

# ASSESSMENT OF COST ALLOCATION PRACTICES IN CASE OF BGI BREWERY MANUFACTURING COMPANIES

# SCHOOL OF GRADUATE STUDIES

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**ADDIS ABEBA** 

# ST.MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES

# Assessment of Cost Allocation Practices: In St. George Brewery Share Companies

A Thesis Submitted to the School of Graduate Studies of

St. Mary's University in Partial Fulfillment of the Requirements for the Degree MBA in Accounting and Finance

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# ENDORSMENT

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

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St. Mary's University School of Graduate, Addis Ababa May, 2019

# ST.MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES FACULTY OF BUSINESS

# ASSESSMENT OF OVERHEAD COST ALLOCATION PRACTIES IN CASE OF BGI BREWERY MANUFACTURING COMPANIES

By: Abel Haile

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# **Declaration**

I declare that this project work is my original work. It has not been submitted for any awarded in any University. I have undertaken it independently with the advice and suggestions of my advisor for the thesis, Asmamaw Getie (Assistant Professor). In carrying out of the project work I have different sources and materials, which have been appropriately acknowledged.

Abel Haile

Signature\_\_\_\_\_

#### Abstract

The purpose of this thesis is to understand how factory allocate overhead cost for each product they produced. This research assesses overhead cost allocation practices in case of St. George brewery factors. It also determines currently used allocation practices, to determine factors of overhead cost allocation system in company and lastly examine allocation system on profitability. The research was conducted with 19 employee's individuals working in St. George brewery factory in finance, cost and production using administered questionnaire for department 17 workers and interviews with selected two individuals. The researcher conducted descriptive case study for this research and also the results show that the firm overhead allocation system has obtain results indicate that company overhead cost allocation system use traditional allocation system, there are factor that affect allocation system and profitability. The research result shows that the firm employees have no get training in cost allocationmechanism. andcompany cannot identify overhead production cost for each production types, employee have no satisfied by firm it also affect employees performance it also affect companies profitability.

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# ACRONYMS

- **ABC-** Activity Base Costing Systems
- BGI- Brewery of St. Georges Industry
- JIT- Just- in- time
- LCC- Life Cycle Costing

# **CHAPTER ONE**

# **1 INTRODUCTION**

# **1.1 BACKGRAOUND OF THE STUDY**

As many researchers argued that manufacturing overhead costs includes items such as indirect, material, indirect labor, maintenances and repairs on production equipment; heat and light, property taxes, depreciation and also insurance on manufacturing facilities (Garrison, Noreen and Brewer, 2010). The Major objective of overhead cost is to obtain accurate unit cost of production found in the company. When a company has more than two production type and consumed different material to obtain one output, then the cost allocation will be complicated and need concentration because of this cost management is one of the most important issues to control company's performance and company financial management and also the issue of the costing systems, methods and techniques is one of the important features of cost management and management accounting (Peter and Boris, 2014).

Based on above issues the importance of cost allocation system in manufacturing company is more important than ever, the reasons for this are (a) local and global competition between the companies is more complicated and tight, therefore organization take a care for cost allocation to control production cot for each production, (b) Globalization also has its own deriving force on company's cost allocation mechanism so to compete internationally company better to use modern cost allocation mechanism, (c) When we use ratio (Traditional) cost allocation mechanism we can't evaluate the efficiency of the employee, that work in cost department, (d) we can't easily identify unit cost for each product if we produce more than two or more types of items and we cannot get rational unit cost for each product that produced and also limitation of resource has its own effect therefore our cost will be exaggerate and we can't compete with competitors globally. The purpose of this research formulating is to assess cost allocation practice in BGI's company by using purposive sampling method to distribute questioner that helps to collect information.

Before that we try to show one of modern allocation mechanisms. ABC is a modern cost allocation method that is able to allocate costs of products, service and provides focus for process

improvement starting from the purchase of raw material up to the moment when the result reaches to client (Baxendale, 2001). ABC is a reliable, cost analysis, which is a highly effective tool for strategic decision making (Shannon, 1999).Modern cost allocation is affected by technology, scarcity of raw materials, organizational behavior, skilled, unskilled man power, size of firm & also contextual of organization (Safaa, Repiah, and Jamal, 2017). Therefore, cost allocation & capacity determination are economically very important tasks that managers should deal with (Guruswamy, 2011).

In 1922 Addis Ababa was just beginning to see the first triggers of technology when St. George, the nation's first brewery was founded. The brewery was set up with modest premises to produce the country's first bottled beer. When the brewery began operation, the machineries were manually operated and not more than 200 bottles were produced daily. The factory is now owned by BGI, an internationally acclaimed Brewing Company that operates in many countries. It has an excellent reputation in producing quality beer and brought St. George to the same standard. Today, St. George is the oldest beer in Ethiopia and is certainly also the youngest with fresh dynamism (Belay, Kassahun and Mekonnen, 2014).

#### **1.2 Statement of Problems**

Currently there has high competition in the global market so as to win this competition and to survive; integrated, flexible and highly automated mechanisms are required. When we use these mechanisms the overhead cost will be very large and hard to allocate by the traditional method as per (Aleem, and Hamad, 2016). According to Peter & Boris (2014) also say that overhead cost allocation method needs more concentration to get high profitability of the manufacturing organization because the overhead cost was increased from 25% to 60% off the total cost between 1950's because of the higher marketing, distribution and communication costs and also incurred new costs such as researching, training and use of information technologies occurred. And also management needs more information related to cost in order to make strategic and operational decision that use to compete with competitor (Hailu, 2013) this also one input for improvisation of organizational performance. Traditional cost allocation method as per theory above was not accurately provided information about organization unit production cost when company produced different output and consumed different material, this also has impact on measurement of company's performance. Joseph (2012) say that some firm in the developing

economies are still using traditional method of overhead cost allocation, particularly in the practical capacity method.

Therefore now a day BGI company produced St. George beer, Castel beer, Castel wine, panache beer, Zebidar beer and also Raya beer because of this company's manufacturing overhead cost is becoming very large and hard to allocate for each produced items and also hard to measure profitability(performance) of the company. When we came to our country practices cannot get paper that written on cost allocation practices based on researcher's observation but can get paper that toke only about in general cost management. Therefore those are reason behind that researcher motivated to asses BGI'S overhead cost allocation practices in our country and also to motivate others researchers to prepared there theses on area of cost allocation practices in Ethiopian context to fill gap found in this theses.

### **1.3 Research Questions**

Managers are constantly challenged with the need to understand and control costs and overhead cost, to make important decisions, coordinate resources, guide and motivate employees (Hailu, 2013). Based on the above theoretical information researcher raised the following basic question to be addressed.

- 1, How does BGI Company allocate manufacturing overhead cost?
- 2, How does Staff quality and technological advancement effect on overhead cost allocation system?
- 3, How does the cost allocation system affect profitability?

#### **1.4 General Objectives**

The general objective of this study is to assess cost allocation practices in manufacturing company found in Ethiopian, Addis Ababa particularly in BGI brewery share companies.

### **1.4.1 Specific Objectives**

From this research expect to evaluate BGI's overhead cost allocation practices to analysis with international company allocation methods of raising those listed under question.

1, To assess company manufacturing cost allocation system.

- To assess the existence of qualified staff and technological advancement to applied allocation Mechanism.
- 3, To assess the existence of overhead allocation affect company's profitability (performance).

# **1.5 Scope/Delimitation of study**

The finding of the research would be better if it was covered all Brewery factory found in the country. However, the researcher was focused only on the BGI Brewery manufacturing company and manufacturing overhead cost allocation systems because this research has used case study so that focused only one company or one case but stud conduct intensively (John Gerring, 2007). So researcher wants to get data related to documents that show information how they prorate overhead cost of production intensively.

# **1.6 Limitation of study**

The researcher wants to get written document (policy) that show how they are prorate overhead cost allocation practice, but company's management cannot be willing to give this document because all manufacturing company's overhead cost was contained very high percent and it also so secrete issue therefore they are not willing to give this document and other limitations are:-

This study was focus on the assessment of overhead cost allocation practices in a single firm so participants of the study were found in finance and some production department only this also limits the number of participants. The analysis of the data absorbs from interviews and questionnaires also limit the types of tools that were used. Therefore, the study is limited to assessing on the overhead cost allocation method for making better decision and recommendation.

# 1.7 Significance of the Study

This study has useful implications for theory and practice. Regarding the potential implications for theory, the study will expand the existing overhead cost allocation literature in two main ways. First, the study will provide new empirical evidence on the overhead allocation practices. Second, the study will contribute an additional study in the new context of Ethiopian manufacturing firms regarding what contingent factors has effect on overhead cost allocation practices.

