost Management System

Hilton & Platt (2014) explained the explosion in technology we can experiencing, coupled with significant worldwide competition, is forcing managers to produce high-quality goods and services, provide outstanding customer service, and do so at the lowest possible cost. To help managers cope with this high-pressure environment, many companies have moved away from a historical cost accounting perspective and toward a proactive cost management perspective. A cost management system is a management planning and control system with the following objectives.

- Measure the cost of the resources consumed in performing the organization's significant activities and measures the unused capacity of those resources.
- Identify and eliminate non-value added costs. These are the costs of activities that can be eliminated with no deterioration of product quality, performance, or perceived value.
- Determine the efficiency and effectiveness of all major activities performed in the enterprise.
- Identify and evaluate new activities that can improve the future performance of the organization.

2.2.15 Cost-Volume-Profit Analysis

Managers are concerned about the impact of their decision on profit. The decisions they make are about volume, pricing, or incurring a cost. Therefore, managers require an understanding of the relations among revenues, costs, volume and profit. The cost accounting department supplies the data and analysis, called cost-volume-profit (CVP) analysis that supports these managers. Lanen et al., (2014).

2.2.16 The Roll of Cost Information in Pricing Decisions

Drury (2018) stated that, most organizations need to make decisions about setting or accepting selling prices for their products or services. In some firms, prices are set by overall market supply and demand forces and the firm has little or no influence over the selling prices of its products or services. This situation is likely to occur where there are many firms in an industry and there is little to distinguish their products from each other. No one firm can influence prices significantly by its own actions. For example, in commodity markets such as wheat, coffee, rice and sugar, prices are set for the market as a whole based on the forces of supply and demand. Also, small firms operating in an industry where prices are set by the dominant market leaders will have little influence

over the price their products or services. Firms that have little or no influence over the prices of their products or services are described as price takers.

2.2.17 Pricing Decisions and Cost Management

Most companies carefully analyze their input costs and the prices of their products. They know if the price is too high, customers will go to competitors; if the price is too low, the company won't be able to cover the cost of making the product. A company must also know how its customers will react to particular pricing strategies. Datar & Rajan (2018).

2.2.18 Major Factors That Affect Pricing Decisions

How managers price a product or a service ultimately depends on demand and supply. According to Datar & Rajan (2018), there are three influences on demand and supply are customers, competitors, and costs.

1. **Customers:** Customers influence price through their effect on the demand for a product or service. The demand is affected by factors such as the features of a product and its quality. Managers always examine pricing decision through the eyes of their customers and then manage costs to earn a profit.
2. **Competitors:** No business operates in a vacuum. Managers must always be aware of the actions of their competitors. When there are competitors, managers try to learn about competitors' technologies, plant capacities, and operating strategies to estimate competitors' costs-valuable information when setting prices because it helps managers understand how competitors are willing to go on price without making a loss. Because competition spans international borders, fluctuations in exchange rates between different countries' currencies affect costs and pricing decisions.
3. **Costs:** Costs influence prices because they affect supply. The lower the cost of producing a product, the greater the quantity of product the company is willing so supply. Companies supply products as long as the revenue from selling additional units exceeds the cost of producing them. Managers who understand the cost of producing products set prices that make the products attractive to customers while maximizing operating income.

2.2.19 Costing and Pricing for the Long Run

As Datar & Rajan (2018) explained that, long-run pricing is a strategic decision designed to build long-run relationship with customers based on stable and predictable prices. Managers prefer a stable price because it reduces the need for continuous monitoring of prices, improves planning, and builds long-run buyer-seller relationships.

Two different approaches for pricing decisions are:

2.2.19.1 Market-based pricing

Market-based approach: Target costing for target pricing. Market-based pricing starts with target prices, which is the estimated price for a product or service those potential customers, are willing to pay. Managers base this estimate on an understanding of customers' perceived value for a product or service and how competitors will price competing products or services. Managers need to understand customers and competitors for three reasons:

1. Lower-cost competitors continually restrain prices.
2. Products have shorter lives, which leaves companies less time and opportunity to recover from pricing mistakes, loss of market share, and loss of profitability.
3. Customers are more knowledgeable because they have easy access to price and other information online and demand high-quality products at low prices.

2.2.19.2 Cost-plus pricing

Instead of using the market-based approach for long-run pricing decisions, managers sometimes use a cost-based approach. The general formula for setting a cost-based selling price adds a markup component to the cost base. Because a markup is added, cost-based pricing is often called cost-plus pricing, where the plus refers to the markup component. Managers use the cost-plus pricing formula as a starting point. The markup component is usually flexible, depending on the behavior of customers and competitors. In other words, market conditions ultimately determine the markup component.

2.2.20 The roll of cost accountant

Kinney & Raiborn (2011) argued that, accountants have traditionally accumulated costs as transactions occurred and thus focused on the cost's amount rather than its source. However, this lack of consideration for underlying causes of costs has often resulted in both a lack of ability to control costs and flawed product cost data. Traditional cost allocations tend to subsidize low-volume specialty products by misallocating overhead

to high-volume, standard products. This problem occurs because costs of the extra activities needed to make specialty products are assigned using the one or very few drivers of traditional costing and usually these drivers are volume based.

Cost accountant begun capturing costs at the different levels and assigning those costs to products based on appropriate cost drivers.

2.2.21 Product Diversity

Product diversity simply means that products consume overhead activities in systematically different proportions. Products might consume overhead in different proportions for several reasons. For example, difference in product size, product complexity, setup time, and size of batches all can cause product to consume overhead at different rates. Regardless of the nature of the product diversity, product cost will be distorted whenever the quantity of unit-based overhead that a product consumes does not vary in direct proportion to the quantity consumed of non-unit based overhead. The proportion of each activity consumed by a product is defined as the consumption ratio. Hansen & Mowen (2007).

2.2.22 Types of Cost System

Drury (2018) who pointed out that, costing systems can vary in terms of which costs are assigned cost objects and their level of sophistication. Typically, cost systems are classified as follows:

2.2.22.1 Direct costing systems

Direct costing systems only assign direct cost to cost objects. Because they do not assign indirect costs to cost objects they report contributions to indirect costs. The disadvantage of direct costing system is that systems are not in place to measure and assign indirect costs to cost objects. Direct costing systems can only be recommended where indirect costs are a low proportion of an organization total cost.

2.2.22.2 Traditional costing systems

It is probably impossible to determine the exact cost of a product or service. However, in order to achieve improved management decisions, companies strive to provide decision-makers with the most accurate cost estimates they can. The most accurate estimate of product cost occurs when the costs are traceable directly to the product produced or the service provided. Direct material and labor costs are the easiest to trace directly to the product through the use of material requisition forms and payroll time

sheets. Overhead costs, on the other hand, are an indirect or common cost that generally cannot be easily or directly traced to individual products or services. Instead, companies use estimates to assign overhead costs to products and services.

Often the most difficult part of computing accurate unit costs is determining the proper amount of overhead cost to assign to each product, service, or job. In job order costing and process costing, we used a single overhead rate throughout the year for the entire factory operation. That rate was called the predetermined overhead rate. For job order costing, we assumed that direct labor cost was the relevant activity base for assigning all overhead costs to jobs. For process costing, we assumed the machine hours were the relevant activity base for assigning all overhead to the process or department.

