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St. Mary's University, Ethiopia

**ST MARY UNIVERSITY  
SCHOOL OF GRADUATE STUDIES**

**ASSESSMENT OF MANUFACTURING PRODUCT  
COSTING TECHNIQUES**

**CASE STUDY OF TWO BISCUITS MANUFACTURING COMPANIES  
IN ETHIOPIA**

**BY**

**YENENESH BELAYNEH GABREMARIAM  
ID NO. MBAAF/0374/2008A**

**JANUARY 2018  
ADDIS ABABA,  
ETHIOPIA**

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**DEPARTMENT OF ACCOUNTING AND FINANCE  
ST MARY UNIVERSITY  
ADDIS ABABA, ETHIOPIA**

**IN PARTIAL FULFILMENT OF THE REQUIRMENT  
FOR THE AWARD OF MASTERS DEGREE IN  
BUISINESS ADMINSTRATION IN ACCOUNTING AND  
FINANCE**

**ADVISOR: DR. HABTAMU BIRHANU**

**JANUARY 2018**

## CERTIFICATION

I, Yenenesh Belayneh Gabremariam have certified that the research has been approved; having gone through rigorous steps and satisfy the Department requirements (MBA-Accounting and Finance) St Mary University, for the Award of Degree of Masters in Accounting and Finance.

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## DECLARATION

I declare that this research paper work is my original work. It has not been submitted for any Degree/Masters in any University. I have undertaken it independently with the advice and suggestions of my advisor for the project, Habtamu Birhanu (Dr). In carrying out of the research work I have different sources and materials, which have been appropriately acknowledged.

Signature \_\_\_\_\_

Yenenesh Belayneh

## ENDORSEMENT

This research paper has been submitted to St mary university school of graduate's studies for examination with my approval as a university advisor

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Dr. Habtamu Birhanu  
(Advisor)  
St Mary University

.....  
Date



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## ABSTRACT

*This research 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 central statistical agency in 2006 there was ranked 5 companies from biscuit industries . But because of the fact that many of the them were not willing to provide all the necessary information except two of them namely, Kality Foods Complex and nas foods Plc.*

*The population 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 was 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 and all are filled and returned. Interview has been done for two employees from all 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.*

***Key words –Manufacturing Product cost, valuation of raw material cost, measurement of finished goods cost.***

## **CHAPTER ONE**

### **1. INTRODUCTION**

#### **1.1.BACK GROUND OF THE COMPANY**

Kallti Food Share Company was established in 1938. It is located in Kality situated 17km Kilograms of different food products and the factory mange's more than 500 employee composed of professionals and labourer. The Share Company has five major departments; finance, commercial, production and technique, human resource development and administration, audit department and production, and service quality improvement and assurance service.

Nas Foods PLC was established in 2000 as a PLC located in Oromiya Region Legetafo Legedadi. The company is the leading sandwich biscuit manufacturer (50,000kg/day) in the country. The company has more than 350 employees both labourer and professionals. Nas Foods has organized with Production, Quality control, Technique, Commercial, Sales and Marketing, Finance and Human Resource Administration department.

#### **1.2.BACKGROUND TO AND JUSTIFICATION OF THE RESEARCH**

The purpose of this study is to assess the product cost accounting techniques being practiced by biscuits manufacturing in Ethiopia.

An accounting system is a formal means of gathering and communicating data to aid and coordinate collective decisions in the light of overall goals or objectives of an organization. The accounting system is the major quantitative information system in almost every organization (Horngren and Sundem, 1987).

Cost accounting is a formal means of gathering, measuring, analyzing, and reporting cost data to aid management in coordinating collective decisions in the achievement of the overall goals of an organization. An effective cost accounting system provides information for two broad purposes:

- The accumulation of cost data for external reporting.

- The collection of quantitative data for internal use by management in carrying out its functions of planning, control, decision making and the formulation of overall policies.

Cost accounting system of an organization is the foundation of the internal financial information system. Biggs (1972) realized the importance of cost accounting and stated that without a system of cost accounts, it is doubtful whether a business of any size can survive in the intensely competitive conditions of today, but it must be emphasized that just as no two businesses are alike, even in the same industry, so no ready-made system of cost accounts can be provided to suit each and every business. The underlying principles, conventions and objects of all costing systems are the same, but the application of these principles and methods by which the objects are to be achieved must vary with circumstances.

A good cost accounting system should aim at accomplishing the following purposes:

- To arrive at the cost of production every unit, job, operation, process, department or service and develop cost standards.
- To indicate to the management any inefficiencies and the extent of various forms of waste, whether of materials, time, expense or in the use of machine equipment and tools. Analysis of the causes of unsatisfactory results may indicate remedial action.
- To reveal sources of economies in production, having regards to methods, types of equipment, design, output and layout, daily, weekly, monthly or quarterly information (reports) may be necessary to ensure prompt corrective action;
- To provide actual figures of cost for comparison with estimates, and to serve as a guide for future estimates, or quotations, and to assist the management in their price-fixing policy.
- To present comparative cost data for different periods and various volumes of production output, and to provide guidance in the development of the business.
- To indicate whether the cost of certain parts or components made in the factory is such that it would be more economical to buy from outside sources.

- To record the relative production results of each unit of plant and machinery in use as a basis for examining its efficiency. (Owler and Brown, 1984).

Manufacturers employ various accounting systems in order to measure the cost of manufacturing their product. Sound managerial decision making requires a timely, relevant, and accurate measure of the resources consumed in the manufacture of that product. This thesis discusses how some biscuits manufacturers in Ethiopia determine the costs attributable to the production of their product. Furthermore, the relevancy of these product costing techniques is analyzed. Every manufacturing process requires a unique blend of specific, often limited resources. Materials and labor are required to produce a given product. If a manufacturer is to produce quality products at competitive prices, sufficient technology and accurate cost data must be available. Today, the manufacturing landscape covers a wider global span than 20 years ago. Today, world class manufacturers are employing automated manufacturing systems and techniques to produce consumer goods. (Howell, 1986; Johnson, 1987; Kaplan 1987).

Cost accounting and product costing techniques are used by firms to ensure the amount of resources consumed in the production of goods. Writings the current literature [Johnson, 1987; Kaplan, 1987; Howell, 1987] have argued that traditional cost accounting should be modified in an automated manufacturing environment.

The purpose of this thesis is, therefore, to assess the cost accounting techniques used by selected biscuits manufacturing companies in Ethiopia.

### **1.3.STATEMENT OF THE PROBLEM**

Different cost accounting techniques are utilized in different areas of work. However, the general cost accounting techniques includes an input measurement basis, inventory valuation technique, cost accumulation technique, cost flow assumption as well as recording of inventory cost flows at specific intervals.

The base of any cost accounting system starts with the kind of costs which flow inside as well as across the inventory accounts. The basis allows three alternatives. These are standard, normal historical and pure historical costing. For manufacturing companies more than 50% of their assets are inventories, hence product valuation technique affects

companies' profits. The major problem and companies need to consider for product valuation is which costs are needed to be included as value of a given product.

For Biscuit manufacturing companies the nature of produced product uses various raw material ingredients or mix and packing material like the major components of Floor, sugar, shortening or gee, milk, various color, various flavor, wrapping film and packing carton etc. all Biscuits have major common ingredients like flour and vary their tests because of their color, flavor, mixture and dosage. These will create products or biscuits to have similar in character but it would have different size, test and the major important thing of their cost.

#### **1.4.RESEARCH QUESTIONS**

These objectives can be expressed in the following research questions:

- What is the existing Cost accounting techniques by the selected biscuits manufacturer in Ethiopia?
- How the existing cost accounting techniques will affect the reporting and Managerial decision for the selected manufacturer?

#### **1.5.OBJECTIVES OF THE RESEARCH**

The objective of this study is to assess the cost accounting techniques that are being used in biscuits manufacturing companies in Ethiopia.

The specific objectives are to;

- assess the impact of costing techniques on inventory valuation
- assess the role of costing techniques for managerial decisions
- assess the effect of costing techniques on profit determination

#### **1.6.SCOPE OF THE RESEARCH**

This thesis will cover the manufacturing product costing techniques for selected biscuit manufacturing companies in Ethiopia. The paper is designed to assess the selected company specifically costing section of finance department, production and inventory purchasing and store keeping department and administration of the company. Production department related the information with the consumption of all input, usage of overhead costs to produce the final product, Purchasing and store keeping related with the purchase

handling movement of raw material input, administration related with utilization of human or labour resources and finally costing section of finance department related with how to use all the necessary information and giving the final cost of product for decision makers.

### **1.7.SIGNIFICANCE OF THE RESEARCH**

The subject matter of this research and the resulting from the analysis will likely to have different benefit. This study will be significant for its contribution to:

- Knowledge – from this study on product costing technique the selected manufacturing companies in Ethiopia and it will enrich the knowledge of readers on the role of product costing technique for control and decision making like valuation of products, setting price, measurement of profitability etc.....
- Managerial Decision Making - The studies will find and recommend highly important to management of the selected companies because it draws their attention to some of the point where corrective actions are necessary and enable them to make such corrections.