Finally, the research will test for a relationship between the use of overhead cost allocation practices and profitability of a company in the context of the Ethiopian manufacturing firm. The focus of research in Ethiopian is especially important because research on overhead cost allocation practices is very limited in this country and developing countries as per (Joseph, 2012). Benefits for practices will include the following:

The creation of an awareness among managers of the importance of cost allocation practices as a means of increasing profits and minimizing of wastage to make better strategic decision. Currently in our country have immerged large manufacturing companies therefore to compete and control there cost this paper provided suggestion by analyzing there merit and performance try to use modern cost allocation mechanism.

The provision of results that may assist managers, such as the level of use of cost allocation practices in firm and factors that affect the cost allocation practices. And also use to motivate other researcher to conduct their studies in this tittle.

### **1.8 Organizational of the paper**

This research report contains five chapters those are listed below:-

The first chapter contained the introduction, Background of the study, statement of problems, research questions, Research objectives, general and specific, Scope, limitation and the significance of the study. The Second chapter presents a discussion of the literature that written by another authors in both empirical and historical studies. The historical development of the cost, cost types, definition, element of cost, and means of overhead cost allocation, impact of overhead cost in effectiveness and efficiency of the company, profitability and measure the company performance under international competition. The third chapter present discussion on the introduction, methodology, design of the study, population, sample and sampling technique, sources of gathering data, analysis of data therefore this chapter contained over all the role map to this paper. The fourth chapter contains an analysis of data that collected and present it and finally fifth chapter present collected finding conclusion and provided recommendation.

# **CHAPTER TWO**

# LITERATURE REVIEWS

#### **2.1 Introduction**

The researcher tries to discuss the historical development of overhead cost, types of overhead cost, definition of overhead cost; factors affect overhead cost allocation system, modern overhead cost allocation practice. Also the researcher tries to review the disadvantage that face when we use inefficient overhead cost allocation practices exist on the globe on litterateur and after it try to discuss the modern cost allocation techniques (ABC) and its effect.

Know a day cost accounting are most important part of the manufacturing company and need more concentrated in this area because of managers use cost accounting information to make decisions related to strategy formulation, research and development, budgeting, production, planning, and pricing, among others (Tabitha and Oluyinka, 2016). There for management of the company is focused to control costs of the company, specifically the overhead cost found in the company because to increase profitability of the company if control it (Guruswamy, 2011).

When we observe first half of the 20<sup>th</sup> century portion of the indirect overhead costs rarely exceed, then 20% of total company costs. Summarize the major reasons of the changes in the structure of the manufacturing industries in 2<sup>nd</sup> half of the 20<sup>th</sup> century (Glad and Becker, 1996). Because of some reason Prototyping technologies, increased mechanization and automation: increased use of information technologies (Peter & Boris, 2014).

Above mentioned reasons lead in the situation, when in 1990's portion of the direct costs of manufacturing concern consume only approximately 40% of the total company costs. This study is also supported by other authors. The main reason is that change overhead cost increase from 20% to 60% portion because of technology, equipment, automation and computers are briefly considered as the main reason of change in the cost structure (Peter & Boris, 2014). Therefore in large manufacturing company will be focuses on the controlling of manufacturing overhead costs because if this BGI brewery manufacturing company can control the cost then the profit will be increased from 20% - 60% based on the literate mention above then if the company management

can plan to achieve the organization's profit to be increased this also helps that to compete with competitors organization locally as well as internationally.

# 2.2 Historical development of cost Accounting

Cost accounting was one of the oldest managerial tools used to determine the amount of taxes that were levied by kings or used to control the prices of product that trading people of ancient times were selling. The trading people of ancient times such as the Chinese, Egyptians & Arabs had accountants in the service of the royal courts (Perren, 1944).

Therefore, in Egypt, 3000 years before Christ, accountants had to present to the kings each year a detailed report on the net cost of harvest so that just taxes on wheat could be levied. At about 1100 BC in ancient China, there existed some form of government auditing, budgetary accounts, expenditure control, and periodic reporting. These were some of the costing techniques used by governments in ancient civilizations (Ovunda, 2015).

The nineteenth century sows the emergence of large business enterprises like the textile mills, iron & still works, which made extensive use of machinery in industrial production, hence the general belief that cost accounting is a product of the nineteenth century (Hailu, 2013).

Therefore, cost accounting is defined as the equivalent of 'direct costing' designed to provide financial information for management decision making and control (Johnson, 1981). So the literature shows that most cost accounting techniques that are currently in use were developed in the 19 century; by 1925 most of the techniques have been developed and the subsequent years' experience dearth of innovation in the field. These techniques that were developed in the industrial era, which are now regarded as traditional techniques include standard costing, Variance Analysis, and Absorption Costing among others (Tabitha and Oluyinka, 2016).

# 2.3 Cost behavior

There are different costs; classifications based on the behavior of cost that have researcher try to show them below: - Legesse, Desta and Tekie (2012) say that the costs can be controllable and uncontrollable. The success of responsibility accounting system depends on the ability of the company to identify correctly, which costs each level of management can control. Not all controllable costs are variable. Some fixed costs such as the cost of lighting during a production

shift are also controllable (Peter & Boris, 2014). With another way can be grouped in two according to economics, in the short run, some costs may be fixed, but in the long run all cost is variable (Hansen, Mowen and Guna, 2009).

### 2.4 Costing Systems and costing methods

Various types of the product costing systems and methods are defined by the academics and practitioners. According to traditional management accounting (Shim and Siegel, 2009; Garrison et al, 2010; Weygandt et al. 2010, Van Derbeck, 2013 etc.) to provide management with the data needed for effective cost control, two basic types of cost accounting systems have been developed: the process cost system and the job order cost system. Both systems are used to gather cost data and to allocate costs of goods manufactured (Peter & Boris, 2014). Cost can be categorized into two parts based on the cost assignment those are Job order cost system; the company assigns costs to each job or to batch of goods and Process cost system companies apply costs to similar products that are mass-produced in similar fashion (Peter & Boris, 2014).

Therefore, those costing methods are used to allocate cost for by job order or by batch of goods produced but can't to allocate for each production that produced because of this those mechanism assigns cost without detailed consumption of overhead cost.

# 2.5 Overhead cost

The term overhead has a wider meaning than the term indirect expenses. Overheads include the cost of indirect, material, indirect labor and indirect expense. There are costs that are associated with or caused by two or more operating activities "jointly" but are not traceable to each of them individually. The nature of an indirect cost is such that it is not possible (practically) to measure directly how much of the cost is attributable to a single operating activity (Kidist Belay, Haymanot Kassahun and Tamir Mekonnen, 2014).

Overheads are classified into following three categories. Factory/ Works overheads included all indirect costs incurred in the factory for production of goods is termed as factory/works overheads. Such costs are concerned with the running of the factory or plant. Those factory overhead costs are costs that used for support for production of items behind the observation (direct outlying).

Office and administrative overheads these expenses are related to the management and administration of the business. They are incurred for the direction & control of an undertaking. Like indirect labor, and indirect expenses incurred by office & administration department.

Selling and distribution overheads incurred in the marketing of a commodity. These expenses represent the aggregate of indirect, material, indirect labor, and indirect expenses incurred by the selling and distribution department of the firm (Elementary Cost Accounting Module-6B). When we came to this paper researcher try to focus on the Factory/ production manufacturing overhead costs.

Manufacturing Over Head: includes all manufacturing costs except direct materials and direct labor. Manufacturing overhead includes items such as indirect materials; indirect labor; maintenance and repairs on production equipment; and heat and light, property taxes, depreciation, and insurance on manufacturing facilities. Only those costs associated with operating the factory are included in manufacturing overhead cost (Garrison et al, 2010).

A costing system typically accounts for costs in two basic stages accumulation followed by assignments. Cost accumulation is the collection of cost data in the same organized way by means of an accounting system, (Belay et al, 2014). Cost assignment is a general term that encompasses both (1) tracing accumulated cost that have a direct relationship to a cost object and (2) allocating accumulated costs that have an indirect relationship to cost object (Belay et al, 2014).

#### **2.6 Function and Objectives of Overhead Costs**

The main function and objectives of overhead cost allocation method was listed below those are:

To provide Accurate cost: by allocating costs to the respective departments that used a particular resource you're able to show that the item associated with the cost had an input in the cost generation. Specifically, you can easily identify the amount spent on specific areas of the company. Accurate product cost information also enhances the quality of financial reporting and improves decision making within the company (Ferguson, 2009).

Considerations: One of the best ways to understand cost allocation is to view it as a process that requires you to identify, aggregate and assign costs to cost objects. A cost object is an item or

activity such as a department or product, that require you to separately weight costs. The direct method is the most widely used alternatives for allocating of cost (Joseph, 2012).