The use of direct labor as the activity base made sense when overhead cost allocation systems were first developed. At that time, direct labor made up a large portion of total manufacturing cost. Therefore, it was widely accepted that there was a high correlation between the most popular bases for allocating overhead.

The need for a new approach

In recent years, manufacturers and service providers have experienced tremendous change. Advance in computerized systems, technological innovation, global competition, and automation have changed the manufacturing environment drastically. As a result, the amount of direct labor in many industries has greatly decreased, and total overhead costs resulting from depreciation on expensive equipment and machinery, utilities, repairs, and maintenance have significantly increased. When there is not a correlation between direct labor and overhead, it is inappropriate to use single predetermined overhead rates based on direct labor. Companies that use overhead rates based on direct labor when this correlation does not exist experience significant product-cost distortions. Drury (2018).

To avoid such distortions, many companies now use machine hours as the basis on which to allocate overhead in an automated manufacturing environment. But even machine hours may not suffice as the only single basis for allocated all overhead. If the manufacturing process is complex, then only multiple allocation bases can result in more accurate product-cost computations. In such situations, managers need to consider

an overhead cost allocation method that uses multiple bases. That method is activity-based costing.

2.2.22.2 Activity-based costing systems.

Drury (2018) explained that activity-based costing (ABC) is an approach for allocating costs. More specifically, ABC allocates overhead to multiple activity cost pools, and it then assigns the activity cost pools to products and services by means of cost drivers. To understand this more clearly, we need to apply some new meanings to the rather common-sounding words that make up the definition: In activity-based costing, an activity is any event, action, transaction, or work sequence that incurs costs when producing a product or providing a service. An activity cost pool is the overhead cost attributed to a distinct type of activity (e.g., ordering materials or setting up machines). A cost driver is any factor or activity that has a direct cause-effect relationship with the resources consumed. The reasoning behind ABC cost allocation is simple. Products consume activities, and activities consume resources.

ABC allocates overhead in a two-stage process. The first stage allocation overhead costs to activity cost pools. Examples of overhead cost pools are ordering materials, setting up machines, assembling products, and inspecting products.

The second stage assigns the overhead allocated to the activity cost pools to products, using cost drivers. The cost drivers measure the number of individual activities undertaken or performed to produce products or provide services. Examples are number of purchase orders, number of setups, labor hours, and number of inspections.

Benefits of ABC

The primary benefit of ABC is more accurate product costing. Here's why:

1. ABC leads to more cost pools being used to assign overhead costs to products. Instead of one single pool (or even department pools) and a single cost driver, companies use numerous activity cost pools with more relevant cost drivers. Costs are assigned more directly on the basis of the cost drivers used to produce each product.
2. ABC leads to enhanced control over overhead costs. Under ABC, companies can trace many overhead costs directly to activate allowing some indirect costs

to be identified as direct costs. Thus, managers have become more aware of their responsibility to control the activities that generate those costs.

3. ABC leads to better management decisions. More accurate product costing should contribute to setting selling prices that can help achieve desired product profitability levels. In addition, more accurate cost data could be helpful in deciding whether to make or buy a product part or component, and sometimes even whether to eliminate a product.

Limitation of ABC

Drury (2018) argued that although ABC systems often provide better product cost data than traditional volume-based systems, there are limitations:

1. ABC can be expensive to use. The increased cost of identified multiple activities and applying numerous cost drivers discourages many companies from using ABC. Activity-based costing systems are more complex. So companies must ask, is the cost of implementation greater than the benefit of greater accuracy? Sometimes it may be. For some companies, there may be no need to consider ABC at all because their existing system is sufficient. If the costs of ABC outweigh the benefits, then the company should not implement ABC.
2. Some arbitrary allocations continue. Even though more overhead costs can be assigned directly to products through ABC's multiple activity cost pools, certain overhead costs remain to be allocated by means of some arbitrary volume-based cost driver such as labor or machine hours.

When to use ABC

How does a company know when to use ABC? The presence of one or more of the following factors would point to its possible use:

1. Product lines differ greatly in volume and manufacturing complexity.
2. Product lines are numerous and diverse, and they require differing degrees of support services.
3. Overhead costs constitute a significant portion of total costs.
4. The manufacturing process or the number of products has changed significantly for example, from labor-intensive to capital-intensive due to automation.

5. Production or marketing managers are ignoring data provided by the existing system and instead using “bootleg” costing data or other alternative data when pricing or making other product decisions.

The redesign and installation of a product costing system is a significant decision that requires considerable cost and a major effort to accomplish. Therefore, financial managers need to be very cautious and deliberate when initiating changes in costing systems. A key factor in implementing a successful ABC system is the support of top management.

Developing activity-based costs

Drury (2018) pointed out activity-based costing involves the following four steps:

1. Identify the activities such as processing orders that consume resources and assign costs to them.
2. Identify the cost driver(s) associated with each activity. A cost driver causes, or “drives,” an activity’s costs. For the order-processing activity, the cost driver could be the number of orders.
3. Compute a cost rate per cost driver unit or transaction. The cost driver rate could be the cost per order, for example.
4. Assign costs to products by multiplying the cost driver rate by the volume of cost driver units consumed by the product. For example, the cost per order multiplied by the number of orders processed for a particular song during the month of March measures the cost of the order processing activity for that song during March.

In contrast, firms selling products or services that are highly customized or differentiated from one another by special features, or who are market leaders, have some discretion in setting prices. Here, the pricing decision will be influenced by the cost of the product, the actions of competitors and the extent to which customers value the product. We shall describe those firms that have some discretion over setting the selling price of their products or services as price setters. In practice, firms may be price setters for some of their products and price taker for others.

When firms are price setters, cost information is often an important input the pricing decision. Cost information is also of vital importance to price takers in deciding on the

output and mix of products and services to which their marketing effort should be directed, given their market prices. For both price takers and price setters, the decision time horizon determines the cost information that is relevant for product pricing or output mix decisions.

2.2.23 Activity-based management (ABM)

Weygandt et al., (2012), some companies that have experienced the benefits of activity-based costing have applied it to a broader range of management activities. Activity-based management (ABM) extends the use of ABC from product costing to a comprehensive management tool that focuses on reducing costs and improving processes and decision-making. A refinement of activity-based costing used in ABM is the classification of activities as either value-added or non-value-added.

Value-added versus activities are those activities of a company's operations that increase the perceived worth of a product or service to customers. Examples for manufacturing company exercise equipment include engineering design, machining, assembly, and painting.

Non-value-added activities are those activities that, if eliminating, would not hinder the company's operations or reduce the perceived worth of its product or service. These activities simply add cost to, or increase the time spent on, a product or service without increasing its perceived value. One example is inventory storage.

2.2.24 Classification of activity levels

Weygandt et al., (2012) argued that, traditional costing system is volume-driven driven by unit-based cost drivers such as direct labor or machine hours. Some activity costs are strictly variable and are caused by the production or acquisition of a single unit of product or the performance of a single unit of service. However, the recognition that other activity costs are not driven by unit-based cost drivers has led to the development of a classification of ABC activities consisting of four levels, as follows.

1. Unit-level activities are performed for each unit of production. For examples, the assembly of cell phones is a unit-level activity because the amount of assembly the company performs increases with each additional cell phone assembled.
2. Batch-level activities are performed every time a company produces another batch of a product. For example, suppose that to start processing a new batch of

ice cream, an ice cream producer needs to set up its machines. The amount of time spent setting up machines increases with the number of batches produced, not with the number of units produced.