### **1.8. DEFINITION OF TERMS**

The concept of Product costing technique is the accumulation of material, labor and overhead **costs** across entire departments or entities, with the total production **cost** then being allocated to individual units. Some of the words used in this research project are defined as follows;

- **Cost accounting** – An area of accounting that involves measuring, recording, and reporting product costs.
- **Cost accounting system** – Manufacturing cost accounts that are fully integrated into the general ledger of a company
- **Direct costs** - can be directly traced to the product. Material and labor costs are good
- **Indirect costs** - These can't be directly traced to the product; instead, these costs are allocated, based on some level of activity.

- **Fixed costs** – Costs that remain the same in total regardless of changes in the activity level.
- **Variable costs** – that vary in total directly and proportionately with changes in the activity level.
- **Mixed costs** – Costs that contain both a variable and a fixed cost element and change in total but not proportionately with changes in the activity level.
- **Absorption costing** – A costing approach in which all manufacturing costs are charged to the product.
- **Variable costing** – A costing approach in which only variable manufacturing costs are product costs, and fixed manufacturing costs are period costs (expenses).
- **Activity-based costing** – A cost accounting system that focuses on the activities performed in manufacturing a specific product.
- **Cost driver** – Any factor or activity that has a direct cause–effect relationship with the resources consumed
- **Cost Object** - is an activity, a product or a service, a customer, a project, a contract, a process or a department of an organization for which cost measurement is made.
- **Cost accumulation** - refers to a systematic process engaged by the organizations to collect cost data of its operations by using an accounting system.
- **Cost Allocation** - It is the process of charging the entire amount of cost object to cost unit or cost center.
- **FIFO** - stands for first-in, first-out, meaning that the oldest inventory items are recorded as sold first but do not necessarily mean that the exact oldest physical object has been tracked and sold.
- **LIFO** -stands for last-in, first-out, meaning that the most recently produced or purchased items are recorded as sold first.
- **Weighted average** - an inventory cost flow assumption that assigns average costs to each unit of inventory when it is sold or decreased during the year



## CHAPTER TWO

### 2. REVIEW OF LITERATURE (THEORIES)

#### 2.1. DEFINITION OF COST ACCOUNTING

cost accounting is the process of accumulating the costs of manufacturing, and other functional processes and identifying these costs with units produced or some other object. it is a unique sub field of managerial and financial accounting. cost accounting is applied primarily to manufacturing. organization that combine and process raw material in to finished products (cherrington, 1998).

#### 2.2. CLASSIFICATION OF COST

companies incur different types of costs that can be classified based on certain characteristics. each cost classification provides management with a different type of information to be applied in analyzing different business situations.

costs can be classified into five categories:

- behavior
- traceability
- controllability
- relevance
- function

cost classifications - any type of cost may have categorized using any one or a combination of the five different classifications (laurie l. swanson).

- classification by behavior - costs can be fixed, variable or mixed:
  - ✓ fixed – a cost which does not change as the volume of activity (production) changes
  - ✓ variable - a cost which changes with changes in the volume of activity
  - ✓ mixed – a cost which has both fixed and variable components
- classification by traceability - costs can be direct or indirect
  - ✓ direct – a cost which is incurred for the benefit of one specific product (cost object)

- ✓ indirect – a cost which is incurred for the benefit of more than one cost object or which cannot be easily or efficiently traced to a specific cost object
- classification by controllability - costs can be controllable or non-controllable
  - ✓ controllable – a cost which can be affected (controlled) at the hierarchical level which is being measured
  - ✓ uncontrollable – a cost which cannot be affected (controlled) at the hierarchical level which is being measured
- classification by relevance - costs can be sunk, out – of – pocket or opportunity cost
  - ✓ sunk – a cost which has already been incurred and cannot be avoided or changed regardless of future actions
  - ✓ out-of-pocket – a cost which requires future cash outlays
  - ✓ opportunity – a cost measured as the loss of potential benefits by choosing one course of action over another
- classification by function - costs can be product or period cost
  - ✓ product – a cost which is necessary to produce a finished product
  - ✓ period – a cost which is necessary to run the business during a specified fiscal period

### **2.3.TYPES OF MANUFACTURING INVENTORY**

inventory represents the largest single investment in asset for most manufacturers, wholesalers and retailers. there are typically three categories of inventory. these include raw materials and semi-finished item inventory or work in process & finished goods inventory. (harold and amrine 1975:219).

- ✓ raw material inventory - a raw material inventory includes all the items purchased from suppliers, or produced internally to directly support production requirements. this type of inventory is primarily managed by purchasing. the cost of this will be the purchase value, transportation and other related cost till the material ready for use.

a raw material includes those items purchased in bulk or unfinished condition. raw material inventory includes all items that after being received at the plant require additional processing before becoming unidentifiable part of finished products (colin lewis, 1975)

- ✓ work in process (wip inventory) - the sum total of inventory that exists within and among all processing centers located throughout the manufacturing system. this includes materials that are:
  - waiting to be moved to other processes;
  - being worked on at a work center;
  - queuing up at a processing center due to capacity bottle neck & machine break down (colin lewis 1975)
- ✓ finished goods inventory - this includes completed items or products that are available for shipment of future customer order. a firm that produces item in anticipation of future customer order should monitor the levels of finished goods inventory closely (harold and amrine, 1995)

## 2.4.ELEMENTS OF MANUFACTURING COST

The function of manufacturing is to process various purchased items into new products. Sometimes the change in product form wrought by the fabricating is large; sometimes it is relatively slight. In any event, the manufacturer does not sell the identical article he buys. Product cost to the manufacturer is, then, not purchase amount, but purchase amount plus fabricating expense. It comprises three distinct cost elements: - Direct material, Direct labor and Factory burden. The nature of each of these elements will be briefly considered.

- **Material** - By material is meant the substances from which the products are made. It may be substance in a raw state, as in the case of the logs used by a sawmill, or substance in a manufactured state, as in the instance of the tires used by an automobile plant. It is characterized by having been purchased, not made, by the plant to which it is material. Direct material comprises those material costs which are conveniently allocable to specific lots of production. By "conveniently allocable" is meant not only that it is possible to identify the material cost with a specific lot of production but that the expense of doing so is not too large for the value involved. A board used to repair the factory roof is not direct material, because it is impossible to identify it with the manufacture of any specific lot of product, A single nail used in the manufacture of a specific product is not direct material, because it is impractical in view of the small value of the nail to incur the

clerical expense required to allocate it as direct material. Material which cannot be classed as direct is termed indirect material and its cost is included as an item of factory burden.

- **Labor.** By labor is meant the human effort used in converting material into the finished product. Direct labor comprises those labor costs which are conveniently allocable to specific lots of production, as, for instance, the labor cost of a machinist doing turning work on a specific job order. Labor which cannot be classed as direct is termed indirect labor and handled as an item of factory burden.
- **Factory burden.** Factory burden comprises all manufacturing costs other than direct material and direct labor. The more important items of factory burden in any industrial establishment are like Indirect labor, Depreciation, Indirect material, Insurance, Power, light, and heat, Rent, Supervision, Maintenance etc (Samuel Waldo,1950)

## **2.5.INVENTORY COST FLOW ASSUMPTION**

Inventory cost flow assumption is important because businesses are required to reduce the amount they deduct for inventory purchases over the course of a year by the amount remaining in inventory at the end of the year. For example, a business that purchased birr 10,000 in inventory during the year but had birr 6,000 remaining in inventory at the end of the year could only count birr 4,000 as an expense for inventory purchases, even though the actual cash outlay was much larger. Valuing the remaining inventory differently could increase the amount deducted from income.

There are three basis approaches to valuing inventory that are allowed by GAAP:

- ✓ **First-in, First-out (FIFO)** - Under FIFO, the cost of goods sold is based upon the cost of material bought earliest in the period, while the cost of inventory is based upon the cost of material bought later in the year. This results in inventory being valued close to current replacement cost. During periods of inflation, the use of FIFO will result in the lowest estimate of cost of goods sold among the three approaches, and the highest net income.
- ✓ **Last-in, First-out (LIFO)** - Under LIFO, the cost of goods sold is based upon the cost of material bought towards the end of the period, resulting in costs that closely approximate current costs. The inventory, however, is valued on the basis

of the cost of materials bought earlier in the year. During periods of inflation, the use of LIFO will result in the highest estimate of cost of goods sold among the three approaches, and the lowest net income.

- ✓ **Weighted Average** - Under the weighted average approach, both inventory and the cost of goods sold are based upon the average cost of all units bought during the period. When inventory turns over rapidly this approach will more closely resemble FIFO than LIFO.

## **2.6.METHOD OF INVENTORY RECORD KEEPING**

Perpetual inventory system and periodic inventory systems are the two systems of keeping records of inventory.