#### 2.7 Advantage of Overhead Cost Allocation

Indirect costs of particular cost object are costs that are related to that cost object, but cannot be traced to it in an economically feasible (cost effective) way. This cost often comprises a large percentage of the overall costs assigned to such cost objects as products, customer and distribution channels. The allocation of a particular cost need not simultaneously satisfy all for purposes (Belay et al 2014). To control the cost that incurred for each production department as well as unit produced, because as the litterateur show 40% to 60% off organization cost is related with overhead cost therefore, Proper overhead cost allocation is one of the important input that helps to decide unit selling price of items produced and to produce accurate internal report for management those also have its own effect on profitability of organization and also create capacity to exist in computation (Peter & Boris, 2014).

#### 2.8 Factors of overhead cost allocation

Contingency theory declares that the design and application of control systems are contingent on the environment of the organizational setting in which these controls operate and function. It is widely used to explain the characteristics of management accounting system.

Therefore, factors that will be needed for controlling overhead cost allocation in modern cost allocation model contain those Factors. If the firm can implement a modern caste system those variables must fulfill effectively (Akinyomi Oladele, 2014).

# 2.8.1 Capacity of Organization

Capacity of Organization means the potential of the organization that have, like capacity to contain inventory, capacity of installation of machinery for production etc.

Capacity of Organization has its own effect on the implementation of modern manufacturing overhead cost allocation system like ABC. To support this idea sum researcher say on this issue like this. The high tech needs more intensive investments and as a consequence, the proportion of overhead costs increases in the total cost structure. Such increase greatly threatens the validity of the traditional labor-based overhead allocation method. The relatively small portion of labor

cost can no anger be used to allocate the large portion of overhead costs (Chris Lefebvre and Liangqi Lin, 1992).

#### 2.8.2 The relationship between Capacity Utilization & Costs

The growth of overhead costs is largely due to the expansion of capacity costs. That is, a high tech investment increases the depreciation costs of such investments. The appropriate depreciation method can determine a great deal of overhead costs. If the depreciation cost is related to the production volume, or capacity utilization the changes in capacity utilization can certainly affect the total overhead costs & the unit product cost if the full costing method is adopted (Chris et al, 1992).

#### 2.8.3 Size of Company

Most researchers prepared research in the globe that show the size of the company will have a positive relationship and its affect the overhead cost allocation system because the large size of the company used more complex and large overhead cost so they should use modern cost allocation technique like ABC system. In most countries show the size of the firm usually measured in terms of number of employees, skilled employee more professional, skilled workers that facilitate the implementation of innovations and have greater resources available (Akinyomi Oladele, 2014).

And also the Size of company can be described as the relation between input and output volumes if companies have a high amount of input on types of row material, other material and have high volumes of output for the mark can we say this company have large size as per (Fariborz Damanpour, 2012). And also the size of the company as a factor can be measured in terms of no of employee, measured by the size of the company in terms of the market, community, clients they have (Baldridge and A Burnham, 1975).

# 2.9.4 Behavioral & Organizational Variables

Behavioral & Organizational Variables affecting the success of the ABC cost allocation system so ABC is the modern cost allocation system, then organization behavior will not be efficient it affects ABC allocation system so that managers try to give more concentration to the behavior of organization because it affect the modern cost allocation system. Some articles show the relation below behavioral and organizational variables of modern cost allocation system. Prior research findings indicated that in western countries, the main factors influencing the success of ABC were organizational factors, such as top management support, adequate resources, training and so on. The benefits of ABC have motivated numerous studies, such as Innes and Mitchell (1995, 2000), kahild (2005) & Yanren, et al (2008) researched on factors affecting ABC adoption; shields (1995), shields and McGowan (1996), Baird et al. (2004) & (2007) conducted research on factors influencing ABC success, especially at implementation stage. ABC success is determined by behavioral & organizational factors in western countries (Che Ruhana Isa, 2010) (Shield, 1995).

Using a sample of manufacturing firms in China, this study aimed to provide further insights to effect of behavioral and organizational variable, namely top management support, resources, non-accounting ownership, training, link ABC to performance measurement and evaluation, link ABC to competitive strategies, as well as clarity of ABC objectives on ABC success.

#### 2.9.4.1 Top Management Support

The literature shows that top management has critical factors for success of ABC cost allocation systems so when the researcher select ABC costing system because this system is efficient, modern and acceptable in this time.

So ABC is considered as an administrative innovation, top management support or leadership is expected to be a critical factor for its success. Provide training for employees at the adoption and implementation stage of ABC, as well as in the collection of detailed data (Gunasekaran, 1999). Top management support could eventually eliminate the employees' resistance towards the implementation of ABC (Che Ruhana Isa and Zhang Yi Fei, 2010). They found that in most of these firms, only the accounting staffs retain the ABC ownership. They suggested that if non accounting employees could take part in the early stage of ABC implementation more effectively (Che Ruhana Isa and Zhang Yi Fei, 2010).

#### 2.9.5 Contextual

Contextual variable means factors that affect overhead cost allocation methods and contained two elements these are described below:

The individual believes in overhead cost allocation system and individual commitment. So if the individual believes easiest in the firm to control overhead cost can control it and also if the firm have an individual commitment to implement modern overhead cost allocation method can control it as a firm. Therefor contextual factors have positive relationships with overhead cost allocation systems of a company (Shannon, an Anderson & Young, 1999).

The context is one factor such as the usefulness of cost information, less task uncertainty and large organizations were related to ABC adoption. Moreover, organizational factors, such as top management support, and implementation training affect ABC success implementation. Variables such as technological advancement and other relevance to support manager's decisions and compatibility with existing systems to produce different degrees of impact on different stage of the ABC as per (Che and Zhang, 2010).

Based on the literature above, the researcher believed that to implement appropriate overhead cost allocation system firms, employee should have committed, top management support to properly implement modern cost allocation systems and should need individual believe for degree of importance of the new system.

#### 2.9.6 Technological advancement

Shields, (1995) say that conducted research finding says that a significant cause for unsuccessful implementations of ABC of several companies could be due to the emphasis of architectural and software design of the ABC system. Therefore, technological advancement has its own effect on the implementation of the ABC system (Che and Zhang, 2010). When new software was published Company tendency to use this software for facilitating the allocation of cost and motivate staff for more work there for this used by advanced technological software support activity to perform in the organization and this implies that we can measure the efficiency and effectiveness of employee. Some of the most ordinary accounting processes which have been influenced by the application of IT include: General ledger, accounts receivable, accounts payable, financial control, asset management, funds flow, cost centers, profit center, profitability analysis, order & project accounting, product cost accounting and performance analysis (Sadagopan, 2003).

So that there has been a level of agreement between past, researchers with regard to the importance of investing heavily on the application of different information technologies at different level organizational operations. Past studies have observed that, there is a positive impact on Technological investment in organizational performance. There is a positive effect of IT capital & labor on organizational performance (Safaa Ibrahim Ali-Nuaimi, Rupiah Mohamed and et al, 2017).

# 2.9.7 Understanding of Staff

Understanding of staff & employee satisfaction levels are associated with ABC implementation by they also measured their perceptions of the factors associated with the degree of satisfaction, such as top management support; the degree of the involvement in the implementation process; objectives clearly stated; objectives shared; training; linked to the performance evaluation system; adequate resources; information quality and prepare over user. Their results indicated that employee satisfaction with most popular overhead allocation system like ABC implementation was positively related with clarity of objectives and quality of ABC information (Zhang, 2010).

# 2.9.7.1 Training

According to Ruhanita and Daing (2006), the accessibility of well-trained manpower could influence the success of any projects.

Therefore, employee can improved the understanding of the employee that worked in that company by give continues training about cost allocation, give training that employee be compacted with new soft war to work in that instrument & they suggested that to prevent their employees from feeling stresses during the process of change, an organization should provide adequate training resources.

Training refers to the level of training put into the design, implementation, and the application of ABC. Krumweide (1998a) found out that a high association exists between ABC success implementation and training program stressed that the training could make ABC implementation to reach the highest level of success (Che Ruhana Isa, 2010). Therefor the researcher agrees that by fulfilling those factors firms can improved overhead cost allocation mechanisms if firms implemented properly.

#### 2.10 Modern Cost Allocation Techniques

Traditional cost accounting techniques include standard costing, process cost, job order cost and other cost technique were listed above, but in this subtitle the researcher tries to describe newer techniques suggested by various advocates of the modern techniques include; Activity Based costing (ABC), Target Costing, Life cycle costing (LCC), Just in time System, throughput accounting/Costing, Back flash costing and Kaizen costing among others (Nasieku and Oluyinka, 2016).