3. Product-level activities are performed every time a company produces a new type of product. For example, before a pharmaceutical company can produce and sell a new type of medicine, it must undergo very substantial product tests to ensure the product is effective and safe. The amount of time spent on testing activities increases with the number of products the company produces.
4. Facility-level activities are required to support or sustain an entire production process. Consider, for example, a hospital. The hospital building must be insured and heated, and the property taxes must be paid, no matter how many patients the hospitals treats. These costs do not vary as a function of the number of units, batches, or products.

Companies may achieve greater accuracy in overhead cost allocation by recognizing these four different levels of activities and, from them, developing specific activity cost pools and their related cost drivers.

2.2 Empirical studies

Numerous researchers in different countries have done studies related on cost allocation system. Mainly those studies were focused on that implementation of appropriate cost allocation system is very important for the company to provide actual product cost information. Some of important studies that are relevant for this study are reviewed as follows: Biniam (2021), conducted study to assess and examine the cost management practice utilized by FAFA Food S.Co. This study employed a descriptive case study research design. The study relied on primary and secondary data. The primary data collected using interview with Finance manager and cost and budget accountant of FAFA Food S.Co. The secondary data collected from documents and reports of the company. Data collected was analyzed using qualitative data analysis approaches. The study found out that the importance of top management support for application of cost management practice and the initiation of management to implement new cost management techniques to improve and enhance company performance. Also FIFA FOOD S.Co. costing system, cost control tool, cost drivers and the frequency of

reviewing its standard cost. The result of data analyzed showed that the FAFA management has not show any initiation to apply a new cost management techniques, they use traditional cost system and yet not familiarized with the new cost accounting practices such as activity based costing. This study recommended that FAFA S.Co. top managements give support to implement a new and up to date cost management techniques in their overall manufacturing process, change costing system of the product from traditional costing to activity-based costing.

Yenenesh (2018), determined that assessment of manufacturing product costing techniques in Two Biscuits Manufacturing Companies in Ethiopia. The paper was conducted to assess the product costing technique. The objectives of the study were to assess the cost accounting techniques that are being used in biscuits manufacturing companies in Ethiopia.

Based on the annual sales run reported by cement statistical agency in 2006 there was ranked 5 companies from biscuit industries. But because of the fact that many of them were not willing to provide all the necessary information except two of them namely, Kality Food Complex and Nas Foods plc.

The production of this study is two companies who are manufacturing biscuit in Ethiopia: Kality Foods Complex and Nas Foods plc and it spread in their concerned departments. There were six types of questionnaire for six departments prepared for a total of 18 questionnaires were distributed for the concerned department for the above mentioned biscuits manufacturing companies who are responsible and handling for the companies product cost calculation. The study employed descriptive research methods. Data collected through questionnaire were analyzed through quantitative data analysis and presenting by excel tabulation and from interview and primary source were also analyzed and presented through qualitative approach. The result of data analyzed showed that the valuation of product costing is violated from the general accounting principle.

On the other hand, Kubrom (2019), assess and examine the cost accounting practices utilized by Des General Trading PLC in Ethiopia. This study adopted a descriptive survey design. The sample size of the study consists of 25 employees of the company, using self-administered questionnaire and structured interviews with selected accountants of the finance departments and other department staffs. The major findings

of the study are as follows: the most widely used product costing method is process costing and the technique used is absorption costing; the most widely used overhead allocation is units produced; the most important area where the cost information is used for financial accounting, inventory valuation and to some extent for price decision which is low on other decision making and cost control. The findings indicate that company perceives traditional cost accounting is still important and yet not familiarized with the new cost accounting practices such as activity-based costing. This study recommends the creation of awareness about the importance of information for decision making practices and the advantage of using activity-based costing.

In another study, Akpan and Effiong (2019), evaluate the degree of influence of Activity-Based-Costing (ABC) on manufacturing productivity. Traditional cost accounting method, which allocates overhead costs on the basis of one driver, that is, overhead absorption base (e.g. direct labor hour, machine hour, etc.) is inaccurate and misleading as this method often allocates too much cost a product, based on the overhead absorption base, and not enough to another. To address this problem, activities-based-cost accounting method was developed to provide a means of creating a more accurate representation of how activities performed in the creation of a product or service actually impact costs. The study made use of survey descriptive research design method where data were collected through questionnaire. The collected data were analyzed using the ordinary least square regression method. The results showed that ABC method is significantly and positively related to production process efficiency. Conclusively, rather than allocating overhead on the basis of one variable, such as direct labor, ABC effectively uses multiple cost drivers to present a more accurate foundation for overhead costs allocation. It was recommended that a clear understanding of ABC method and its effective implementation will help gain competitive advantages and achieve higher level of productivity performance of manufacturing companies.

Besides, Abel (2019) determined assessment of cost allocation practices in case of BGI (Brewery of Saint Georges Industry) brewery manufacturing companies. It also determines currently used allocation practices, to determine factors of overhead cost allocation system in company and lastly examined allocation system in company and lastly examine allocation system on profitability. The research was conducted with 19 employee's individuals working in Saint George brewery factory in finance, cost and

production department using administered questionnaire for 17 workers and interviews with selected two individuals. The researcher conducted descriptive case study for this research and also the results show that the firm overhead allocation system has obtain results indicate that company overhead cost allocation system use traditional allocation system, there are factor that affect allocation system and profitability. The research result shows that the firm employees have no get training in cost allocation mechanism, and company cannot identify overhead production cost for each production types, employee have no satisfied by firm it also affect employees performance it also affect companies profitability.

Similarly, Ali (2010) investigated the cost and management accounting practices utilized by manufacturing companies operating in Istanbul, Turkey. The sample of the study consists of 61 companies. The data collection methodology of the study is questionnaire survey. The content of the questionnaire survey is based on several previous studies. The major finding of the study are as follows: the most widely used product costing method is job costing; the complexity in production poses as the highest ranking difficult in product costing; the most widely used three overhead allocation bases are prime costs, units produced, and direct labor cost; pricing decisions is the most important area where costing information is used; overall mean of the ratio of overhead to total cost is 34.48 percent for all industries; and the most important three management accounting practices are budgeting, planning and control, and cost-volume-profit analysis. Furthermore, decreasing profitability, increasing costs and competition, and economic crises are the factors, which increase the perceived importance of cost accounting. The finding indicates that companies perceive traditional management accounting tools still important. However, new management accounting practices such as strategic planning, and transfer pricing are perceived less important than traditional ones. Therefore, companies need to improve themselves this aspect.

2.3 Summary and Literature Gap

In general the literature indicates that companies had been still using the same traditional costing system which provides inaccurate product cost information. In this

result the researchers recommended companies to develop and implement recent cost system. However, there are many constraints to enhance the new cost system.