- ✓ **perpetual inventory system** - merchandise inventory and cost of goods sold are updated continuously on each sale and purchase transaction. Some other transactions may also require an update to inventory account for example, sale/purchase return, purchase discounts etc. Purchases are directly debited to inventory account whereas for each sale two journal entries are made: one to record sale value of inventory and other to record cost of goods sold. Purchases account is not used in perpetual inventory system.
- ✓ **Periodic inventory system** - merchandise inventory and cost of goods sold are not updated continuously. Instead purchases are recorded in Purchases account and each sale transaction is recorded via a single journal entry. Thus cost of goods sold account does not exist during the accounting period. It is determined at the end of accounting period via a closing entry.

## **2.7.COSTING SYSTEM AND METHOD**

one of the most serious problems within cost management for companies. Accurately allocating overhead costs is one of the key criteria for effective product costing, meaning that correct managerial decisions can thus be made, an example being pricing decisions governing products.

Three types of costing methods, which are different in the way they allocate overhead costs to products, are generally used. These are the conventional absorption costing

method, variable costing method and Activity-Based Costing method (Drury, 2001; Král, 2006).

- ✓ **Conventional absorption costing method** - is a costing system which treats all costs of production as product costs, regardless whether they are variable or fixed. The cost of a unit of product under absorption costing method consists of direct materials, direct labor and both variable and fixed overhead. Absorption costing allocates a portion of fixed manufacturing overhead cost to each unit of product, along with the variable manufacturing cost. Because absorption costing includes all costs of production as product costs, it is frequently referred to as full costing method.
- ✓ **Variable costing method** - is a costing system under which those costs of production that vary with output are treated as product costs. This would usually include direct materials, direct labor and variable portion of manufacturing overhead. Fixed manufacturing cost is not treated as a product costs under variable costing. Rather, fixed manufacturing cost is treated as a period cost and, like selling and administrative expenses, it is charged off in its entirety against revenue each period. Consequently, the cost of a unit of product in inventory or cost of goods sold under this method does not contain any fixed overhead cost. Variable costing is some time referred to as direct costing or marginal costing. To complete this summary comparison of absorption and variable costing, we need to consider briefly the handling of selling and administrative expenses. These expenses are never treated as product costs, regardless of the costing method in use. Thus under either absorption or variable costing, both variable and fixed selling and administrative expenses are always treated as period costs and deducted from revenues as incurred
- ✓ **Activity-Based Costing method** - The underlying assumption of activity based costing is entirely different from that of conventional costing systems. The conventional costing system assumes that products cause costs. Activity based costing systems have activities as the fundamental cost objects. Activity based costing systems also assumes that activities cause costs and that cost objects create the demand for activities.  
Activity based costing is a different approach and improves control of overheads by a

cost/cause relationship, that are activity and cost. The system is flexible enough to relate costs to customers, processors, management responsibility and not just products.

As the name suggests, activity based costing is a system that focuses on activities as the basic cost objects and uses the costs of these activities as building blocks for compiling the costs of other cost objects. The use of an activity based costing system can also help a company to develop a way to analyze and justify manufacturing cycle-time improvements.

The use of activity based costing according evolved over the last few years from a more accurate method of product costing, to a more scientific method of cost reduction, to an all-embracing advanced planning, monitoring and control system, encompassing

## **CHAPTER THREE**

### **3. CONCEPTUAL FRAMEWORK OF THE RESEARCH**

This study is organized in five chapters. The first chapter is dedicated to the background to the study, statement of the problem, research objectives, significance of the study, scope and limitation of the study and organization of the study. Chapter 2 provides the literature review which has composed of theoretical and empirical research. Chapter 3, which is about methodology of the research, presents the research design employed, the sampling, data collection methods, and the data analysis method and technique. Chapter 4 presents analysis results and findings of the study. Lastly, Chapter 5 deduces the implications of the findings, concludes the investigation.



## CHAPTER FOUR

### 4. RESEARCH METHODOLOGY

#### 4.1.INTRODUCTION

This chapter will discuss the methodology adapted in this study. It will discuss the research design used, the sampling technique implemented and the data analysis technique used.

#### 4.2.RESEARCH DESIGN

On the basis of the research questions raised in chapter one, the appropriate research design adapted for this study is descriptive. Descriptive research design will make the study to explain the variables, the facts in detail as well as the findings. Case study was opted as an approach to undertake a closer investigation on the issues raised in the research question.

#### 4.3.SAMPLE

The study adopted a non-probability sampling called convenience sampling. The researcher was tried to take 5 sample companies from biscuit industries based on the annual sales run reported by central statistical agency in 2006. But because of the fact that many of the them were not willing to provide all the necessary information as far as this study is concerned. As a result, two manufacturing firms, namely, Kality Foods Complex and nas foods Pls are selected because of the reason mentioned above.

#### Sales Revenue of L&M food manufacturing enterp. 2000/01 - 2004/05 (in 000 Birr)

Biscuit & "Galeta" sector	2001/02	2002/03	2003/04	2004/05	2005/06	Average share	Market share
NAS Foods		13900	40370	58130	96140	41708	38%
2 Brothers		15750	29750	38930	52710	34285	31%
Dire Dawa Food	6488	6179	6283	5503	7077	6306	6%

Complex								
Kality Complex	Food	7319	7054	7309	4249	2222	5631	5%
<b>Total</b>		<b>13807</b>	<b>42883</b>	<b>83712</b>	<b>106812</b>	<b>158149</b>	<b>81073</b>	<b>73%</b>

*Source – Central statistical agency, report on large and medium scale manufacturing and electricity industry survey November 2006*

#### **4.4.DATA SOURCES AND COLLECTION TECHNIQUES**

The study used both primary and secondary data sources. The primary data were collected through questionnaire and interview techniques. The questionnaires are reviewed by my friends who are studding with me in same field of study and the interviewee are selected based on the work flow.

Respondents of these instruments are the Finance Managers, Purchasing manager, store department supervisors and Production managers, human resource manager and technique managers. The interview was conducted with cost accountants/ finance department responsible person who is working with product cost computation.

The secondary data used in this study are product costing sheet and cost accounting reports etc.

#### **4.5.DATA ANALYSIS TECHNIQUE**

The researcher used both qualitative and qualtitative data analysis techniques. The responses that had been collect from questioner analyzed through quantitative data analysis and presenting by excel tabulation. Data gathered from interview and primary source were analyzed and presented through qualitative approach of data analysis techniques.

## CHAPTER FIVE

### 5. DATA ANALYSIS AND PRESENTATION

#### 5.1. INTRODUCTION

This chapter deals with presentation, analysis & interpretation of data obtained from respondents through questionnaire, interview & from secondary sources to assess the product costing technique practices of selected companies Nas Foods and Kality Foods Complex.

#### 5.2. DATA COLLECTED FROM THE QUESTIONNAIRE

This research aimed is to assess the product costing technique for some biscuits manufacturer in Ethiopian focused on 2 companies named Kality Food complex & Nas Foods PLC.

Six types of questionnaire for six departments prepared for total of 18 questionnaires were distributed 4 for Production, 2 for Purchasing, 4 for Store, 2 for Technique, 2 for human resource & 4 for Cost accounting and finance departments of the above mentioned biscuits manufacturers in Ethiopia. They were all properly filled and returned, thus; 100% response.

Each question in the questionnaire has been analyzed separated with the use of statistical and descriptive analytical tools. Emphasis on the analysis is on those questions, which have direct bearing or relevance on the objective of the study and they are presented in table form.

##### 2.1.1. General Information about the respondent

	No	Gender		Age					Educ Qualf.		
									Dip	Deg	MA
	.	M	F	<25	26-30	31-40	41-50	>50			
Production Dep.	4	4				3	1			3	1

Technique Dep.	2	2				2				2	
Purchasing Dep.	2	2			1	1				2	
Store Dep.	4	1	3			2	2		4		
Human Resource Dep.	2	2				2				1	1
Finance Dep.	4	1	3		1	2	1			3	1
<b>Total</b>	<b>18</b>	<b>12</b>	<b>6</b>		<b>2</b>	<b>12</b>	<b>4</b>		<b>4</b>	<b>11</b>	<b>3</b>

**Table 5.1- Source Questionnaire – General Part**

The studies found that out of the 18 respondents were 12 Males and 6 Females. According to this table information 2 of the employees are found at the age of between 26-30, 12 of them are age between 31-40 and the rest 4 are age between 41-50. Finance, Human resource and production department respondents each have one masters and others excluding stores department all have Degree BA degree and all store department have diploma holders.