#### 2.11.1 Activity Based Costing

Activity-based costing the term was first used by John Deere Kaplan (1989) is a recent development in management cost accounting. It represents a "middle way" between the small numbers of cost pools characteristic of traditional labor- based or machine-hour allocation systems, and the overwhelming number of measurements and individual cost pools needed to calculate and charge truly accurate costs to each product.

As per Nasieku and Oluyinka (2016), say that ABC method was conceived in the mid- 80 by Robin Cooper a professor of Management in the area of designing & practicing of costing systems & Robert Kaplan a professor of management Accounting at Harvard University. It was developed mainly to correct misleading overhead allocations. The ABC method was designed in the united-states during the 80's. It is a refined costly system which enables classifying more costs as direct, to expend the number of indirect- cost pools & to identify cost drivers, to expend the number of indirect cost pools & to identify cost drivers.

So it is a refined costly system which enables classifying more costs as direct to expend the number of indirect cost pools and to identify cost drivers. ABC favors better cost allocation using smaller cost pools called activities. Using cost drivers, the costs of these activities are the basis for assigning costs to other cost objects such as products or service (Zhang and Che, 2010).

#### 2.11.1.1 Advantage of ABC costing system

A product is only charged with the cost of capacity utilized idle capacity is isolated and not charged for a product or service. Under traditional approaches, some idle capacity may be incorporated into the overhead allocation rates, thereby potentially distorting the cost of specific output (M. Walther, 2009).

Because of this number of previous researchers reported the benefits of ABC. For example, ABC is significantly associated with higher product quality, decrease in cycle time, and noticeable increase in the first pass quality (Ittner, Lanen and Larcker, 2002). If to achieve those benefits the above factors will be fulfill, otherwise the system was not being functional (Anna, 2012).

#### 2.11.1.2 Disadvantage of ABC costing System:

ABC may produce results that differ from those required under generally accepted accounting principles (GAAP). Therefore, ABC is usually viewed as supplemental in nature. It is used for internal management decision making, but it may not be suitable for public reporting because a company that wishes to benefit from ABC must develop two costing systems, one for external and other for internal management report.

Even these ABC is that it is usually more involved than other approaches rather than applying all factories overhead on some simple basis, such as labor hours, it requires the development of numerous cost pools that must be individually allocated. In other words ABC is a more intensive technique, & the costs to implement it may not be worth the trouble (M. Walther, 2009).

### 2.12 Gap Analysis

The main gap that the researcher inspires to do theses in this title because of there was no sufficient paper prepared publicly available in Ethiopia. But when we look Sum articles talk about the cost in general and try to focus on the impact of cost control in profitability of the organization and unit pries setting as per (Legesse et al, 2012). Another writer tries to focused overhead cost (indirect labor) cost relationship with cost drivers (direct labor hours) under different conditions as per (Chiang, 2013).

While the other article says that if there is no proper overhead cost allocation is present in manufacturing company the company cost may be misled for diction maker because the overhead cost contain 40 to 60% of all cost (Peter & Boris, 2014). Therefore, this paper also motivates the researcher to assess their country Experian. Therefore researcher prepares this paper to fulfill those gaps mentions above.

# CHAPTER THREE RESEARCH DESIGN AND METHODOLOGY

#### **3.1 Introduction**

In this section researcher try to present the methodology of research used in this study, Design of study that researcher planned to get direction to address the problems that stat in problem of statement, population & selected technique, source & way of gathering data and also data analysis found in this chapter.

#### **3.2 Research Design**

A research design is not just a work plan. A work plan details what has to be done to complete the project, but the work plan flows from the project's research design therefore design is a structure that before data collection or analysis can commence (Creswell, 2003).

Therefore, most of the time well known way of research methodology includes qualitative (descriptive) research methodology, quantitative research methodology & mixed research methodology (Hailu, 2013).

Qualitative (descriptive) research, on the other hand is concerned with quantitative phenomenon, Phenomena relating to or involving quality or kind & also descriptive research is used to obtain information concerning the current status of the phenomena to describe "What exists" with respect to variables or conditions in a situation, this type of research aims is to discovering the underlying motives & desires, using in depth interviews for the purpose (Kothari, 2004).

The Mixed method research approach is used when researcher combine elements of both qualitative and quantitative approaches. Qualitative and quantitative research design (mixed) is appropriate for answering different kinds of questions. When we use a mixed approach we learn more about the research question problem. During mixed research approach both quantitative and Qualitative data are collected to answer a single research question. Historical research strategy is largely qualitative endeavor, although historical researchers often make use of quantitative data as well (Leedy and Ormorod, 2005).

Therefor when we came to the purpose of this study is to assess overhead cost allocation practices, so as we observed from research problem, it is more descriptive cased study types

because this type of research is involved in gathering data that describe events and then organize, represents then present collected data (Chinniah, 2013). Therefore, based on the nature and type of data collected to address the topic, the researcher used both qualitative and quantitative research approaches where data were collected through questionnaires and interview that help to provide conclusions.

# 3.3 Population and Selecting Technique

The target population has been conducted under the oldest Ethiopian brewery company (BGI),

Usually when we conducted case study and anyone uses the term "sampling technique" is implying that the number of cases is large. Thus "sample-based work" is to be understood as referring to large N cross-case methods-the opposite of case study work (John, 2007). Therefore the researcher uses selecting technique instead of sampling technique.

The target population was selected from employees that work in the accounting department, cost department and also the production department of the company. Therefore researcher had been taken all targeted employees found in this area. For this study the most appropriate types of sampling design were a purposive sampling technique because researchers used case study so try to get deep information researcher select purposely those employee. As per Diamantopoulost & Schlegelmilch (2000), purposive sampling is used when sample members are chosen with a specific purpose or objective in mind.

The sample selection has been based on the following process among all target employee first employees of chief of finance in BGI Company. Second people who work in the above company and involve in position of cost accounting department head, general accounting head, senior accountant clerk and production manager has been involved.

# **3.4 Sources of Gathering Data**

This researcher collected data using both primary and secondary data for triangulating of collecting data. Primary data, such as questionnaire method and conducted an interview to collect some relevant data which help to elaborate questions arise on the questionnaire. The secondary data also indicate such as literature prepared by this company, manuals and also a magazine that show the historical development of BGI.

# 3.5.1 Questionnaire

As per Ryde (2009) say questionnaire is a well-established tool within social research for acquiring information on participant social characteristics, present and past behavior, standards of behavior or attitude and their beliefs and reasons formation with respect to the topic under investigation.

Researcher prepared 17 questionnaires for those employees found in the company, including those interviewed employees.

Questions present in the form of affirmative statements, relating to the concepts on cost allocation practices and its factors in BGI, in such a way as to enable measurement of the respondent's opinions so questioners have two parts, first parts show general information about employee & second parts of questionnaires also have six min elements and try to address those three main elements raised in research question of this research (A) ask about firm overhead cost allocation mechanism, (B) qualified staff and technological advancement on allocation system (C) overhead cost allocation and profitability.

The respondents were asked to indicate their level of agreement on five points of Likert scale, As per Cooper & Schindler (2003) say that Likert scale is a variation of the summated rating scale which consists of statements that express either a favorable or unfavorable attitude toward the object of interest. Each response is given a numerical score to reflect its degree of favorableness Strongly disagree (1), Disagree (2), Undecided (3), Agree (4), and strongly agree (5). The numbers were indicated in the questionnaires to provide a feel of ordinal scale measurement and to generate data suitable for quantitative analysis.

### **3.5.2 Interview**

As per Kvale (2003) the qualitative data are most often collected by researchers through interviews and also As per Alshenqeeti (2014) say that interview compare to questionnaires are more powerful in eliciting narrative data allows researchers to investigate people's views in greater depth. So when researcher uses those methods can collect more appropriate data use for providing good conclusion. The researcher uses as one-to-one interviews. Those interviews were designed to focus on the various aspects of overhead cost allocation practices for all types of production in the company.

Therefore for this research the researcher tries to interview in face to face for 2 employees that have positions in the organizations specifically in cost department and production department.

#### 3.6 Analysis of Data

The data collected were analyzed, interpreted, and discussed by using quantitative and qualitative method of analyses concerning assessment of overhead cost allocation mechanisms & the data were analyzed by using statistical tools (SPSS). The first analysis done is to determine the profile of the respondents according to working position, the amount of experience the respondent has and the company they are currently working on. Next questions were collated and grouped under headings to ease analysis, this included the questions to employee attitude, understanding and factors of on the assessment of overhead cost allocation practices in the company. The primary and secondary source had been interpreting data within the frequency, min & the standard deviation of SPSS output.

# CHAPTER FOUR RESULTS AND DISCUSSION

# **4.1 Introduction**

As indicated in the preceding chapters, this research study tried to examine the assessment of overhead cost allocation practices in BGI. In this section the results of the study are discussed by analyzing different types of sources results, like questionnaire results, interviewed results and other source like document reviewed.