There was considerable research studied by different researchers in the area of cost allocation system. Biniam (2021) Cost management practice in manufacturing companies (In case of FAFA food complex s.co.); Yenenesh (2018) assessment of manufacturing product costing techniques in Two Biscuits Manufacturing Companies in Ethiopia; Kubrom (2019) Assessment of cost accounting practice: the case of Des General Trading PLC in Ethiopia; Akpan and Effiong (2019) Effect of activity-based costing (ABC) on the productivity of manufacturing company: Research article at University of Calabar cross river state; Abel (2019) assessment of cost allocation practices in case of BGI (Brewery of Saint Georges Industry) brewery manufacturing companies; Biniam (2021) Cost management practice in manufacturing companies (In case of FAFA food complex s.co.); Ali (2010) Cost and management accounting practices: A survey of manufacturing companies operating in Istanbul, Turkey. The objective of this study is to assess cost allocation system in pipe manufacturing company. The research paper also tries to contribute its own share to fill research gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter the research methodology consists of the basic aspects of research procedures and techniques for conducting of the study. The methodology involves such as research design, target population and sampling technique, data source and collection instruments, methods of data analysis, reliability and validity and ethical consideration.

3.2 Research Design

A research design is a blueprint or plan for the collection of data, measurement and analysis of data. It essentially includes a descriptive research method, which is the researcher attempts to describe the subject matter of the study through collection of primary and secondary data. The goal of a descriptive study is to offer to the researcher a profile or to describe relevant aspects of the phenomenon of interest from an individual, organization, industry-oriented, or other perspective (Bougie, et al. p.98). Descriptive research is thus a type of research that is primarily concerned with explaining the nature or conditions or the degree of intensity of a factor under investigation (Derbisa, P.49). Collection of data is presented and analyzed through qualitative and quantitative approach by using statistical tools such as SPSS (Statistical package for the social science), tables and percentages.

3.3 Target Population and Sampling Technique

3.3.1 Target Population

The target population is focused on 25 employees of Oromia Pipe Factory PLC. Those are listed from general manager, deputy general managers, department heads, factory and administrative staffs.

3.3.2 Sampling Technique

The sample technique is a non probability sample. Purposive sampling technique is used to select respondents for questionnaire and focus group discussion on the bases of

their expertise in the research study. The respondents are selected because they can easily understand and give valid responses to the question provided, as compared to the illiterate. The researcher assumes that senior, experienced and supervisory level in each of the selected departments would be educated enough to provide more accurate responses. It is important that the subjects are chosen in such a way that they reflect the diversity of the population (Bougie, et al., p.265).

3.4 Data Sources and Collection Instruments

3.4.1 Data Sources

Data is gathered from primary and secondary sources. Primary data refers to information obtained first-hand by the researcher on the variables of interest for the specific purpose of the study. Primary data is obtained using questionnaire and focus group discussion. Secondary data refers to information gathered from sources that already exist from organization documents, brochure, journals, pamphlets, books and other sources relating with research study.

3.4.2 Data Collection Instruments

Data is collected through questionnaire and focus group discussion. Questionnaire is a data collection tool in which close ended written questions are presented and given to respondents. The questionnaires are administered for collecting information from staffs that are working in the purposively selected departments to get rich information and reliable data. Focus group discussion (FGD) is typically composed of six to twelve participants conducted by the researcher and it enables the researcher to gain large amount of information in short period of time. FGD is important that all participate and no one dominates the open-ended discussions. The role of researcher becomes that of a facilitator, who guides the group's discussion on relevant issues, and keeps the group focused on these issues rather than deviating and ensuring that all participate.

3.5 Methods of Data Analysis

The data collected is analyzed through qualitative approach for focus group discussion. Qualitative data are numerically non measurable. Quantitative approach for questionnaire which is put into SPSS and then analyzed by using descriptive statistical

tools such as frequency and percentages. Quantitative data can be measured numerically.

3.6 Reliability and Validity

3.6.1 Reliability

The reliability of a measure indicates the extent to which it is without bias (error free) and hence ensures consistent measurement across time and across the various items in the instrument. The use of better instruments will ensure more accuracy and consistent in results, which in turn will enhance the scientific quality of the research.

3.6.2 Validity

This states that the sampling methods provide valid estimate about the population parameters. Bad information brings about poor decisions, and if a data is not creditable, there is no reason to use it. Decision based on incorrect and defective information badly affect the decision making process. Thus, the importance of data validation and verification is very indispensable to all business and scientific practices (Derbisa, P.198).

3.7 Ethical Consideration

The following ethical consideration is considered when conducting in research studies.

- ✓ Treating the information given by the respondent as strictly confidential and guarding his or her privacy.
- ✓ No one should be forced to respond to the survey and if someone does not want to avail themselves of the opportunity to participate the individual's desire should be respected.
- ✓ Maintaining objectivity during data collection, analysis and report stages.

CHAPTER FOUR

RESULT AND DISCUSSION

4.1 Introduction

This chapter describes presentation, analysis and interpretation of data which was collected from respondents through using instruments of questionnaire and focus group discussion. The researcher used IBM SPSS version 20 statistics to analyze the data. It has two parts. The first part shows respondents profiles including gender, age, educational background, work experience and their field of profession. The second part presents questions related to cost allocation system including cost system practice & allocation mechanism, internal control system, change of manufacturing process and cost, staff quality and company's capacity, maintaining database and department's involvement & customer's satisfaction on pricing decision.

A total of twenty five (25) questionnaires were distributed for management level, general and administrative staff, production staff, quality assurance staff and technical staff. All respondents returned the distributed questionnaire. The researcher also conducted focus group discussion with management members and team leaders.

4.2 Descriptive Statistics

A manager in his day-to-day operations requires as much information as possible about the business performance, economic environment, and industry trends to be able to make the right decisions. With the advancement in the field of information and communication technologies, it has become much easier to capture data and a huge amount of data is available with the organizations. However, the sheer amount of data makes it virtually impossible to comprehend it in its raw form. Descriptive statistics are used to summarize and present this data in a meaningful manner so that the underlying information is easily understood (Gaur A. and Gaur S., 2009).

Cooper and Schindler (2014) explained that originally, creating a Likert scale involved a procedure known as item analysis. In the first step, a large number of statements were

collected that met two criteria: (1) Each statement was relevant to the attitude being studied; (2) each was believed to reflect a favorable or unfavorable position on that attitude. People similar to those who are going to be studied were asked to read each statement and state the level of their agreement with it, using a 5-point scale. A scale value of 1 indicated a strongly unfavorable attitude (strongly disagree). The other intensities were 2 (disagree), 3 (Neutral), 4 (agree) and 5 (strongly agree).

The square of the standard deviation is known as variance. The bigger the standard deviation, the more variable or dispersed the data is and it is a basic tool used for measuring the spread within individual variables (White D., et al., 2007).

4.3 Demographic Characteristics of Respondents

Table 4.1

Demographic Characteristics of Respondents

S.N	Indicator	Category	<i>Descriptive Statistics</i>	
			<i>Frequency</i>	<i>Percent</i>
1	Gender	Male	23	92.0
		Female	2	8.0
		Total	25	100.0
2	Age	26-30 Years	3	12.0
		31-40	13	52.0
		41-50	4	16.0
		Above 50	5	20.0
		Total	25	100.0
3	Education Background	Diploma Holder	1	4.0
		Degree Holder	19	76.0
		Master's Degree Holder	5	20.0
		Total	25	100.0
4	Work Experience	1-5 Years	1	4.0
		6-10	5	20.0
		11-15	11	44.0

		16-20	2	8.0
		Above 20	6	24.0
		Total	25	100.0
5	Your Field of Profession	Management Level	8	32.0
		General and Administrative Staff	7	28.0
		Production Staff	4	16.0
		Quality Assurance Staff	3	12.0
		Technical Staff	3	12.0
		Total	25	100.0

Source: Survey result and own computation

As indicated in the above table 4.1, 23(92%) of the respondents are male and the remaining 2(8%) of the respondents are female. The proportional number of female in the organization is very few.