### **2.1.2. Data gathered from Production People**

Production is the functional and responsible for Turing inputs or raw materials in to finished outputs through a series of production process. The production department a section of the company and is responsible for making sure that the raw materials are provided and made in to finished goods effectivity. The data gathered from production people are presented below:

<b>Questions</b>	<b>Nas Foods</b>			<b>Kality Foods</b>			<b>Total</b>
	<b>Yes</b>	<b>No</b>	<b>Don't know</b>	<b>Yes</b>	<b>No</b>	<b>Don't know</b>	
1. the Production department use material requisition form to request raw materials issuance from the store	1	-	1	2	-	-	<b>4</b>
2. the production department use goods return voucher when they return back raw material to store	1		1	2	-	-	<b>4</b>

with copy of voucher to the costing department when it has excess raw materials in the production floor							
3. the firm has product quality inspection	2	-	-	2	-	-	4
4. the production department issue production consumption report to cost accounting department	2			2			4
5. the production department report the work in process to cost accounting department	2			2			4
6. the company current production system or technique affect the cost of produced finished goods inventory	1		1	2			4

**Table 5.2**

**Source Questionnaire – Production Department**

1. Out of the 4 respondent 3 of them are replied that issuance of raw material from raw material store to production store based on the material request requested by the user or production department
2. Out of the 4 respondent 3 of them are replied that the excess raw material in production hall will be returned to the raw material store and this return is supported by material return voucher issued by the production department and by copying to the company cost department
3. All respondent from the selected companies are replied the company has quality inspection
4. 2 Respondent from nas foods reply that production consumption are prepared and send to the cost department but for the time interval 1 reply that on monthly basis and the other reply both daily and monthly. 2 respondents from Kality foods reply production consumption report are on monthly basis

5. All respondent from both companies replied as monthly production work in progress reported to Cost accounting department
6. 1 respondent from Kality Foods replied yes (the current system affect the product cost technique) but the respondent didn't mention the reason.2 respondents from Nas foods replied yes the current system affect the product cost technique. They explain that most of the machineries are old and their efficiencies are down which is less output and much wastage and it requires frequent maintenance which will lead high machine breakdown hour and high cost for repair and maintenance so this may affect the cost of the product as machineries have direct impact on the produced items.

### 2.1.3. Data gathered from Technique People

Questions	Nas Foods			Kality Foods			Total
	Yes	No	Don't know	Yes	No	Don't know	
1. the company have separate technique department or section who are controlling the operation of each and every production machine	1			1			2
2. the technique department issue time report for operational machineries which is working during a specified time interval during operation to cost accounting department		1			1		2
3. the company current machinery working time follow up sheet system or technique affect the cost of produced finished goods inventory	1			1			2

**Table 5.3**

**Source Questionnaire – Technique Department**

1. all respondent from both companies replied yes technique departments are exist the selected company's operation
2. all respondent from Nas Foods and from Kality Foods replies the technique departments don't report machineries working hour to the costing department.
3. all respondents replay as yes the current system affect the cost of production.
4. comment for improving the current system of production cost determination: respondent from Kality Foods explained planned and scheduled machinery maintenance will preventive for high repair and maintenance cost and increase machine time for operation. respondent from Nas Foods explained as machineries are too old the required replacement and repair should do with. With the existing machineries it is difficult to forecast efficient and effective output so replace the existing machineries with new will be advisable.

#### **2.1.4. Data gathered from Purchasing People**

Purchasing department buy raw material and other materials required by the company. Purchasing department is responsible for everything related to ordering and dealing with suppliers or vendors. A good purchasing team or department will minimize the cost of purchased materials

Questions	Nas Foods			Kality Foods			Total
	Yes	No	Don't know	Yes	No	Don't know	
1. the firm purchase raw materials as inventory stock	1			1			2
2. the company have proper purchasing procedures for the purchase of raw material	1			1			2
3. the purchase process strictly follows the procedure		1		1			2
4. the purchasing department submit the proper documents to the cost accounting department for recording of purchased material on time	1			1			2
5. the company purchase raw material	1			1			2

from local market and import from abroad							
6. the company current purchasing procedure affect the cost of purchased inventory	1				1		2

**Table 5.4**

**Source Questionnaire – Purchasing Department**

1. All respondents reply yes the firm purchase raw materials as inventory stock for both companies
2. All respondents reply yes for both companies use proper raw material purchasing procedure
3. All respondents reply yes the company have proper purchasing procedures for the purchase of raw material but they say no for the proper implementation of the procedure for both companies
4. All respondents reply yes as the company purchasing department submit the proper documents to the cost accounting department for recording of purchased material on time for both companies
5. All respondents are replied that the company use mix which is raw materials are purchased locally and import from abroad for both companies
6. Data from the question that the factor that affect the product cost due to current purchasing procedure is: Respondents from Kality foods reply no and respondent from Nas Foods says yes and explain that the current purchasing procedure will affect the cost of purchased raw material like raw materials are purchase for short period of time, there is no re order point most of the time purchases are processed urgently which will lead to buy with high price. Example flour is seasonal material prices are high in some period and low in other if we purchased flour during the low season and kept as stock and use it during high season. This and related issue for other materials will affect or make ups and down the production cost

**i. Data gathered from Store People**



After completion of the purchasing procedure the next important material management is store keeping. A store is a boiling or house provided for preserving material stores and finished goods. The person who are responsible for store called store keeper or store manager. This person is responsible to supply material to the production without delay, protect material from theft and other risks and continuous control over materials by following the store function like issuing purchase question, receiving vouchers for purchased materials, proper material storing, issuing material with issue vouchers to user department etc

Questions	Nas Foods			Kality Foods			Total
	Yes	No	Don't know	Yes	No	Don't know	
1. Does the company have store department or section who are controlling the movement of inventory which is raw material or finished goods	2			2			4
2. there a segregation between raw material store and finished goods store for inventory movement control of for raw material and finished goods	2			2			4
3. the store keeper sends a copy the store movement vouchers (which is Goods receiving note, Goods issue voucher and Goods return voucher, Produced finished goods transfer voucher etc) to the costing department on time?	2			2			4
4. the company raw material store and production department reconcile with certain time interval for total raw material issuance and return		2		1	1		4

5. the company current store transaction system or technique affect the cost of produced finished goods inventory		2			2		4
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**Table 5.5**

**Source Questionnaire – Store Department**

1. All respondents from both companies reply that the company have store department or section who are controlling the movement of inventory which is raw material or finished goods
2. All respondents reply yes for both companies which they have separate raw material and finished goods control section.
3. All respondents reply yes the store keepers are send the copy of store transaction vouchers to costing department or section for both companies.
4. All respondent from Kalitty foods and 1 from Nas Foods says no and the other from Nas foods says Yes
5. All respondents reply no the current store transaction system not affect the costing system for both companies

**ii. Data gathered from Human Resource People**

Human resource department is critical component of employee well-being in any business. Human resource department are responsible for hiring, promotion position classification and grading salary determination performance appraisal review and processing awards review and processing data entry etc.

This department is also responsible for maintain adequate labour record for cost analysis purpose

Question	Nas Foods			Kalitty Foods			Total
	Yes	No	Don't know	Yes	No	Don't know	
the company have separate human resource department or section who are controlling operational and nonoperational or administrative staff	1			1			2

the Human Resource department issue time report for operational staff who are direct relation with production and others to cost accounting department	1			1			2
the company current time keeping system or technique affect the cost of produced finished goods inventory		1			1		2

**Table 5.6**

**Source Questionnaire – Human Resource Department**

All respondents reply agree on the company have separate human resource department or section who controlled the operational a non-operational administrative staff for both companies

The Human Resource department issue time report for operational staff who are direct relation with production and others to cost accounting department in both companies as replied by all respondent from the selected companies

All respondents say no for question raised that the company current time keeping system or technique affect the cost of produced finished goods inventory

### **iii. Data gathered from Cost Accounting People**

Cost accounting is the process of recording, classifying and analyzing, summarizing, allocation and evaluating various alternative courses of action for the control of costs. Its goal is to advise the management on the most appropriate course of action based on the cost efficiency and capability.

Cost accountants work closely with the production department to measure and report manufacturing costs. Production department concerned with the conversion of raw material in to finished goods or products. Cost accounting department helps in calculating or computing the various costs involved in the manufacturing process like material costs, labour costs and other factory overhead costs involved in manufacturing product

Cost accounting department is concerned with ascertaining, controlling and reducing cost of the manufacturing process. The required information regarding costs related to the

manufacturing process both budgeted and actual collected by cost accounting department from the production department and send to the management for exercising control.