A total of 17 questionnaires were distributed into the BGI brewery company for all finance and production manager staff and all questionnaire researchers obtain (100%). In addition to questionnaire researcher try to conduct interviews for 2 employees researcher can conduct only two employees those are cost manager and production manager it was obtained.

In this chapter researcher try to prepared analyzing of data based on the frequency of respondents, descriptive of respondents based on a sequence of questionnaires, mean mode and standard deviation of respondents and conduct interpretation on it. For interpretation of the output data researcher used as a benchmark to mean. If when mean of output result will be greater than (4) health, then (3.5 - 4) good, (2.5 - 3) neutral and below (2.5) poor.

# **4.1.1 Background information of respondents**

To do this research a total of 17 questionnaires were distributed physically to the targeted group of employees. These questionnaires were distributed to employees of BGI. Out of total 17 questionnaires all of them fully responded and returned so achieving 100% response rate.

# 4.1.1.1 General information

With respect to gender 29.4 percent of respondents are female and remaining 70.6 percent of respondents are male from this researcher understand that the female contribution on it was not good enough in the company so based on output result researcher can conclude that better to upgrade female involvement to bovid gender discrimination show below the table.

#### Table 1.1 Gender of respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
	Female	5	29.4	29.4	29.4
Valid	Male	12	70.6	70.6	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results

With respect to age of respondent 47.1 percent of employees found between 34-39 years, 41.2 percent of respondents found between 26-33 years old and also remaining 11.8 percent is found between 20-25 years old, so based on output researcher can conclude that this firm has more potential employees. If those youngest employee working hard in the future can upgrade their potential by sharing with more experienced olds employee show table below.

Table 1.2 Age or respondent

-		Frequency	Percent	Valid Percent	Cumulative
	_				Percent
	20-25	2	11.8	11.8	11.8
Valid	26-33	7	41.2	41.2	52.9
Valid	34-39	8	47.1	47.1	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results

With regard to the respondent among hundred percent employee education qualification in the company is showing that the employee has degree holders are 15 (88.2) percent among hundred percent remaining have masters holders therefore company can upgrade employees educational qualification by providing scholars with communicating schools because most employees was fulfill only minimum requirement on it So as per Ruhanita and Daing (2006), say that the accessibility of well-trained manpower could influence the success of any projects so if firm can provided training can attain there plan and if not it will limitation of implements of modern cost allocation method and it also helps to answer secondary research question.

 Table 1.3 Education Qualification of respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Degree	15	88.2	88.2	88.2

Mas	sters	2	11.8	11.8	100.0
Tot	al	17	100.0	100.0	

Source: Questionnaire results

With regard to workers experience 47.1 percent of employee have less than 6 years' experience, 41.2 percent of employees have between seven to twelve years remaining 11.8 percent of employee have experience between twelve to twenty years this also indicate that almost more that 50% of employees working in company have in position of senior in filled so it also helps that company can upgrade remaining employee experience that not found in position of senior it also support to accept of modern allocation mechanism as well because experience also related to qualification of employee as per Che Ruhana Isa (2010) say that if employee experience (qualification) upgrade to reach level of success of modern cost allocation.

**Table 1.4 Work Experience of respondent** 

		Frequency	Percent	Valid Percent	Cumulative
	_				Percent
	<6 Years	8	47.1	47.1	47.1
Valid	7-12 Years	7	41.2	41.2	88.2
valid	12-20 Years	2	11.8	11.8	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results

With respect to employee position 64.7 percent of respondents are working in accounting position others are 17.6 percent of respondent work in cost accounting, two percent of employees work in position of finance manager and remaining 5.9 percent of respondent work in the position of general manager position, from this researcher understand that company have no enough no of employee that work in cost department, That also is one barrier according to Akinyomi Oladel (2014) say that to implement modern cost allocation those factors fulfill properly, So to implement modern system cost department better to upgrade.

 Table 1.5 Respondent's Position in Organization

		Frequency	Percent	Valid Percent	Cumulative Percent
	Accountant	11	64.7	64.7	64.7
Valid	Cost Accountant	3	17.6	17.6	82.4
	Finance Manager	2	11.8	11.8	94.1

General Manager	1	5.9	5.9	100.0
Total	17	100.0	100.0	

Source: Questionnaire results

#### 4.1.2 Allocation Mechanism

To identify the cost allocation mechanism in companies of BGI there were three questions raised. The first question tries to investigate firm cost allocation mechanism respect to mean and standard deviation of respondents so from statistical results show that the standard deviation is (0.5145) it indicates that respondents are given similar response and mean also show that (1.47)in poor stage so researcher understand that firm is not used modern cost allocation mechanism. The second question also investigates about the employee experience on allocation mechanism, then standard deviation indicate (0.8488) it show respondent responses are dispersed, but men also show (2.294) it indicate that respondent answers are neutral based on this question and respondent's response indicate that employees have no other allocation mechanism than traditional systems. The last question also investigate about capacity of firm to use modern cost allocation mechanism so based on respondent response standard deviation (1.2485) it also indicate that respondent answer is dispersed, but men of respondent's answer show that (4.0588) it indicate that it found in health condition, based on respondent response and by triangulating with questioner result for those two analyses presented above indicate that company have capacity to implement modern cost allocation system. Therefor company used traditional cost allocation mechanism but if the firm can improve the employee experience on allocation mechanism and providing education can implement modern cost allocation mechanism.

		The firm used	Employee have	The firm has the
		modern cost	another	capacity to use
		allocation	experience on	modern
		Mechanism	allocation	mechanism
			mechanism	
NI	Valid	17	17	17
Ν	Missing	0	0	0
Mean		1.4706	2.2941	4.0588
Median		1.0000	3.0000	4.0000
Mode		1.00	3.00	4.00

Std. Deviation	.51450	.84887	1.24853
Sum	25.00	39.00	69.00

Source: Questionnaire results

From question raise on modern cost allocation mechanism implementation (52.9) percent respondent say that firm not used modern cost allocation mechanism (strongly disagree) and remaining (47.1) percent of respondents say that firm used traditional cost allocation mechanism (disagree) show resale under based on respondent response output firm not used modern cost allocation mechanism.

Table 1.7 Firm used modern cost allocation Mechanism

		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Strongly Disagree	9	52.9	52.9	52.9
Valid	Disagree	8	47.1	47.1	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results

From question raise on employee experience on allocation mechanism (23.5) percent of respondent say that (strongly disagree) which mean have no other experience on allocation mechanism, other (23.5) percent of respondent say that (disagree) have no experience and remaining (52.9) percent of respondent say that undecided (neutral) even those neutral respondent responses have contain large percent by men, standard deviation and interview result triangulations output indicate that employee have no other allocation mechanism experience.

 Table 1.8 Employee have other experience on allocation mechanism

		Frequency	Percent	Valid Percent	Cumulative	
					Percent	
	Strongly Disagree	4	23.5	23.5	23.5	
Valid	Disagree	4	23.5	23.5	47.1	
Valid	Undecided	9	52.9	52.9	100.0	
	Total	17	100.0	100.0		

Source: Questionnaire results

To identify firms capacity to use modern cost allocation mechanism from total respondents (11.8) percent of employee say that (strongly disagree) or firm have no capacity to implement modern cost allocation mechanism and (47.1) percent of respondent say that (agree) which

means firm have capacity to implement modern cost allocation mechanism, remaining (41.2) percent of respondent say that firm have capacity to implement modern cost allocation mechanism so from respondent response we observe that firm can implement modern cost allocation mechanism if they needed to implement fulfilling factors. Capacity of organization means the potential of the organization that have like capacity to contain inventory, capacity of installation of machinery for production as per (Chris Lefebvre and Liangqi Lin, 1992) therefore based on respondents response result indicate that firms have a capacity to implement modern cost allocation system.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly disagree	2	11.8	11.8	11.8
	Agree	8	47.1	47.1	58.8
Valid	Strongly Agree	7	41.2	41.2	100.0
	Total	17	100.0	100.0	

Table 1.9 Firm have capacity to use modern mechanism

Source: Questionnaire results

#### 4.1.3 Profitability and cost allocation mechanism

To identify profitability and allocation mechanism in BGI Company there were three question Rise that use to derive for conclusion first question related to profitability and allocation mechanism as it present on table 1.10 below standard deviation show (0.7905) it indicate that respondent response is dispersed, when we analysis mean showing that (4) it indicate health range it also indicate that firm cost allocation mechanism also affect the profitability of the company. Second question rise on firm can identify unit overhead cost for each product type, then respondent response indicate that standard deviation (0.5145) it indicate response somehow similar and mean also show (1.47) it indicate that (poor) result it means firm cannot identify overhead cost for each product type. The third question also rises on firm can manage overhead cost wastage inaccurately so based on (1.10) table resale show that the standard deviation (0.4925) it means respondent response is not diversify (similar) and mean also show (1.3529) it indicates that (poor) which means firm cannot manage overhead cost wastage accurately in production. As per Peter and Boris (2014) say that overhead cost allocation method need more concentration to get high profitability because in manufacturing organization overhead cost wast increased from 25% to 60% off total cost. Therefore, from the analysis above and litterateur researcher understand that a company cannot control wastage accurately and the firm also cannot identify the overhead cost that consumed for each product so those affect profitability of a company.