On the other hand, as displayed in the table 4.1 above, 13(52%) of respondents age between 31 and 40 years, followed by 5(20%) of the respondents age above 50 years, 4(16%) of the respondents age exist between 41 and 50 years and lastly 3(12%) of the respondents age between 26 and 30 years.

Regarding educational background of the respondents as shown above in table 4.1, 19(76%) of the respondents were degree holder, followed by 5(20%) of the respondents have educational qualification of master's degree and lastly 1(4%) of the respondent was diploma holder. This indicated that the company has well educated employees. The respondents can understand the subject matter and they are capable to respond answers for the stated questionnaires.

Concerning the functional position of the respondents as indicated in table 4.1 above, 8(32%) of the respondents were management level, followed by 7(28%) of the respondents were general and administrative staffs, followed by 4(%) of the respondents worked as production staffs and lastly 3(12%) of the respondents were quality assurance and technical staffs of each. This indicates that the respondents are expected to give reliable information about cost allocation system.

4.4 Cost System Practice and Allocation Mechanism

The methods or types of costing refer to the techniques and process employed in the ascertainment of costs. Several methods have been designed to suit the needs of different industries. The method of costing to be applied in a particular concern depends upon the type and nature of industry Arora (2004).

Drury (2018) explained that often the most difficult part of computing accurate unit costs is determining the proper amount of overhead cost to assign to each product, service, or job.

Table 4.2

Cost System Practice and Allocation Mechanism

S.N	Indicator	Category	Descriptive Statistics			
			Frequency	Percent	Mean	Std. Deviation
1	The company uses process costing system.	Strongly Disagree	2	8.0	4.00	1.080
		Neutral	2	8.0		
		Agree	13	52.0		
		Strongly Agree	8	32.0		
		Total	25	100.0		
2	The company uses traditional costing method to allocate factory overhead costs.	Strongly Disagree	3	12.0	4.16	1.313
		Neutral	1	4.0		
		Agree	7	28.0		
		Strongly Agree	14	56.0		
		Total	25	100.0		
3	The company assigns factory overhead cost using units of production.	Strongly Disagree	2	8.0	3.84	1.143
		Disagree				
		Disagree	1	4.0		

		Neutral	3	12.0		
		Agree	12	48.0		
		Strongly Agree	7	28.0		
		Total	25	100.0		
4	The company uses proper predetermined rate for allocating manufacturing overhead costs.	Strongly Disagree	1	4.0	2.68	.988
		Disagree	13	52.0		
		Neutral	5	20.0		
		Agree	5	20.0		
		Strongly Agree	1	4.0		
		Total	25	100.0		
5	Current costing system enables the company to provide accurate cost information for decision making.	Strongly Disagree	3	12.0	2.64	1.186
		Disagree	12	48.0		
		Neutral	3	12.0		
		Agree	5	20.0		
		Strongly Agree	2	8.0		
		Total	25	100.0		

Source: Survey result and own computation

Respondents were asked for their level of agreement for the statement that the company uses process costing system. Their responses were 13(52%) agree, 8(32%) strongly agree and 2(8%) strongly disagree and neutral of each with mean value of 4.00 and standard deviation of 1.08. This indicates 84% of respondents agree that the company uses process costing system.

In analyzing whether the company uses traditional costing method to allocate factory overhead costs, respondents replied 14(56%) strongly agree, 7(28%) agree, 3(12%) strongly disagree and 1(4%) neutral with a mean value of 4.16 and standard deviation of 1.313. This shows 84% of respondents agree that the company uses traditional costing method to allocate factory overhead costs. Hansen and Mowen (2007)

recognized that the traditional management accounting practices no longer served managerial needs.

Respondents were asked whether the company assigns factory overhead cost using units of production replied that 12(48%) agree, 7(28%) strongly agree, 3(12%) neutral, 2(8%) strongly disagree and 1(4%) disagree with the mean value of 3.84 and standard deviation of 1.143. This indicates 76% of respondents agree that units of production is a mechanism to assign factory overhead cost.

For the statement that the company uses proper predetermined rate for allocating manufacturing overhead costs, respondents replied 14(56%) disagree, 5(20%) neutral and agree of each, 1(4%) strongly agree and strongly disagree of each with the mean value of 2.68 and standard deviation of 0.988 This indicated that the company does not use proper predetermined rate for allocating manufacturing overhead costs.

From the result of focus group discussion, the company allocates factory overhead costs using single predetermined rate through calculated total overhead cost divided by units of production. This indicated that it is not relevant activity base to assign the activity cost pools to products by means of cost driver. Datar & Rajan (2018) argued that, product-cost cross-subsidization means that if a company under costs one of its products; it will over cost at least one of its other products. Similarly, if a company over costs one of its products, it will under cost at least one of its other products. Product-cost cross-subsidization is very common when a cost is uniformly spread-meaning it is broadly averaged-across multiple products without managers recognizing amount of resources each product consumes.

Besides this from the total respondents, 12(48%) of them disagree, 5(20%) of them agree, 3(12%) of them neutral and strongly disagree of each and 2(8%) of them replied strongly agree with the mean value of 2.64 and standard deviation of 1.186 by responding that current costing system enables the company to provide accurate cost information for decision making. This showed that the company is not enabling to provide accurate cost information for decision making from current costing system.

4.5 Internal Control System

Ashenafi (2017) cited The United Kingdom Auditing Practices Committee (1979) as defined internal control as " the whole system of control established by management in order to carry on the business of any enterprise in an orderly and effective manner to ensure adherence to managerial policies and directives, safeguard the assets, ensure the completeness and accuracy of the records, the prevention and detection of errors and fraud and the timely preparation of financial information".

Table 4.3

Internal Control System

S.N	Indicator	Category	<i>Descriptive Statistics</i>			
			<i>Freq uency</i>	<i>Perce nt</i>	<i>Mean</i>	<i>Std. Deviatio n</i>
6	The company has proper purchasing procedures for the purchase of raw materials.	Neutral	2	8.0	4.36	.638
		Agree	12	48.0		
		Strongly Agree	11	44.0		
		Total	25	100.0		
7	The company uses material requisition form to request raw materials issuance from the store.	Agree	6	24.0	4.76	.436
		Strongly Agree	19	76.0		
		Total	25	100.0		
8	There is a segregation of duties in the company between raw material store and finished goods store for inventory movement control.	Neutral	1	4.0	4.60	.577
		Agree	8	32.0		
		Strongly Agree	16	64.0		
		Total	25	100.0		
9	The company reconciles	Neutral	1	4.0	4.76	.523

	inventory stock balance between property section and finance section.	Agree	4	16.0		
		Strongly	20	80.0		
		Agree				
		Total	25	100.0		
10	The company has a structured cost accounting policy/manual.	Strongly	6	24.0	2.68	1.314
		Disagree				
		Disagree	5	20.0		
		Neutral	8	32.0		
		Agree	3	12.0		
		Strongly	3	12.0		
		Agree				

Source: Survey result and own computation

For the statement that the company has proper purchasing procedures for the purchase of raw materials, respondents replied 12(48%) agree, 11(44%) strongly agree and 2(8%) neutral with the mean value of 4.36 and standard deviation of 0.638. This indicates 92% of respondents agree that the company has proper purchasing procedures for the purchase of raw materials.