<b>Cost Accounting</b>	<b>Nas Foods</b>			<b>Kality Foods</b>			<b>Total</b>
	<b>Yes</b>	<b>No</b>	<b>Don't know</b>	<b>Yes</b>	<b>No</b>	<b>Don't know</b>	
1. the company have adequate, efficient and qualified accounting staff	2			2			4
2. such employees have sufficient knowledge and skill for their job and their responsibility	2			2			4
3. the company have a structured cost accounting policy / manual		2			2		4
4. the costing department record the inventory movement transaction (incoming and issuing of raw material) immediately when it gets the proper source documents?	2			2			4
5. the company make inventory counting	2			2			4
6. the company have a system of standard costing & variance analysis on periodical basis	2			2			4
7. the company necessary departments participate in setting the standard costing process	2			2			4

***Table 5.7-1***

***Source Questionnaire – Cost Accounting/Finance Department***

1. From all of the 4 respondents of Nas Foods as well as Kality Foods the selected companies have adequate, efficient and qualified cost accounting staff
2. all respondents say yes as these employees have sufficient knowledge and skill for their job and responsibility.
3. The respondents reply that Neither Nas Foods nor Kality Foods complex have structured cost accounting policy or manual
4. All The respondent replies that the costing department record the inventory movement transaction (incoming and issuing of raw material) immediately when it gets the proper source documents
5. Both company's respondent says yes as the company making periodic inventory counting.
6. Standard cost is the practice of substituting an expected cost for an actual cost in the accounting records, and then periodically recording variances showing the difference between the expected and actual costs. Nas foods as well as Kality foods company have a system of standard costing & variance analysis on periodical basis
7. Both company's respondent says yes as the company concerned departments are involved on setting standard costing
8. From the respondent response of Nas foods a Kality foods company have a system of standard costing & variance analysis on periodical basis
9. the costs or charges that will included as cost of purchased raw material - The cost of purchased raw materials should the purchasing price and other related charges till the materials are ready for use. From all respondent of the companies are used for locally purchase material invoice price is the cost of material but for imported materials the cost will be the lump sum of the invoice value, import customs tax, freight and transport, insurance and other related charges.
10. the company Inventory Record Keeping - In accounting there are two inventory record keeping systems which are periodic and perpetual inventory record keeping. Periodic inventory keeping system uses updated the inventory record based on count whereas perpetual systems uses to update inventory through recording of all inventory in and out.

All quality foods respondent replied that periodic inventory system but the nas foods respondents replied the company use perpetual inventory system

11. Inventory cost flow assumption is the method available for moving the costs of the company inventory from its inventory to its cost of goods sold or cost of production. In GAAP three types of inventory cost flow assumption which are FIFO (first in first out), LIFO (last in first out) and average method.

As per all respondent both companies inventory cost flow assumption average method of cost flow assumption

12. As per the respondents from the selected companies the list of their products as follows

12.1. List of Products

12.1.1. Kality Foods Complex list of their products (finished goods of biscuits)

- Knick Knack.
- Kiddy
- Galleta
- High Energy
- Teamate.

12.1.2. Nas Foods List of Biscuits

- Hip Hop (Stawberry, Checholate, caramel, vanilla flavor and fasting)
- Ora (fasting and non-fasting)
- Glucose (Fasting and non-fasting, small and large package)
- Tropicana (Lemon, Coconut, Orange flavor)
- Star

12.2. Based on the list of products mentioned above in each company the proportion of different cost items as a percentage of total costs. Both company's respondent reported only material percentage allocation for the output. The average material consumption percentage for each company's products listed below.

List of Raw Materials	Nas Foods			Kality Foods		
	Ingredient	wrapping	Packing Ctn	Ingredient	wrapping	Packing Ctn
Flour	40%			45%		

Vegetable Fat	20%			16%		
Sugar	15%			18%		
Color	2.5%					
Flavor	2.5%					
Wrapping		15%			13	
Packing (Carton)			5%			8%
<b>Total</b>	<b>80%</b>	<b>15%</b>	<b>5%</b>	<b>79%</b>	<b>13%</b>	<b>8%</b>
	<b>100%</b>			<b>100%</b>		

**Table 5.7-2**

**Source Questionnaire – Cost Accounting/Finance Department**

From the above summarized table in both companies use cost component of only materials. This implies that the companies finished goods are evaluated based on the consumption quantity material cost only which violet the general principle of production cost. Because production cost or production finished goods is the summation of direct material, direct labour and indirect factory overheads.

Question	Nas Foods			Kality Foods			Total
	Yes	No	Don't know	Yes	No	Don't know	
1. Overhead costs are assigned to finished products		2			2		4
2. the firm use proper predetermine rate for allocating manufacturing overhead costs		2			2		4
3. the firm have a proper time keeping mechanism to identify the labor hour consumption on a certain time interval		2			2		4
4. the cost allocating department use more than one pool for accumulating indirect or overhead costs		2			2		4
5. the company product has scrap or	2			2			4

wastage							
6. The value of scrap is treated well through allocating		2			2		4
7. the production cost or cost of good manufactured considers the cost of this scrap or wastage		2			2		4
8. the cost/profitability of finished goods products/activities regularly measured and reported to the management of the company	2			2			4
9. Does the company encourage employees / workers to come up with cost improvement suggestions	2			2			4
10. the cost accounting department prepare interim production reports to management	2			2			4
11. the company's current costing system is proper		2			2		4
12. the current costing system convenient for cost effective production cost assignment		2			2		4

**Table 4.7-3**

**Source Questionnaire – Cost Accounting/Finance Department**

1. Factory overhead is the costs incurred during the manufacturing process which is not including on the cost of direct labour and direct materials. overheads, have to be allocated or apportioned to cost units, cost centers, or cost accounts using appropriate bases for allocation and apportionment. Overhead costs are untraceable to particular units (compared with direct costs).

All respondents for the selected companies reply that the company is not allocating overhead costs to product. One of the major components of production manufacturing cost of product is overhead costs if this cost is omitted the product cost is incomplete or holds partial cost or understated



2. Predetermined overhead rate is used to apply manufacturing overhead to products or job orders and is usually computed at the beginning of each period by dividing the estimated manufacturing overhead costs by an allocation base (also known as activity driver). commonly used allocation bases are direct labour hours, machine hour etc  
From all respondent above both companies have no predetermined factory overhead rate to allocate overhead cost to finished goods.
3. Direct labour is a labour that only involved in the hands-on production of goods or services all other labour is indirect labour. The cost associated with direct labour is easily traceable and charged to all unit produced during the reporting period. Whereas indirect labour cost is a labour cost that can't be easily traced and is assigned to a cost pool from which it is allocated to the units produced during the reported period
4. As per all respondents from both companies they don't keep proper time keeping in order to consider the direct or indirect labour cost. This will create misclassification of cost category which leads to improper product costing valuation
5. Scrap is the loss associated with the output this will happen at the end of production or due to the nature of material or process itself. Wastage is the loss connected with raw material or inputs to the production process and usually means to refer that inputs has been lost due to any reason either because of its nature of material

All respondents reply that as there is scrap or wastage of production but the cost is not considered or treated properly.

This implies that if scrap or wastage are properly managed it will affect the value of produced finished goods. Even if the company finished goods valuation understate the cost of produced finished goods both respondents confirm the cost profitability measurement has been taken regularly.

The costing department people opinion about the effectiveness of the current product costing technique - From both companies costing people response the company product costing techniques are in adequate. The costing department people suggest to improve the current system of product cost for both raw material and finished goods by considering the allocation of indirect and overhead costs to product.

### **5.3. DATA COLLECTED FROM THE INTERVIEW**

This section conducted data gathered through oral interviews for cost accountant and/ or finance department who are working with the costing. Interview is obtained to get in-depth understanding of the organizations working procedures, methods and systems.

These interview question was raised and its response from the selected companies presented

here:

#### **5.3.1. Interview question response from Kality foods**

Interview is obtained from Kality Foods cost accountant who is responsible to inventory accounting and cost of production. The questions or issues was raised and the responses are presented below:

##### **1. Recording of raw material purchased and its evaluation**

When raw materials are purchased or received the raw materials are increased so the entry is debit raw materials purchase and credit account payable or cash. The Purchase price will be the cost for raw material which is locally purchased. For imported raw material the costs will be the lump sum of the invoice value, insurance, freight, transit cost and customs tax.

From the above interviewee response, I can have summarized that the cost of raw materials sourced from local markets are understated because they use only the purchase price only without considering other related charges incurred till the material ready for use

##### **2. Recording of raw material issuance and raw material return from production to raw material store**

When raw materials are issued it means it goes to the line of production which is raw material on hand are decrease and shifted to the work in progress inventory. So the recorded will be at the time of raw material issuance raw material inventory will be credited and work in progress will be debited. At the time raw materials are returned raw material inventory will be debited and work in progress will be credited.

##### **3. Recording for produced and transferred finished goods from production to finished goods store**

Finished goods comes from the line of production so the record will be debit finished goods inventory and credit work in progress

#### **4. Setting the standard unit cost of finished goods**

The standard unit cost for finished goods are settled:

- ✓ Calculated the total units completed during the period
- ✓ Calculated equivalent unit which convert the work in process to the equivalent unit by considered as completed this period
- ✓ Total Costs for equivalent units which is beginning work in progress cost plus costs added this period
- ✓ Assign total costs for the total equivalent units which gives unit cost for equivalent units and completed units

#### **5. Setting standard cost of labor and other factory overhead costs**

The company set standard costs for labour and factory over head the cost pools are labour hour and machine hours.

#### **6. Company inventory cost flow assumption**

The company use weighted average cost flow assumption for all inventory wheatear it is raw material or finished goods inventory

#### **7. Measurement of actual material consumption and treatment of the actual cost of finished**

The actual material consumption is measured by dividing the total input consumption cost to the total produced output. The cost of consumed material is the product of the total quantity of output by the unit cost of consumed material.