		Firm allocation mechanism affects	The firm can identify unit overhead cost	The firm can manage overhead cost	
		profitability	for production	wastage	
			types	Accurately	
N	Valid	17	17	17	
IN	Missing	0	0	0	
Mean		4.0000	1.4706	1.3529	
Mediar	ı	4.0000	1.0000	1.0000	
Mode		4.00	1.00	1.00	
Std. De	eviation	.79057	.51450	.49259	
Sum		68.00	25.00	23.00	

**Table 1.10 Statistics** 

Source: Questionnaire results

To discuss on firm's allocation mechanism affects profitability from total respondent (41.2) percent of respondents agree on firm allocation mechanisms affect profitability, other (29.4) percent of respondents strongly agree on allocation mechanism affect profitability remaining (29.4) percent of respondents give undecided mark so based on result of respondents responses researcher argued that the allocation mechanism affect the profitability of the organization.

 Table 1.11 Firm allocation mechanism affects profitability

-		Frequency Percent		Valid Percent	Cumulative
					Percent
	Undecided	5	29.4	29.4	29.4
Valid	Agree	7	41.2	41.2	70.6
valid	Strongly Agree	5	29.4	29.4	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

In respect to identify of the unit overhead cost of production types respondents provided (52.9) percent of respondents responses gives strongly disagree which means firm cannot identify

overhead cost for each product type remaining (47.1) percent of respondents also give disagree response so research understand that firm is not identify unit overhead cost for each production.

		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Strongly Disagree	9	52.9	52.9	52.9
Valid	Disagree	8	47.1	47.1	100.0
	Total	17	100.0	100.0	

 Table 1.12 Firm can identify unit overhead cost for production types

Source: Questionnaire results.

To discuss on manageability of overhead cost wastage accurately from table 1.13 below understand that (64.7) percent of respondents are strongly disagreeing with it and also (35.3) percent of respondents also disagree with it therefore from result understand that firm have not accurately manage overhead cost wastage on production it also affect the profitability of the firm because when firm not use modern cost allocation system as per Zhang and Che, (2010) cannot assigning cost to cost objects therefore it distorted profitability.

 Table 1.13 Firm can manage overhead cost wastage Accurately

-			Percent	Valid Percent	Cumulative
					Percent
	Strongly Disagree	11	64.7	64.7	64.7
Valid	Disagree	6	35.3	35.3	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

# 4.1.4 Staff quality

To identify staff quality found in BGI Company there were nine question rise the first one is about firm provided continues training for upgrade of quality of staff response of respondents are show below that in table 1.14 standard deviation (0.9851) it show that respondent response is dispersed, mean of respondent also show (2.2941) it indicate that poor resolute and from interview result show firm have lack of providing employee training for upgrade of staff qualification by short training this also one factor for implement of modern cost allocation and also if firm's staff quality not improved firm going concern also in question. Second question is that firm has sufficient qualified staff and respondent's response also show that below standard deviation (0.5557) it show that respondent responses are similar and also mean of respondent show below (3.9412) it indicate that good which means that based on respondent responses firm have sufficient qualified staff and also it have positive impact on allocation mechanism as per (Che Ruhana Isa, 2010) this also help to implement modern cost allocation when firm interested on it. Third question show that employee satisfied on firm and respondent responses also show that below standard deviation (0.9963) which means respondents responses are dispersed and mean also (2.6471) found in neutral level, but frequency results show below table 1.17 say (17.6) percent of respondent response say strongly disagree, (17.6) percent say disagree, (47.1) percent of respondent response say undecided which means neutral form output result can understand that employee not satisfied by the firm. Fourth question also about firm gives priority to employee creativity respondent's response also show that standard deviation also show (0.8920) which means respondents responses are dispersed and also mean showing (2.4375) neutral level based on result firm cannot give attention to employee creativity this also one obstacle to implement modern cost allocation system in the company. Fifth question is that firm provided appropriate depreciation of machinery for no of production and respondent's response also show that the standard deviation (0.7276) and also mean (3.8235) which means the firm can provide appropriate depreciation for machinery it also one factor of implementation of modern cost allocation mechanism so when firm want implement modern cost allocation this factor is not be obstacle. Sixth question also says that firm has different types of production and respondent's response show standard deviation (1.0641) which mean respondent's response are dispersed and also mean (3.5882) in a good position so researcher can say that firm have different types of production because of this as per Peter and Boris, (2014) say that firm overhead costs are high. Seventh question also says that firm has a large no of production volume and the respondent's response also show that the standard deviation (0.3929) and also mean (4.1765) which means health so when production volumes are large company overhead costs also increased so hard to accurately allocate. Eight question also say that employee gets top management support by facilitating material to do their job so standard deviation show that (1.1180) and also mean (3)neutral, which means top management have no give proper support for employment because of this employee will have lack of interest on work this also one input to distort the cost of production. Question no nine also say that employees are compatible with existing systems and respondent responses are shown below standard deviation also show (0.7812) and also mean showing (3.8824) in a good position this indicate that employees are compatible with the existing

system of cost allocation mechanism so employees are compatible then firm allocation mechanism are bee gone smoothly.

Image: heat shape is a large provided continues training to upgrade of qualityThe Firm has sufficient qualified staffAll employees is priority to employee creativityFirm provided appropriate depr. For machinery for no productionThe Firm has a large different types of productionThe Firm has a large employee gets top management supportEmployees compatible with existing systemNValid1717117161717171717Missing0001000000Mean2.29413.94122.64712.43753.82353.58824.17653.8824Median243244434Mode243243.00a434Std.0.985180.55570.99630.892090.727611.064120.392951.118030.78121Sum396745396561715166											
Missing         0         0         0         1         0 </td <td></td> <td></td> <td>provided continues training to upgrade of</td> <td>has sufficient qualified</td> <td>employees Satisfied by the</td> <td>gives priority to employee</td> <td>Provided appropriate deper. For machinery for no</td> <td>has different types of</td> <td>has a large no of production</td> <td>employee gets top management</td> <td>compatible with existing</td>			provided continues training to upgrade of	has sufficient qualified	employees Satisfied by the	gives priority to employee	Provided appropriate deper. For machinery for no	has different types of	has a large no of production	employee gets top management	compatible with existing
Mean         2.2941         3.9412         2.6471         2.4375         3.8235         3.5882         4.1765         3         3.8824           Median         2         4         3         2         4         4         4         3         4           Mode         2         4         3         2         4         4         4         3         4           Mode         2         4         3         2         4         3.00a         4         4         3         4           Mode         0.98518         0.5557         0.9963         0.89209         0.72761         1.06412         0.39295         1.11803         0.78121	N	Valid	17	17	17	16	17	17	17	17	17
Median         2         4         3         2         4         4         4         3         4           Mode         2         4         3         2         4         3.00a         4         3         4           Mode         2         4         3         2         4         3.00a         4         3         4           Std.         0.98518         0.5557         0.9963         0.89209         0.72761         1.06412         0.39295         1.11803         0.78121		Missing	0	0	0	1	0	0	0	0	0
Mode         2         4         3         2         4         3.00a         4         3         4           Std. Deviation         0.98518         0.5557         0.9963         0.89209         0.72761         1.06412         0.39295         1.11803         0.78121	Mean		2.2941	3.9412	2.6471	2.4375	3.8235	3.5882	4.1765	3	3.8824
Std. Deviation         0.98518         0.5557         0.9963         0.89209         0.72761         1.06412         0.39295         1.11803         0.78121	Median		2	4	3	2	4	4	4	3	4
Deviation         0.98518         0.5557         0.9963         0.89209         0.72761         1.06412         0.39295         1.11803         0.78121	Mode		2	4	3	2	4	3.00a	4	3	4
Sum         39         67         45         39         65         61         71         51         66			0.98518	0.5557	0.9963	0.89209	0.72761	1.06412	0.39295	1.11803	0.78121
Source: Questionnaire results					45	39	65	61	71	51	66

Table 1.14 Statistics

Source: Questionnaire results.