Respondents were asked whether the company uses material requisition form to request raw materials issuance from the store, they replied that 19(76%) strongly agree and 6(24%) agree with the mean value of 4.76 and standard deviation of 0.436. This showed that all respondents agree that the company uses material requisition form to request raw materials issuance from the store.

In analyzing whether the company segregate duties between raw material store and finished goods store for inventory movement control, respondents replied 16(64%) strongly agree, 8(32%) agree and 1(4%) neutral with the mean value of 4.60 and standard deviation of 0.577. This indicates 96% of respondents agreed that the company has segregation of duties between raw material store and finished goods store for inventory movement control.

Respondents were asked for their level of agreement for the statement that the company reconciles inventory stock balance between property section and finance section. Their responses were 20(80%) strongly agree, 4(16%) agree 1(4%) neutral with mean value of 4.76 and standard deviation of 0.523. This indicates 96% of respondents agreed that

the company perform inventory reconciliation between property section and finance section.

For the statement that the company has a structured cost accounting policy/manual, respondents replied 8(32%) neutral, 5(20%) disagree, 6(24%) strongly disagree and 3(12%) agree and strongly agree of each with the mean value of 2.68 and standard deviation of 1.314. This showed that there is variability of response. However, majority of respondents which is 48% have disagreed that the company has a structured cost accounting policy/manual. This indicated that it is difficult to secure uniformity of cost activity and to provide efficient and effective operations.

4.6 Change of Manufacturing Process and Cost

Drury (2018), in recent years, manufacturers and service providers have experienced tremendous change. Advance in computerized systems, technological innovation, global competition, and automation have changed the manufacturing environment drastically. As a result, the amount of direct labor in many industries has greatly decreased, and total overhead costs resulting from depreciation on expensive equipment and machinery, utilities, repairs, and maintenance have significantly increased.

Table 4.4

Change of Manufacturing Process and Cost

S.N	Indicator	Category	Descriptive Statistics			
			Frequency	Percent	Mean	Std. Deviation
11	Factory overhead cost of the company significantly increased.	Disagree	3	12.0	3.80	.913
		Neutral	4	16.0		
		Agree	13	52.0		
		Strongly Agree	5	20.0		
		Total	25	100.0		
12	The company change	Strongly	1	4.0	4.20	1.000

significantly manufacturing process or number of products from labor intensive to capital intensive due to automation.	Disagree			
	Disagree	1	4.0	
	Neutral	1	4.0	
	Agree	11	44.0	
	Strongly Agree	11	44.0	
	Total	25	100.0	

Source: Survey result and own computation

Respondents were asked for their level of agreement for the statement that factory overhead cost of the company significantly increased. Their responses were 13(52%) agree, 5(20%) strongly agree, 4(16%) neutral and 3(12%) disagree with the mean value of 3.80 and standard deviation of 0.913. This indicated that 72% of respondents have agreed that factory overhead cost of the company significantly increased.

Besides this from the respondents, 11(44%) of them agreed and strongly agree of each, 1(4%) of them neutral, disagree and strongly disagree of each item with the mean value of 4.20 and standard deviation of 1.00 by responding that the company change significantly manufacturing process or number of products from labor intensive to capital intensive due to automation. This showed that 88% of respondents have agreed manufacturing process is changed significantly.

4.7 Staff Quality and Company's Capacity

Kinney & Raiborn (2011) argued that, accountants have traditionally accumulated costs as transactions occurred and thus focused on the cost's amount rather than its source. However, this lack of consideration for underlying causes of costs has often resulted in both a lack of ability to control costs and flawed product cost data.

Table 4.5

Staff Quality and Company's Capacity

S.N	Indicator	Category	Descriptive Statistics			
			Frequency	Percent	Mean	Std. Deviation
13	The company facilitate training to upgrade the skill of cost allocate system for staffs.	Strongly Disagree	2	8.0	2.76	1.091
		Disagree	10	40.0		
		Neutral	7	28.0		
		Agree	4	16.0		
		Strongly Agree	2	8.0		
		Total	25	100.0		
14	The company has adequate, efficient and qualified staffs in cost accounting section.	Strongly Disagree	1	4.0	2.88	1.092
		Disagree	11	44.0		
		Neutral	5	20.0		
		Agree	6	24.0		
		Strongly Agree	2	8.0		
		Total	25	100.0		
15	The company has capacity to implement modern cost allocation system.	Strongly Disagree	5	20.0	2.60	1.258
		Disagree	9	36.0		
		Neutral	4	16.0		
		Agree	5	20.0		
		Strongly Agree	2	8.0		
		Total	25	100.0		

Source: Survey result and own computation

For the statement that the company facilitate training to upgrade the skill of cost allocate system for staffs, respondents replied 10(40%) disagree, 7(28%) neutral, 4(16%) agree, and 2(8%) strongly disagree and strongly agree of each with the mean value of 2.74 and standard deviation of 1.091. This showed that there is variability of response. However, majority of respondents which is 48% have disagreed that the company facilitate training to upgrade the skill of cost allocate system for staffs.

Respondents were asked whether the company has adequate, efficient and qualified staffs in cost accounting section. They replied that 11(44%) disagree, 6(24%) agree, 5(20%) neutral, 2(8%) strongly agree and 1(4%) strongly disagree with the mean value of 2.88 and standard deviation of 1.092. This indicated that there is variability of response. However, majority of respondents which is 48% have disagreed that the company has adequate, efficient and qualified staffs in cost accounting section.

A focus group discussion was made with management members and team leader about the capacity of the company to implement modern cost allocation system, the result from discussion showed that to implement the new cost system at least it needs five requirements those are provide training program for creating awareness, form project team in which necessary departments involve as a team work, develop new cost system, maintain database and implement new cost system. Therefore now a day the company is not able to use the new cost system. Rajan & Datar (2018) explained that because erroneous product costs can mislead managers about the profitability of various items, managers want to allocate costs to cost objects appropriately. For instance, managers may unintentionally promote less profitable products over more profitable ones as a result of this.

4.8 Maintaining Database

Guy et al. (1999) quoted by Ashenafi (2017), saying that effective information technology management is critical to achieving useful, reliable and continuous recording and communication of information. Moreover, the system should be communicated to everyone in the organization.

Table 4.6

Maintaining Database

S.N	Indicator	Category	<i>Descriptive Statistics</i>			
			<i>Frequ ency</i>	<i>Perce nt</i>	<i>Mean</i>	<i>Std. Deviat ion</i>
16	The company measures and records scrap materials accurately.	Strongly Disagree	7	28.0	2.52	1.388
		Disagree	8	32.0		
		Neutral	3	12.0		
		Agree	4	16.0		
		Strongly Agree	3	12.0		
		Total	25	100.0		
17	The company keeps and records data about how many number of machines setup and machine operation hours to manufacture products.	Strongly Disagree	2	8.0	2.84	1.068
		Disagree	9	36.0		
		Neutral	6	24.0		
		Agree	7	28.0		
		Strongly Agree	1	4.0		
		Total	25	100.0		
18	The company keeps and records the data which is how many times it inspects and tests quality products.	Strongly Disagree	2	8.0	3.80	1.118
		Disagree	1	4.0		
		Neutral	3	12.0		
		Agree	13	52.0		
		Strongly Agree	6	24.0		
		Total	25	100.0		
19	The company uses finger print machine or other update technology for	Strongly Disagree	15	60.0	1.56	.821
		Disagree				
		Disagree	7	28.0		

	control employees' attendance.	Neutral	2	8.0		
		Agree	1	4.0		
		Total	25	100.0		

Source: Survey result and own computation

Respondents were asked whether the company measures and records scrap materials accurately, they replied that 8(32%) disagree, 7(28%) strongly agree, 4(16%) agree and 3(12%) neutral and strongly agree each with the mean of 2.52 and standard deviation of 1.388. This showed that 60% of respondents have disagreed that the company measures and records scrap materials accurately.