#### **8. Measurement and recognition of work in process**

Measurement of the work in process is the sum of all costs put in to the production process to manufacture the product. Work in progress is recognized when materials are consumed and other factory overhead costs are applied

#### **9. Variance reporting and management**

Variance are existing for the standard and actual costs of production. This variance is reported every month to management to help for their decision making.

#### **10. Computation of inventory profitability analysis**

the company average profitability ratio of the product is measured the business ability to generate earning compared to its expense and relevant costs incurred during a specific period.

### **11. Product costing report and decision taken by management**

The Company use product costing report for the here under issues:

- ✓ to set price - the company pricing strategy is based on cost the management use the product cost to set price.
- ✓ Efficiency measurement: The company measure efficiency by measuring the estimated or standard cost with the actual costs incurred during a given production period.
- ✓ monthly financial statement – the company product costing report helps to the monthly financial statement which is to report the value of quantity on hand inventory at balance sheet date and to measure cost of goods sold for a given financial period

### **12. Appropriateness of the company current costing technique**

The current costing technique is appropriate to develop new product, to change the current price to reduced cost of production

### **13. advise to change the current costing technique**

there should have a lot of change needed to the current costing technique to design and adapt modern costing system like using ABC costing system for factory overhead costs.

### **14. Comment or suggestion regarding the company product costing technique**

To set appropriate costing system every department work together to set standards which will need to revised every time based on the material used and the production machinery capacity and utilization measurement need to revise with a certain period of time.

#### **5.3.2. Interview Question response from Nas Foods**

Interview is obtained from Nas Foods Accounting Manager who is responsible to check and review inventory accounting and cost of production.

##### **1. Recording of raw material purchased and its evaluation**

The company purchase its raw material from local market and imported some from abroad. For the locally purchased raw material the cost will be the purchase value no other charges added to it. The record will be debit raw material inventory which will be as asset and credit payable to supplier or cash if it is purchased on cash. For imported raw material the cost will be all charges till the item reached in the store (like invoice value, insurance, freight, customs duty charge etc). The record will be:

At the time when the company incur this different costs debit for Goods in transit (GIT) and credit cash or payable to the necessary party. Once all the costs are incurred and received the item the record will be debit raw material inventory and credit the Goods in transit (GIT) account

The necessary supporting document will be attached with the copy of GRN which is issued by the store keeper.

## **2. Recording of raw material issuance and raw material return from production to raw material store**

Raw material requisition form is send from production department to raw material store based on that the raw material store issue raw material issuance voucher and send the material to production department. when there is excess raw material in production floor the production department fill the material return voucher and send the raw material to raw material store.

The copy of raw material issue voucher will come to cost accounts section. Its considered that the production floor just like the work in process store which means once raw material issued from store to production the record will be debit work in process inventory and credit raw material inventory.

The copy of raw material return voucher will come to cost accounts section. The record will be debit raw material inventory and credit work in process inventory

## **3. Recording for produced and transferred finished goods from production to finished goods store**

as its mentioned above the production floor considered as WIP so once the produced finished goods are transferred from production to store the production department issue a finished goods transfer voucher and the copy will be sent to costing section. The voucher

holds only the quantity transfer. When the cost accountant records this voucher use the standard unit cost. And the entry is debiting finished goods inventory and crediting work in process.

#### **4. Setting the standard unit cost of finished goods**

there is recipe or standard consumption quantity which is prepared by production and quality control department for each product per batch. For one batch there is a given set of quantity of output or finished goods. for a batch quantity of output there is a list of ingredients or raw material with stated raw material quantity consumed. From the batch standard raw material consumption quantity can derive the standard material consumption quantity for a single finished goods then to get the cost of a single finished goods by multiplying the quantity of raw material to produce a single finished goods with the monthly beginning raw material unit cost.

#### **5. Setting standard cost of labor and other factory overhead costs**

The is no tracing or allocating direct or indirect labour and other factory over head in finished goods cost. All salary expense both for factory workers and staff is recorded as period expense without tracing or allocating to the product cost. In addition to this any other cost of factory overhead treated as period expense and reported on income statement as cost of goods or aggregate expense for that specific period or month.

#### **6. Company inventory cost flow assumption**

Nas Foods uses moving average cost for both inventory raw material and finished goods inventory.

#### **7. Measurement of actual material consumption and treatment of the actual cost of finished**

actual cost of finished goods will calculate at the end of every month. The production department send monthly raw material consumption report for each finished goods to costing section. The consumption report holds all consumed raw material quantity throughout the month for each type of finished goods with the quantity produced. Usually there will be variance between the standard and actual cost due to quantity and price of raw material. This variance is reported in the income statement as inventory valuation gain or loss.

## **8. Measurement and recognition of work in process**

Recognition of work in process at the end of every month by counting the semi processed goods in the production floor. This semi processed finished goods can be biscuits produced but not wrap and packed (which will have the cost of ingredient only without cost of wrapping and packing or carton costs) and biscuits produced and wrapped but not packed (which will have the cost of ingredient and wrapping cost without packing or carton cost).

## **9. Variance reporting and management**

Variances occur due to quantity and price between the standard and actual consumption of raw material. variance reports are submitting to the management every month and the necessary department give explanation. The production and technique department are responsible to give explanation for Which is for quantity variance the production department and for price variance commercial or purchasing department are responsible to clarify the reason.

## **10. Computation of inventory profitability analysis**

inventory profitability analysis is made every month and reported to Management. To calculate the profitability analysis of each finished good by subtracting the unit cost of each finished good from the selling price of each finished good, then the result will be divided by the selling price to get the Gross profit percentage of each finished goods.

$$\text{profitability ratio} = \frac{\text{Unit Selling Price} - \text{Unit Cost}}{\text{Unit Selling Price}}$$

average profitability ratio reported every month to management. Computation of average profitability ratio is the Summation of each Quantity sold multiplied by their unit selling price minus Summation of each quantity sold multiplied by their unit cost dividend to Summation of each quantity sold multiplied by their unit selling price for a given month will give the average profitability ratio of the month

## **11. Product costing report and decision taken by management**

the company management use the product costing related report for various decision:

- For efficiency evaluation – efficient utilization of raw material by production department from the report of quantity variance analysis (actual versus standard

material consumption report). Efficient purchase of raw material by purchasing department from the raw material price variance analysis (actual versus standard material purchasing price)

- For pricing – even if the company set the price depends on competitors, the managers also consider the cost of finished goods that the profitability varies month to month they will adjust the price as per the variation

### **12. Appropriateness of the company current costing technique**

There is a doubt on the appropriateness of the current costing technique because as a generally accepted principle the product cost will be calculated for:

- ✓ Raw material – for locally purchased raw material the cost should be the purchase price, transportation, loading & unloading and others which is incurred till the goods are reached in the store
- ✓ Finished Goods – the cost of finished goods should be the lump sum of raw material, direct labour, other indirect & factory overhead costs.

But the company costing technique use different from this. Locally purchased raw materials are costed only by purchasing price and finished costs are computed by the cost of consumed raw material only.

### **13. advise to change the current costing technique**

to give proper cost for each company inventory all necessary costs should assign for them. For locally purchased raw material cost will be the purchase price and all related costs like transportation, loading unloading etc should assign as cost of the raw material. For finished goods in addition to the cost of consumed raw material, labour and factory overhead costs should be included

### **14. Comment or suggestion regarding the company product costing technique**

In order to set proper costing system all department work together. With this cooperation they can sort out to set mechanism such system. Like setting standards for labour hour and standard costs for indirect costs and factory overhead etc



#### **5.4. DATA COLLECTED FROM SECONDARY DATA (COMPANY DOCUMENTS)**

The secondary data were solely gathered from selected companies accounting/finance department. This includes vouchers for product or items transaction, forms and report they used.

##### **5.4.1.1. Vouchers for Inventory movement**

For both Kality and Nas Foods have used the listed down vouchers for their inventory movement.