To discuss on continues training of employee to upgrade quality in firm table1.15 below show (23.5) percent of respondent response say strongly disagree which means firm is not provided training for upgrade staff quality and also (35.3) percent of respondents response say that disagree which means firm not provided training to employee (29.4) percent of respondent response say undecided which means neutral and remaining (11.8) percent of respondent response say agree which means firm provided training so again frequency of respondent also same as deviation result above. Above result indicate that firm not provided continues training Therefore as per Gunasekaran (1999) research show that provides training for employees at adoption & implementation of ABC system is important so to implement modern cost allocation system better to give continues training to staff.

		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Strongly Disagree	4	23.5	23.5	23.5
Valid	Disagree	6	35.3	35.3	58.8
Valid	Undecided	5	29.4	29.4	88.2
	Agree	2	11.8	11.8	100.0

Table 1.15 Firm provided continues training to upgrade of quality

					1			1		
	Total			17		100.0	10	0.0		
~	~									-

Source: Questionnaire results.

On issue of sufficient qualified staff qualification on frequency also show that below table 1.16 (17.6) percent of respondent say undecided, (70.6) percent of respondents response say that agree and remaining (11.8) percent of respondents response show firm have sufficient qualified staff which helps to implement modern cost allocation mechanism therefore based on respondents responses indicate that firm have sufficient qualified staff it also helps that to implement modern cost allocation mechanism.

Table 1.16 Firm has sufficient qualified staff

		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Undecided	3	17.6	17.6	17.6
Valid	Agree	12	70.6	70.6	88.2
valiu	Strongly Agree	2	11.8	11.8	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

To discuss an employee satisfaction on a firm by frequency table (1.17) blow below show (17.6) percent of respondent response says strongly disagree which means not satisfied, other respondents also (17.6) percent of response say that disagree which is not satisfied, (47.1) percent of the respondent's response also shows undecided which means neutral and (17.6) percent of respondent's respondents say agree or they are satisfied so aggregation effect say that they are not satisfied by the firm

Table 1.17 All employees Satisfied by the firm

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Disagree	3	17.6	17.6	17.6
	Disagree	3	17.6	17.6	35.3
Valid	Undecided	8	47.1	47.1	82.4
	Agree	3	17.6	17.6	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

In order to discuss on firm give priority to employee creativity on frequency result on show in table 1.18 below (11.8) percent of respondents response say strongly disagree means firm not

give priority to employee creativity, (41.2) percent of respondent say that disagree which means again firm not give priority to employee creativity, (29.4) percent of respondents response say that undecided (neutral) and remaining (11.8) percent of respondents response say that firm give priority to employee creativity therefore from analysis result researcher can conclude firm not provided employee creativity it also have impact on allocation mechanism because employee not provided his/her capacity to implement their plan.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Disagree	2	11.8	12.5	12.5
	Disagree	7	41.2	43.8	56.3
Valid	Undecided	5	29.4	31.3	87.5
	Agree	2	11.8	12.5	100.0
	Total	16	94.1	100.0	
Missing	System	1	5.9		
Total		17	100.0		

 Table 1.18 Firm gives priority to employee creativity

Source: Questionnaire results.

In order to discuss on firm provided appropriate deper<sup>n</sup>.\_of machinery for no\_of production on frequency output show on table 1.19 below (5.9) percent of respondents response say disagree Which means firm not use appropriate depreciation of machinery for no of production, (17.6) percent of respondent's response also say that undecided which means neutral, (64.7) percent of respondents of response say that agree which means a firm provided appropriate depreciation of machinery for no production remaining (11.8) percent of respondent's response say that strongly agree which means that firm provided appropriate depreciation on no production they produced.

Table 1.19 Firm Provided appropriate deper<sup><u>n</u></sup>. For machinery for no

production

		Frequency	Percent	Valid Percent	Cumulative Percent
	Disagree	1	5.9	5.9	5.9
	Undecided	3	17.6	17.6	23.5
Valid	Agree	11	64.7	64.7	88.2
	Strongly Agree	2	11.8	11.8	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

In order to discuss on firm types of production that have shown below in table 1.20 based on frequency of output (17.6) percent of respondent response show that disagree which means firm have no different types of production, (29.4) percent of respondents response show that undecided which means neutral, (29.4) percent of respondents response say that agree which means firm have different types of production and remaining (23.5) percent of respondents response show that strongly agree which means firm have different types of production. So based on a frequency resale show that firm has different types of production, this also one factor that affect overhead cost allocation mechanism.

Table 1.20 Firm have different types of production	
--	--

-		Frequency	Percent	Valid Percent	Cumulative
	-				Percent
	Disagree	3	17.6	17.6	17.6
	Undecided	5	29.4	29.4	47.1
Valid	Agree	5	29.4	29.4	76.5
	Strongly Agree	4	23.5	23.5	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

In order to discuss about firm have a large no of production volume that have shown below in table 1.21 based on frequency of output (82.4) percent of respondent's response show that agree which means firm have a large no of production volume and remaining (17.6) percent of respondent's response show that strongly agree which means firm have a large no of production volume this also difficult to control overhead cost of production accurately.

Table 1.21 Firm has a large no of production volume

		Frequency	Percent	Valid Percent	Cumulative Percent
	Agree	14	82.4	82.4	82.4
Valid	Strongly Agree	3	17.6	17.6	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

To discuss on employee gets top management support with frequency of response that show in table 1.22 below that (11.8) percent of respondent response say that strongly disagree which means firm employee's say that have no top management support so employee have no

motivation to minimize wastage of overhead cost, (17.6) percent of respondents response also say that disagree which means top management not provided support for employee, (35.3) percent of respondents response also say that undecided which means neutral, (29.4) percent of respondents response say that agree which means top management provided support for employee and remaining (5.9) percent of respondents response say that strongly agree which indicate that firm employee have top management support.

-		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Disagree	2	11.8	11.8	11.8
		_			
	Disagree	3	17.6	17.6	29.4
Valid	Undecided	6	35.3	35.3	64.7
Valid	Agree	5	29.4	29.4	94.1
	Strongly Agree	1	5.9	5.9	100.0
	Total	17	100.0	100.0	

 Table 1.22 Firm employee gets top management support

Source: Questionnaire results.

In order to discuss on employee compatible with existing system show below on table 1.23 on frequency of respondents response show (5.9) percent of respondents response say that disagree which means firm employees are not compatible with existing system it also have impact to allocation of system, (17.6) percent of respondents response say that undecided which means neutral, (58.8) percent of respondents response say that agree which means firm employees are compatible with existing system it also improve allocation mechanism, (17.6) percent of respondents response say that strongly agree which means employee's compatible with existing system.

 Table 1.23 Employee compatible with existing system

_		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Disagree	1	5.9	5.9	5.9
	Undecided	3	17.6	17.6	23.5
Valid	Agree	10	58.8	58.8	82.4
	Strongly Agree	3	17.6	17.6	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

#### 4.1.5 Technological advancement

To identify technological advancement of BGI company has raised four questions the first one is about firm have software for allocation of overhead cost respondent's response show below in table 1.14 standard deviation (0.7174) which means respondent's response are dispersed and also mean showing (3.5294) in good level so based triangulation of result observed on mean and frequency below table 1.15 can say firm use software for allocating. Secondary question also says that firm uses modern software for cost allocation improvement based on standard deviation show (0.8993) which means respondent's response are dispersed means also show (3.9412) good which means firm have used modern software for cost allocation. Third question also says that firm has sufficient IT infrastructure based on standard deviation show below say (0.5557) which means respondents response similar and mean also show that (4.0588) which means firm have sufficient IT infrastructure. The fourth questions also say that firm has tended to accept modern software based on table below show that the standard deviation is (0.7524) which means respondent responses are dispersed and mean also show (4.2353) healthy which means respondent responses are firm have tendency to use modern software. As per Safaa Ibrahim and et al (2017) say that technological advancement has positive effect on modern cost allocation mechanism implementation. Therefor output result indicates that firm has capacity to implement modern cost allocation system based on literature.

		Firm have	The Firm uses	The Firm has	The Firm has
		software for	modern	sufficient IT	tendency to
		allocation of	software for cost	infrastructure	accept modern
		overhead cost	allocation		software
N	Valid	17	17	17	17
	Missing	0	0	0	0
Mean		3.5294	3.9412	4.0588	4.2353
Media	in	4.0000	4.0000	4.0000	4.0000
Mode		4.00	4.00	4.00	4.00 <sup>a</sup>
Std. D	Deviation	.71743	.89935	.55572	.75245
Sum		60.00	67.00	69.00	72.00

Table 1.24 Statistics

Source: Questionnaire results.

In order to discuss firm have software for allocation of cost table 1.25 below show on frequency observed that (11.8) percent of respondent response say that disagree which means firm have no

software for allocation purpose, other respondents response (23.5) percent say undecided which means neutral and remaining (64.7) percent of respondent response say that firm have software for allocation of cost so based on respondents response firm have software used for allocation of overhead cost.