For the statement that the company keeps and records data about how many number of machines setup and machine operation hours to manufacture products, respondents replied 9(36%)disagree, 7(28%) agree, 6(24%) neutral and 1(4%) strongly agree with the mean value of 2.84 and standard deviation of 1.068. This indicated that there is variability of response. However, majority of respondents which is 36% have disagreed that the company keeps and records data about how many number of machines setup and machine operation hours to manufacture products.

In analyzing whether the company keeps and records the data which is how many times it inspects and tests quality products, respondents replied 13(52%) strongly agree, 6(24%) agree, 3(12%) neutral, 2(8%) strongly disagree and 1(4%) disagree with the mean value of 3.80 and standard deviation of 1.118. This indicates 76% of respondents agree that the company keeps and records the data which is how many times it inspects and tests quality products.

Respondents were asked whether the company uses finger print machine or other update technology for control employees' attendance. They replied that 15(60%) strongly disagree, 7(28%) disagree, 2(8%) neutral and 1(4%) agree with the mean value of 1.56 and standard deviation of 0.821. This showed that 88% of respondents have disagree that the company uses finger print machine or other update technology for control employees' attendance. It has an impact on evaluation and analysis employee activities.

4.9 Department's Involvement & Customer's Satisfaction on Pricing Decision

According to Datar & Rajan (2018), customers influence price through their effect on the demand for a product or service. The demand is affected by factors such as the features of a product and its quality. The pricing decision will be influenced by the cost of the product, the actions of competitors and the extent to which customers value the product. Moreover, as they explained long-run pricing is a strategic decision designed to build long-run relationship with customers based on stable and predictable prices. Managers prefer a stable price because it reduces the need for continuous monitoring of prices, improves planning, and builds long-run buyer-seller relationships.

Table 4.7

Department Involvement & Customer Satisfaction on Pricing Decision

S.N	Indicator	Category	<i>Descriptive Statistics</i>			
			<i>Frequ ency</i>	<i>Perce nt</i>	<i>Mean</i>	<i>Std. Deviation</i>
20	The company invites necessary departments to participate in setting product selling price.	Strongly Disagree	2	8.0	3.24	1.128
		Disagree	5	20.0		
		Neutral	5	20.0		
		Agree	11	44.0		
		Strongly Agree	2	8.0		
		Total	25	100.0		
21	Company's customers are satisfied on selling price of the products.	Strongly Disagree	2	8.0	2.64	1.036
		Disagree	12	48.0		
		Neutral	5	20.0		
		Agree	5	20.0		
		Strongly Agree	1	4.0		
		Total	25	100.0		

Source: Survey result and own computation

Respondents were asked whether the company invites necessary departments to participate in setting product selling price. They replied that 11(44%) agree, 5(24%) disagree and neutral of each item, 2(8%) strongly agree and strongly disagree of each with the mean value of 3.24 and standard deviation of 1.128. This showed 52% of the respondents agree that the company invites necessary departments to participate in setting product selling price.

In analyzing whether Company's customers are satisfied on selling price of the products, respondents replied 12(48%) disagree, 5(20%) neutral and agree of each, 2(8%) strongly disagree, 1(4%) strongly agree with the mean value of 2.64 and standard deviation of 1.036. This indicates 56% of respondents disagree that Company's customers are satisfied on selling price of the products.

According to the research finding from focus group discussion, customers are not satisfied on selling price of the products. Because the price of Oromia Pipe Factory plc is higher than other competitors proforma invoice. Customers are interesting to buy products with lower price. Datar & Rajan (2018) argued that most companies carefully analyze their input costs and the prices of their products. They know if the price is too high, customers will go to competitors; if the price is too low, the company won't be able to cover the cost of making the product. A company must also know how its customers will react to particular pricing strategies.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

The aim of this chapter is to conclude the major finding of the study that was presented in the preceding chapter of results and discussion and indicate recommendation that helps in improvement of cost allocation system in Oromia Pipe Factory plc.

5.1 Summary of Findings

The general objective of this study is to assess cost allocation system in Oromia pipe factory plc for management decision making. For this study both primary and secondary data sources were used to analyze the assessment of cost allocation system. The primary data was collected through questionnaire from 25 selected employees of management level, general and administrative staff, production staff, quality assurance staff and technical staff and through focus group discussion with management members and team leaders. Secondary data refers to information gathered from sources that already exist from organization documents, brochure, journals, pamphlets, books and other sources relating with research study. The descriptive statistics have been taken for analysis purpose and the overall results obtained from study presented below.

From the indicator of cost system practice and allocation mechanism 84% of the respondents indicated that the company uses process costing system, 84% of respondents indicated that the company uses traditional costing method to allocate factory overhead costs, 76% of respondents indicated that the company assigns factory overhead cost using units of production, 56% of respondents indicated that the company does not use proper predetermined rate for allocating manufacturing overhead costs and 60% of respondents indicated that current costing system is not enable to provide accurate cost information for decision making. From the result of focus group discussion, the company allocates factory overhead costs using single predetermined rate through calculated total overhead cost divided by units of production.

In addition from the indicator of internal control system 92% of respondents indicated that the company has proper purchasing procedures for the purchase of raw materials, all respondents indicated that the company uses material requisition form to request raw materials issuance from the store, 96% of respondents that indicated that there is a segregation of duties in the company between raw material store and finished goods store for inventory movement control, 96% of respondents indicated that the company perform inventory reconciliation between property section and finance section and majority of respondents which is 48% indicated that the company has no structured cost accounting policy/manual in the company with the mean value of 2.68 and standard deviation of 1.314.

Next from the indicator of change of manufacturing process and cost 72% of respondents indicated that factory overhead cost of the company significantly increased and 88% of respondents indicated that the company change significantly manufacturing process or number of products from labor intensive to capital intensive due to automation.

To identify staff quality and company's capacity majority of respondents which is 48% indicated that the company does not facilitate training for staffs related to cost allocation system with the mean value of 2.74 and standard deviation of 1.091 and also majority of respondents which is 48% indicated that the company has no adequate, efficient and qualified staffs in cost accounting section with the mean value of 2.88 and standard deviation of 1.092. Lastly, 56% of respondents indicated that the company has no capacity to implement modern cost allocation system. A focus group discussion was made with management members and team leaders about the capacity of the company to implement modern cost allocation system, the result from discussion showed that to implement the new cost system at least it needs five requirements those are provide training program, form project team, develop new cost system, maintain database and implement new system. Therefore now a day the company is not able to use the new cost system.