- **Goods Receiving Vouchers** – This vouchers prepare by raw material stores at the time of receiving purchased raw materials. This vouchers holds the quantity received, unit cost and total cost. The cost accounting department used this as cost of the purchased material cost. Sample list of materials are wheat flour, sugar, shortening, wrapping film, carton etc
- **Store Issued Voucher** – This vouchers are prepared by raw material store when they transfer raw material to production department. The vouchers hold only the quantity issued. The cost accounting department used this as work in process.
- **Store Return Voucher** - This vouchers are prepared by production clerk when they return raw material from production to raw material store. The vouchers hold only the quantity returned. The cost accounting department used this as reversal of work in process.
- **Finished Goods Transfer Voucher** - This vouchers are prepared by production clerk when they transfer produced finished goods item from production to Finished Goods Store. The vouchers hold only the quantity transferred. The cost accounting department used this as decrease in work in process and increase Finished Goods inventory.
- **Finished Goods Delivery Voucher** – This voucher prepares by finished goods store when they deliver finished goods for sales. This voucher holds only the quantity delivered. The cost accountant used this to calculate the cost of goods sold and basis for sales

##### **5.4.1.2. Other Documents**

1. Nas Foods plc concerned department prepare the listed down sheet related with product cost.
  - **Monthly Production Consumption Report** – This Report are prepared by production department and sent to cost accounting department. These report holds the total quantity of monthly raw material issuance from raw material and total monthly return of raw material from production to raw material store. This report has also the quantity consumed for each produced item with produced quantity throughout the month
  - **Cost Sheet** – This sheet is prepared by Accounting Head by using the above listed voucher and raw material consumption report. The cost Sheet holds:
    - **Recipe or Standard Sheet** – This holds the standard quantity of raw material consumed to produce a given batch of output product and the monthly beginning average unit cost of raw material. From this derived standard unit cost of output product.
    - **Actual produced Finished Goods consumed raw material cost** - total material consumed quantity for each finished good throughout the month with monthly average unit cost of raw material. Total produced finished goods = total material consumed X average unit cost of material
    - **Actual Unit cost of Finished Goods** – Total material consumed cost for a given product divided to total quantity produced for a given products
    - **Cost of Manufactured Product** – The lump sum of each produced product quantity multiplied by unit cost of each product. This sheet has 3 part which is beginning work in progress cost, current add cost and finished work in progress cost.
2. Kality Food Complex concerned department prepare the listed down sheet.

- **Cost Sheet** - This sheet is prepared by cost accountant by using actual transferred goods and information getting from production for percentage of completion for semi processed product. This will give the cost of manufacturing in a given month produced goods
  - Calculate the total units completed during the period by considering units comes from beginning work in process and units remaining as semi processed as ending work in process
  - Calculate total equivalent units of output which is units completed this period and units in ending work in progress.
  - Total Cost for equivalent units which is cost of raw material consumption for beginning work in process plus current add consumption of raw material cost
  - Assigning Total costs to the total equivalent units to get unit cost per equivalent units for each product.
  - Cost of Goods Manufactured in a month – total quantity of actual unit produced for each product multiplied by unit cost per equivalent units of that product.

#### **5.4.1.3.Costing Report**

The key steps of assigning costs to units transferred out and units in ending WIP inventory are formally presented in a production cost report. The production cost report summarizes the production and cost activity within a processing product or service for a reporting period. A production cost report helps managers to answer several important questions:

- How much does it cost to produce each unit of product?
- Which product production cost is the highest—direct materials, direct labor, or overhead?
- Where are we having difficulties in the production process? In any particular goods or cost component?

- Are we seeing any significant changes in unit costs for direct materials, direct labor, or overhead? If so, why?
- How many units flow through each processing product each month?
- Are improvements in the production process being reflected in the cost per unit from one month to the next?

The below reports are used by managements of both companies Kality Food Complex and Nas Foods PLC.

- **Manufacturing Cost Report** – This report holds the number of quantity produced in a given month for each product type and its manufacturing unit cost. This report sent to management. In addition to this the sheet helps for monthly financial report. Which will help to measure cost of goods sold and valuation of inventory. The management use this report for future production budget, working capital requirement etc.
- **Variance analysis report** – this report holds both the standard cost and actual manufacturing cost of of each finished good. It shows the variation between the actual cost and standard cost of a given product. This report sent to management on monthly bias and the concerned department give explanation for each variation. And decision will take for future.
- **Inventory Profitability Report** – Inventory profitability report holds the cost and sales of each product in a given month. The selling price minus cost of a given product divided by its selling price will give the inventory profitability ratio. This report sent to the management on monthly basis and the management take appropriate action either on price or cost of production if the profitability ratio is varying form expected profit margin.

From the above company's production related report, I found that managements are getting insufficient and inadequate information which will lead them for wrong decision or action.

## **CHAPTER SIX**

### **6. FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

This chapter deals with the presentation summary of finding, conclusion and recommendation forward based on conclusion draw from major finding

#### **6.1.SUMMARY OF FINDINGS**

The general objective of this study was to to assess the cost accounting techniques that are being used in biscuits manufacturing companies in Ethiopia. This study adopted a descriptive research method. The target population for this study was the 2 biscuits manufacturing companies in Ethiopia.

Manufacturing companies buy raw materials and use labour and other economic resources to produce products. This produced product valued with the cost of these three component. In determining the cost of raw materials that will use for production could be the necessary costs to get the material ready to use the production which is the purchase price, freight or transport etc.

From the selected company's respondent, the purchase value of the raw material is the cost or value of raw material, all other costs incurred for that purchase considered as period costs as other expense and reported on the income statement during the period. Which leads to under valuation of of raw material and overstated costs or expenses reported on the income statement.

The seleted companies production cost have only the cost of raw material consumption or usage other costs are considered as period costs which leads to:

- Under valuation of produced finished goods – finished goods are valued only by the value of under valued raw material consumed.
- High period costs or expense. As manufacturing costs other than cost of raw material reported as peiod costs, costs or expense reported on the income statement will be high wheater the finished goods are sold or not.
- Under valuation of ending finished goods – as the production cost holds only the cost of raw material consumed, the value of finished goods reported on the balance sheet will be understated
- Pricing against to product cost ( the base of production costs) will be understated – due to under valuation of production costs pricing will be understated.
- Profitably Report – Profitability is the difference between selleing price and manufacturing costs.Under vauation of production lead to actually low profitability of product as the goods has measured only with one component (raw material consumption only by ignoring labour and overhead costs).

## **6.2.CONCLUSION**

The researcher objective of this study is to assess the product costing for the selected biscuit manufacturer in Ethiopia. The study relied on primary and secondary data extracted from the selected companies management report of related with product cost and participants' answers to the inquiry and after analyzing the study data, the study had reached the following conclusions

To set the cost of raw material purchase all the costs incurred during the purchase process till the material are ready for use considered as the cost of material. From this study the companies are used only the purchased price as the cost of the raw material which is purchased locally. Direct Material Cost, Direct Labour Cost, Production overhead Cost are

core ingredients for the valuation of produced finished products and profitability (operating profit) measurement for representing companies performance. The results of the study indicate that raw material cost are the only cost component for the production cost and this value only reported as value of finished goods reported on the balance sheet as well as cost of goods sold on income statement. However, labour and production overhead cost were found as period costs directly and reported on the company income statement. It is therefore concluded that the companies cost management strategies that focus only on the purchase price of raw material only, others production costs are not considered on the production cost of the products rather considered as period costs. These implies that product costs are understated and overstate period cost which leads to inadequate information for management their decision and action.

To understand the inventory valuation and its impact properly it is very important to understand the relationship of inventory valuation, gross profit and cost of goods sold. If inventory cost componenets are omitted from part of inventory cost and reported on income statement as period cost it will have negative impact on the following :

- Undervaluation of ending finished goods inventory reflected on Balance sheet
- Undervaluation of cost of goods sold reflected on income statement
- Overvaluation of operating expense reflected on income statement
- Seems high product profitability margin or Gross profit margin which is not actual that will mislead management decision.

### **6.3.RECOMMENDATION**

Manufacturing companies incur various costs in the course of their operations. They have workers and run the facotory works. To operate efficiently a company has to identify these costs and assign them to revenue generating products. Only then can the company determine which acitvites or products are profitable and optimize its operations

From this study the limitations are addressed and the recommendations are as follows

1. To set a system for accurate Raw materials valuation which is in addition to the purchase price need to add costs incurred till the materal ready for use. Accumulate all incurred costs for a given set of purchased items and divide the cost to the total quantity of raw material purchased

2. To set a system for proper valuation of finished goods – in addition to tracing of raw material to finished out put labour and factory overhead costs should be assigned to the out put
- **Direct labours cost-** total consumed labour hours should be controlled and reported by concerned department in order to get the total consumed hour for a given production period. From this can get time consumed for a given or single out put. Once the labour hour per unit of product is setted, The result figure multiplied by the hourly labour cost can give the total direct labour cost. from this can drive the cost of direct labour for a given unit.
  - **Indirect labour cost** – concerned department can segregate direct labours and indirect one because Understanding the cost contributions of direct labor and indirect labor is crucial in setting product standard cost. Indirect labourer are production supports and their costs are not easily associated with specific units. This cost is assigned to a cost pool, from which it is allocated to the units produced during the reporting period. Depending on the level of allocation sophistication, several cost pools may be used, each of which has a separate allocation methodology.
  - **Other factory overhead** - Manufacturing overhead (also known as factory overhead, factory burden, production overhead) involves a company's factory operations. It includes the costs incurred in the factory other than the costs of direct materials and direct labor. This is the reason that manufacturing overhead is often classified as an indirect cost. manufacturing overhead include the depreciation or the rent on the factory building, depreciation on the factory equipment, supervisors in the factory, the factory quality control department, factory maintenance employees, electricity and gas for the factory, indirect factory supplies, etc. manufacturing overhead consists of only indirect costs. Because it is not possible to identify indirect costs with specific products, companies must distribute the indirect costs.