		Frequency	Percent	Valid Percent	Cumulative	
					Percent	
	Disagree	2	11.8	11.8	11.8	
Valid	Undecided	4	23.5	23.5	35.3	
	Agree	11	64.7	64.7	100.0	
	Total	17	100.0	100.0		

Table 1.25 Firm have software for allocation of overhead cost

Source: Questionnaire results.

In order to discuss firm use modern software cost allocation table 1.16 shows below frequency of respondents response so (5.9) percent of respondents response say that disagree which means firm not use modern software, (23.5) percent of respondent's response say that undecided which means neutral, some of respondent's response (41.2) percent of response say that agree which means firm use software and remaining (29.4) percent of respondent's response say strongly agree which means firm use modern cost allocation software.

		Frequency	Percent	Valid Percent	Cumulative
					Percent
	Disagree	1	5.9	5.9	5.9
	Undecided	4	23.5	23.5	29.4
Valid	Agree	7	41.2	41.2	70.6
	Strongly Agree	5	29.4	29.4	100.0
	Total	17	100.0	100.0	

Table 1.26 Firm uses modern software for cost allocation

Source: Questionnaire results.

To discuss on firm have sufficient IT infrastructure on frequency result show table 1.17 below (11.8) percent of respondent's response say that undecided which means neutral, (70.6) percent of respondent's response say that firm have sufficient IT infrastructure and remaining (17.6) percent of respondent's response say that strongly agree which means firm have sufficient IT infrastructure on implement of modern cost allocation mechanism.

#### Table 1.27 Firm has sufficient IT infrastructure

		Frequency	Percent	Valid Percent	Cumulative
					Percent
Valid	Undecided	2	11.8	11.8	11.8
	Agree	12	70.6	70.6	82.4
	Strongly Agree	3	17.6	17.6	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

To discuss on firm tendency to accept modern software on frequency result show table 1.18 below show that (17.6) percent of respondent's response says that undecided which means neutral other (41.2) percent of respondent's response say agree which means firm have tendency to accept modern software and remaining (41.2) percent of respondents of response say strongly agree which means firm have tendency to accept modern software.

Table 1.28 Firm has tendency to accept modern software

		Frequency	Percent	Valid Percent	Cumulative
					Percent
Valid	Undecided	3	17.6	17.6	17.6
	Agree	7	41.2	41.2	58.8
	Strongly Agree	7	41.2	41.2	100.0
	Total	17	100.0	100.0	

Source: Questionnaire results.

### **CHAPTER FIVE**

### FINDING, CONCLUSIONS AND RECOMMENDATIONS

### **5.1 Finding**

From this research work researcher can observed the following main pointes from data analysis that conducted in previses chapter to assess cost allocation mechanism that conducted in manufacturing company.

- From statistical result observe in fourth chapter on cost allocation mechanism that used in BGI Brewery Company was not used modern cost allocation mechanism so researcher understand that firm is used traditional coat allocation mechanism.
- From statistical result observe in previous chapter indicate that firm have qualified staff on educational qualification but have minimum number of staff found in cost department It also have negative impact on cost allocation system because there is large no of output and production volume was large.
- From statistical result observe in previous chapter output of statistical result indicate that on staff satisfaction can understand that employee not satisfied.
- From statistical result observe in previous chapter of output indicate that firm not give attention to employee creativity this also have impact on allocation mechanism implementation.
- From statistical result observed in previous unit of output indicate that firms top management has no given proper support for employee it also have impact on employee performance.
- From statistical result observed in previous chapter of output indicate that allocation mechanism of cost in company was tradition therefore from literature review and respondent response indicate that traditional cost allocation mechanism affect performance of company.
- From statistical result observed in pervious chapter indicated that cost allocation mechanism of a company was tradition this also have effect on identifying of unit overhead cost for each production.

### **5.2 Conclusion**

As Hilton (1997) discussed, managers are constantly faced with the need to understand and control costs, make important decisions, coordinate resources, guide and motivate employees. Managerial accounting provides an information framework to organize, evaluate, and report proprietary in light of an organization's goals. The broad objective of this research was to assess overhead cost allocation mechanisms. Assess which cost allocation mechanism that firm used, to assess the factors of overhead cost allocation mechanism in the company and also assess the cost allocation mechanism affect the profitability (Performance) of the organization in the BGI brewery share company.

From above finding that researcher observed from analysis of data conclude that firm was used traditional cost allocation mechanism still now, firm management was not give attention for employee, number of staff quantity found in cost department was small compare to production volume, employee was not satisfied on company so production accuracy was affect in general and also firms not arrived proper unit cost for each production output.

### **5.3 Recommendation**

In this day using cost allocation management accounting for decision making is becoming must because for producing of different material overhead cost become very large and complex hear from a research result so based on result of the study researcher recommends the following points:

To be able to produce the necessary management report cost department better to implement modern cost allocation mechanism.

The top management provided continues training for employees to upgrade staff quality; the result of this company can avoid one factor of cost allocation mechanism.

Management can work for better employee satisfaction because satisfied employee move firms for better performance.

Firm's management tries to identify overhead cost for each product type because to provide a proper decision in each department to evaluate performance of the activity.

To be able to produced necessary profit for organization management should be focused on controlling of overhead cost because overhead costs are huge and production types are different in items and also in no so if a firm can control overhead cost can increase profitability of the company.

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#### http://www.businessdictionary.com/definition/marginal-cost.html

# Appendix

# **Annex I: Questionnaires**

# St. Marry University School of Graduate Questionnaire

This questionnaire is prepared to assess overhead cost allocation system of St. George's Brewery Factory. The purpose of this questionnaire is to identify which overhead costing allocation system preferable and its advantage. The study is initiated with the view to securing your honest opinions and comments towards the research study. The researchers take their opportunity to express heart felt gratitude for your unreserved and sincere cooperation to take part in the questionnaire. Your genuine response and comments are vital ingredients for the successful completion of the research.

Thus, you are kindly requested to read each questions and indicate your answer by selecting each number for close ended and by giving necessary explanations for the open ended questions.

The researchers would like to appreciate for your time in responding the questions.

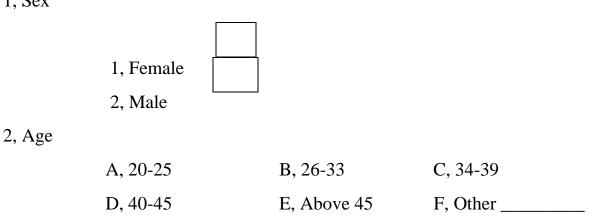
Notice here that:

- Information is being required purely for academic purposes and shall be kept strictly confidential.
- Do not write your name
- Please select the number among choose

Part I

Personal questioners

1, Sex



3, Education Qualification			
A, certificate	B, Diploma C	C, Degree	
D, Masters	E, Other		
4, Working Esperance			
A, Less than 6 years	B, 7-12 years		
C, 12-20 Years	D, Above 20 years	E, Other	
5, your position in organization			
A, Accountant	D, production controlle	er	
B, Cost Accountant	E, Finance manager		
C, Production manager	F, General Manager		

#### Part II

1, Please tick your appropriate evaluation regarding the assessment of overhead Cost allocation Practices.

Question	Strongly	Disagree	Undecided	Agree	Strongly
	disagree				Agree
A, Allocation Mechanism					
1, Firm use modern cost allocation mechanism.					
2, Employee have other experience on					
Allocation mechanism.					
3, Firm have capacity to use modern cost allocation mechanism.					
B, Profitability and Allocation					
1, Firm cost allocation mechanism affect Profitability.					
2, Firm can identify unit overhead cost for each Production type.					
3, Firm can manage overhead cost wastage Accurately.					
C, Staff Quality					
1, your firm provided continues training for Upgrade of Staff understand (quality).					
2, your firm have sufficient qualified Staff					
3, All employees satisfied by firm					
4, your firm give priority to employee's					
Creativity					
5, Firm provided appropriate					
Deprecation of machinery for no of					
Production					
6, Firm have different types of production					

7,firm have large no of production volume			
8, Firms employee gets top management support.			
9, Firms employees are compatible with existing system.			
D, Technological Advancement			
1, Your firm has software for allocation of Overhead cost.			
2, your firm uses modern software for cost Allocation improvement.			
3, Firm have sufficient IT infrastructure.			
4, Your firm have tendency to accept modern Software.			

#### Interview

- 1, what types of cost allocation system used in the firm?
- 2, do you think the firm has enough qualified employee on cost & production Department based on firm's production volume?
- 3, do you think the factors of cost allocation problem exist in this company?
- 4, is there other factors have faced the firm to implement modern cost allocation Systems?
- 5, do you think this company has technological advancement?
- 6, do you think the company provided adequate training for staff?