From the indicator of maintaining database 60% of the respondents indicated that the company does not measure and records scrap materials accurately, majority of respondents which is 36% have disagreed that the company keeps and records data

about how many number of machines setup and machine operation hours to manufacture products with the mean value of 2.84 and standard deviation of 1.068, 76% of respondents indicated that the company keeps and records the data which is how many times it inspects and tests quality products and 88% of respondents indicated that the company does not use finger print machine or other update technology for control employees' attendance.

Moreover, from the indicator of department's involvement & customer's satisfaction on pricing decision showed 52% of the respondents agree that the company invites necessary departments to participate in setting product selling price and 56% of respondents indicated that Company's customers are not satisfied on selling price of the products with the mean value of 2.64 and standard deviation of 1.036. According to the research finding from focus group discussion, customers are not satisfied on selling price of the products. Because the price of Oromia Pipe Factory plc is higher than other competitors proforma invoice.

5.2 Conclusions

From the finding of research study on an assessment of cost allocation system this section gives conclusion.

Regarding in cost system practice and allocation mechanism, the company uses traditional costing method that leads to allocate improper predetermined factory overhead rate for cost objects. It also provides inaccurate cost information and affects performance of the company. Some claimed that existing management accounting systems were obsolete and virtually useless.

From the result of internal control system cost accounting manual is not yet provided in the company. This indicated that it is difficult to secure uniformity of cost activity and to provide efficient and effective operations.

In Oromia Pipe Factory plc, there is shortage of man power and trained employees because of capacity building training in relation with cost system have not been

provided for staffs who are participating in cost section. This indicated that it is challenging to implement modern cost allocation system. In addition there is limitation of advance technology usage on maintain database that is a bottleneck to evaluate performance of employees and productivity of the company.

Concerning customer's satisfaction on pricing decision, the customers who visit the factory are not satisfied to buy the product with increased price. This indicated that sales volume may be decreased and customers shift to other competitors.

5.3 Recommendations

This section gives recommendation on the emphasize of the major findings and conclusion discussed above. So, the researcher suggested recommends that the company is to implement the following points in order to improve relevant cost allocation system.

- To avoid inaccurate product cost information, the researcher recommends the company to develop and adopt the new cost method that method is activity based costing system which uses multiple allocation bases for different product types.
- In order to produce appropriate cost activities, it is advised that the company is to provide cost accounting manual that serves as a general guideline to ensure uniformity of cost activities that carried out to meets the requirements and objectives of the company.
- It is important that the requirement of top management support for improving adequate number of cost accountants and facilitating continuous training related cost for operational improvement and to implement modern cost system easily and timely.
- It is advisable that to maintain long term relationship with existing customers and to attract new customers, the company concern not only quality product

service and timely delivery service but also revise pricing policy and discount policy to accomplish marketing plan and profitability of the company.

- Further research needs to be undertaken within Oromia Pipe Factory plc to identify and develop solutions to address the limitations of the various cost allocation systems.

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APPENDIX

Appendix A: Questionnaire

St. Mary's University

School of Graduate Studies

Department of Accounting and Finance

Questionnaire for a study An Assessment of Cost Allocation System in Manufacturing Company: In Case of Oromia Pipe Factory PLC.

Dear respondents,

The objective of this study is for the partial fulfillment of MBA Degree in Accounting and Finance at St. Mary's University. The study is designed to assess cost allocation system in Manufacturing Company: In Case of Oromia Pipe Factory PLC. Your cooperation to respond these questionnaires is very important to this research survey. Please answer every question on the space provided. All your responses will be kept confidential and will only be used for academic purposes.

Instruction: - Please read each questions and put (√) mark of your response on the box provided.

- No need to write your name.

Part I: Demographic Characteristics of Respondents

1. Gender: Male Female
2. Age: Below 25 26-30 31-40 41-50 above 50
3. Education background: Diploma holder Degree holder Master's Degree holder Other _____
4. Work experiences (in years): 1-5 6-10 11-15 16-20 above 20
5. Your field of profession: Management Level General and Administrative Staff Production Staff Quality Assurance Staff Technical Staff

Part II: Questions Related to Cost Allocation System

Using a rating scale of 1 to 5 please indicate that each of the following is relevant for the manufacturing company in an Assessment of Cost Allocation System: - Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1)

S/No.	Cost System Practice and Allocation Mechanism	1	2	3	4	5
1	The company uses process costing system.					
2	The company uses traditional costing method to allocate factory overhead costs.					
3	The company assigns factory overhead cost using units of production.					
4	The company uses proper predetermined rate for allocating manufacturing overhead costs.					
5	Current costing system enables the company to provide accurate cost information for decision making.					
	Internal Control System					
6	The company has proper purchasing procedures for the purchase of raw materials.					
7	The company uses material requisition form to request raw materials issuance from the store.					
8	There is a segregation of duties in the company between raw material store and finished goods store for inventory movement control.					
9	The company reconciles inventory stock balance between property section and finance section.					
10	The company has a structured cost accounting policy/manual.					
	Change of Manufacturing Process and Cost					
11	Factory overhead cost of the company significantly increased.					
12	The company change significantly manufacturing process or number of products from labor intensive					

	to capital intensive due to automation.					
	Staff Quality and Company's Capacity					
13	The company facilitate training to upgrade the skill of cost allocate system for staffs.					
14	The company has adequate, efficient and qualified staffs in cost accounting section.					
15	The company has capacity to implement modern cost allocation system.					
	Maintaining Database					
16	The company measure and record scrap materials accurately.					
17	The company keeps and records data about how many number of machines setup and machine operation hours to manufacture products.					
18	The company keeps and records the data which is how many times it inspects and tests quality products.					
19	The company uses finger print machine or other update technology for control employees' attendance.					
	Department's Involvement & Customer's Satisfaction on Pricing Decision					
20	The company invites necessary departments to participate in setting product selling price.					
21	Company's customers are satisfied on selling price of the products.					

Appendix B: Focus Group Discussion

St. Mary's University

School of Graduate Studies

Department of Accounting and Finance

Focus Group Discussion for a study An Assessment of Cost Allocation System in Manufacturing Company: In Case of Oromia Pipe Factory PLC.

Discussion code no. _____

Date of Discussion: Date _____ Month _____ Year _____

Time: Start time _____ End time _____

Place: _____

Target Group: _____

Introduction for the respondents:

This discussion is prepared as an instrument to conduct an academic research for the partial fulfillment of MBA Degree in St. Mary's University Department of Accounting and Finance. The study is intended to Assess Cost Allocation System in Manufacturing Company: In Case of Oromia Pipe Factory PLC. To attain this purpose, your honest and genuine participation by responding to the discussion topics is very important and highly appreciated. The researcher, in this regard, assures you that all the information you provide will be confidential and it is to be used only for research purpose.

Thank you in advance for your cooperation!!!

S/N	Discussion Topics
1	Traditional Costing Systems
2	Activity-Based Costing (ABC) System
3	Benefits of ABC
4	Limitations of ABC
5	When to Use ABC
6	How to implement ABC
7	Empirical studies

Discussion Questions

1. How does the company calculate predetermined factory overhead rate and do you think that the company assign it accurately to cost objects or products?
2. Do you believe that the company has capacity to implement modern cost allocation system?
3. Does selling price of the products satisfy customers of the company?

Figure 1

UPVC pipe



Figure 2

HDPE pipe