Concerned department needs to estimate manufacturing overhead costs at the beginning of a period, and determine a basis depends on the nature of the overhead and its convenient cost pool on which to allocate those costs as production occurs



It is therefore recommended that management needs to focus on cost management strategies and problems that affect to do the full costing valuation that enables to get accurate product cost information in order to make proper decision and appropriate action .

Based on the findings from this study, the limitations of product costing techniques are mentioned there. the result is the selected biscuits manufacturing companies are not fulfilling or following the proper costing technique which was indicated on the literature review . As my research is an assessment for product costing ; I invite or suggest for other researcher to identify the reason behind the existing costing technique and propose a solution for it.

## REFERENCE

		Duration in Months (M)	
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## APPENDIX A. TIME SCHEDULE

		Oct 2017	Nov 2017	Dec 2017	Dec 2017	Dec 2017	Jan 2018	
1	Proposal Writing	➤						Full month
2	Review of Related Literature		➤					15 days
3	Data Collection		➤	➤				15 days Nov and 5 day Dec
4	Research Report Writing				➤			20 days Dec
5	Submission of Draft Report					➤		5 days Dec
6	Submission of Final Report						➤	

## APPENDIX B - QUESTIONARIE

*St Marry University 2017 Graduate Studies*

## **Questionnaire on Product costing techniques for selected Biscuits Manufacturing in Ethiopia**

Dear respondent,

The aim of this study is for the partial fulfillment of MBA program in Accounting and Finance at St. Mary,s University. The Questionnaire is designed to obtain information on product costing technique of the participant companies engaged in biscuits manufacturing operations in Ethiopia. Your cooperation to respond this questionnaire 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.

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

No need to write your name.

Should you need any further clarification call me at 0928497376

### **General Information**

- Department  Finance cost accounting section  Purchases  Production  Store  Human Resource  Technical  Other Specify: \_\_\_\_\_
- Gender:  Male  Female
- Age:  Below 25  26-30  31-40  40-50  above 50
- Educational Background  10th Grade complete  Certificate  Diploma Holder  BA Degree Holder  Master's Degree Other Specify: \_\_\_\_\_
- Work Experience (in years):  1-5  5-10  10-15  15-20  above 20  Other Specify \_\_\_\_\_

### **I. Question for cost accounting department /section**

1. Does the company have adequate, efficient and qualified ~~in~~ cost accounting staff?  
 Yes  No  I don't know

2. Do you think such employees have sufficient knowledge and skill for their job and their responsibility?  
Yes    No    I don't know
3. Does the company have a structured cost accounting policy / manual?  
Yes    No    I don't know
4. Does the costing department record the inventory movement transaction (incoming and issuing of raw material) immediately when it gets the proper source documents?  
Yes    No    I don't know
5. What are the costs or charges which will included as cost of purchased raw material?  
  - -----
  - -----
  - -----
  - -----
6. What is the company Inventory Record Keeping?  
 Periodic inventory system  perpetual    I don't know
7. Does the company make inventory counting? If yes, Specific the time interval  
daily weekly    Monthly  Yearly     other \_\_\_\_\_
8. What is the company inventory cost flow assumption?  
FIFO LIFO    Weighted average    Moving average     other \_\_\_\_\_
9. Please indicate the extent to which the following cost collection systems  
Job costing Batch costing Contract costing Process costing
10. Does the company have a system of standard costing & variance analysis on periodical basis?  
yes    No    I don't know
11. Does the company necessary departments participate in the standard costing process?  
yes    No    I don't know
12. Could you please list out maximum of 5 products (finished goods of biscuits) of your company?  
  - -----
  - -----

- -----
- -----
- -----

13. Based on the list on No. 12, Proportion of different cost items as a percentage of total costs

Material Direct labor other indirect and FOH

- -----
- -----
- -----
- -----
- -----

14. Is overhead costs are assigned?

yes      No      I don't know

15. Do you think the firm use proper predetermine rate for allocating manufacturing overhead costs?

yes      No      I don't know

16. Please indicate that which of the following costing systems the company used to allocate overhead costs

Conventional Absorption costing    Variable costing    Activity based costing (ABC)

17. Does the firm have a proper time keeping mechanism to identify the labor hour consumption on a certain time interval?

yes      No      I don't know

18. Does the cost allocating department use more than one pool for accumulating indirect or overhead costs?

yes      No      I don't know

19. If yes, for question 11, does it properly allocate all of them to the cost object?

yes      No      I don't know

20. Does the product have scrap or wastage?

yes      No      I don't know

21. If your answer is yes for question 10, do you think this value are treated well through allocating?

yes      No      I don't know

22. If your answer is yes for question 10, do you think that the production cost or cost of good manufactured considers the cost of this scrap or wastage?  
yes      No      I don't know
23. Is the cost/profitability of finished goods products/activities regularly measured and also form part of regular report to the management of the company?  
yes      No      I don't know
24. Does the company encourage employees / workers to come up with cost improvement suggestions?  
yes      No      I don't know
25. Does the cost accounting department prepare interim production reports to management?  
yes      No      I don't know
26. Do you think the company's current costing system is proper according to its setting? yes      No      I don't know
27. Do you think the current costing system enables the department to assign fair production cost to products? yes      No      I don't know
28. Is the current costing system convenient for cost effective production cost assignment? yes      No      I don't know
29. What is your opinion about the effectiveness of the current product costing technique?  
.....  
.....  
.....
30. What is your comment for improving the current system of product cost determination?  
.....  
.....  
.....

**II. Question for Purchasing Department**

1. Does the firm purchase raw materials as inventory stock?  
yes      No      I don't know

2. Does the company have proper purchasing procedures for the purchase of raw material?
  - yes      No      I don't know
3. If your answer is yes for question 2 does it follow the procedure properly?
  - yes      No      I don't know
4. Does the purchasing department submit the proper documents to the cost accounting department for recording of purchased material on time?
  - yes      No      I don't know
5. Does the company purchase raw material from local market or import from abroad?
  - Local      Import      Mix
6. Do you think the company current purchasing procedure affect the cost of purchased inventory?
  - yes      No      I don't know
7. If your answer is yes for the above question,what is your comment for improving the current system of production cost determination?
  - .....
  - .....
  - .....
  - .....

**III. Question for Production Department**

1. Does the production department use material requisition form to request raw materials issuance from the store?



yes      No      I don't know

2. Does the production department use goods return voucher when they return back raw material to store with copy of voucher to the costing department when it has excess raw materials in the production floor?

yes      No      I don't know

3. Does the firm have product quality inspection?

yes      No      I don't know

4. Does the production department issue production consumption report to cost accounting department? If yes, Specific the time interval

yes      No      I don't know  
daily weekly      Monthly       other \_\_\_\_\_

5. Does the production department report work in progress to cost accounting department? If yes, Specific the time interval

6. yes      No      I don't know  
daily weekly      Monthly       other \_\_\_\_\_

7. Do you think the company current production system or technique affect the cost of produced finished goods inventory?

yes      No      I don't know

8. If your answer is yes, what is your comment for improving the current system of production cost determination?

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.....  
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**IV. Question for Store Department**

1. Does the company have store department or section who are controlling the movement of inventory which is raw material or finished goods?

yes      No      I don't know

2. Is there a segregation between raw material store and finished goods store for inventory movement control of for raw material and finished goods?

yes      No      I don't know

3. If the answer for question 2 is yes Does the store keeper send a copy the store movement vouchers (which is Goods receiving note, Goods issue voucher and Goods return voucher, Produced finished goods transfer voucheretc) to the costing department on time?

yes      No      I don't know

4. Does the company raw material store and production department reconcile with certain time interval for total raw material issuance and return?

yes      No      I don't know

5. Do you think the company current store transaction system or technique affect the cost of produced finished goods inventory?

yes      No      I don't know

6. If your answer is yes for the above question what is your comment for improving the current system of production cost determination??

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.....  
.....  
.....

**V. Question for Human Resource Department**

1. Does the company have separate human resource department or section who are controlling operational and nonoperational or administrative staff?

yes      No      I don't know

2. Does the Human Resource department issue time report for operational staff who are direct relation with production and others to cost accounting department?

yes      No      I don't know

3. Do you think the company current time keeping system or technique affect the cost of produced finished goods inventory?

yes      No      I don't know

4. If your answer is yesfor the above question,what is your comment for improving the current system of production cost determination?

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.....  
.....

**VI. Question for Machinery Technical Department**

1. Does the company have separate technique department or section who are controlling the operation of each and every production machine?  
yes      No      I don't know
2. Does the technique department issue time report for operational machineries which is working during a specified time interval during operation to cost accounting department?  
yes      No      I don't know
3. Do you think the company current machinery working time follow up sheet system or technique affect the cost of produced finished goods inventory?  
yes      No      I don't know
4. If your answer is yes for the above question, what is your comment for improving the current system of production cost determination?

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.....  
.....  
.....