

# CHAPTER I

## INTRODUCTION

This chapter explains about the introduction of research which consists of research background, problem formulation, research objectives, limitations and assumption, and the writing system report.

### 1.1 Background

The rapid growth of information and communication technology during the last two decades leads to a fierce global competition in the business environment. This push companies to discover more efficient ways of doing business (Maiyaki, 2011; Oseifuah, 2014). Changes in business environment, had created a complex effect for their companies. Enormous environmental change has forced many organizations to rethink their business and competitive strategies, particularly cost management system. In order to achieve the competitive edge in the marketplace (Soekardan, 2016). Companies are not only required to utilize technology that can support the company's performance, but also required to compete in providing an affordable price (Wijayanti 2011; Syamsuhartien, 2003; Akbar, 2011).

In manufacturing side, the automation technology and engineering has replace the labor usage. It will cause a change in the production costs composition, such as a decrease in labor costs and increase in overhead costs. These changes will cause a distortion on traditional product costing that charge overhead cost to the product by volume based measurement (Basri, 2001; Syamsuhartien, 2003). As long as the traditional costing system calculates product costs by allocating base on direct hours or direct labor costs required to make a product (Kannaiah, 2015), this will cause many problems because the products can not reflect the actual cost used to produce the products.

The more amount of distortion occur, the more probability to undercosting and overcosting product appear as a result. Nevertheless, it is necessary to use proper cost system by using effectible cost techniques to avoid that. The traditional volume based costing system is argued to inaccurate costing information result (Elhamma, 2013). However, traditional calculation methods and formulas lacking the ability to determine how the processes, products and customers segments consume the sources and generating the revenues (Dejnega, 2011).

Cost has a very important role to determining products selling price. A better costing calculation will show the cost of production/services more accurately (Akbar, 2011). Irrelevance in the production cost calculation will bring an adverse impact to the company. Because it is use as a basis for setting the selling price and profitability, as a tool to measure the efficiency of the production process implementation, and as the basis for decision making for the company management (Mamihoto. 2015). Accurate costing information is essential for any businesses to retain competitive advantages. Therefore, more accurate costing information is needed for effective decision making in today's advanced manufacturing environment (Elhamma, 2013).

This problem has being addressed by Cooper and Kaplan in the 1980s with a new method to calculate the production cost, known as the Activity Based Costing (ABC) System. Activity based costing concept was designed as a method which eliminates the shortages of the traditionally costing methods (Boris, 2011). It based on all activities and functions that participate in a company. This method allows companies to assign all overhead cost (those that cannot be apportioned directly to the products) to the activities, and these activities with the help of activity-drivers are assigned to the products-services produced. The result is to have full information about the cost of products made (Vazakidis, 2010). As mentioned above to be competitive, a company must know its sources of profit and its cost structures (Kannaiah, 2015).

Management has moved to adopt ABC by the desire to improve products and services costing accuracy. It also help them to understanding the better true costs and return on investment from projects or other initiatives. ABC gets closer to true costs in these areas by turning many costs that traditional cost accounting treats as indirect costs essentially into direct costs. In organizations where ABC has been implemented successfully, activity based management uses the approach to support decisions about pricing, adding or deleting items from the product portfolio, choosing between outsourcing and in-house production, and evaluating process improvement initiatives.

Research carried out in the late nineties of the 20th century showed that the number of companies using activity-based costing was growing. Various surveys in the period 2010-2014 report the highest percentage of organizations using ABC in manufacturing (20%-50%), followed by financial services (15-25%), public sector (12-18%), and communications (6-12%). Since its very early stages of development activity-based costing has been claimed to have high-potential applications in businesses with high product diversity (Drury 1997; Cooper & Kaplan 1999). Subsequent empirical studies have confirmed a positive correlation between product diversity and benefits from ABC within a single firm or between product diversity and ABC usage across different industries and firms. Product diversity is defined as the number or range of different product lines or different product families offered (Bufi, 2014).

Biro Workshop structurally is a part of Rancang Bangun Department in PT Semen Padang. Biro Workshop activity is providing manufacturing process to produce the components or products which are required by PT Semen Padang itself. The main problems found in Biro Workshop is related to the need to expand their order scale from internal order PT Semen Padang as well as orders from outside. In this case, the target of Biro Workshop could not met because lack of standard pricing and can not be justified to User/Customer.

As a job order manufacturing type, Biro Workshop produce various product. Currently, Biro Workshop determine the cost is using the traditional costing. Where the level of activity use considered equal for each products. for example in the production process there are some products that do not use CNC machines, but in its calculations, the cost of the CNC machines usage remain charged to the price of production of these products. This problem leads to distortion in determining the production cost that give impact either overcosting or undercosting of a product. That distortion proved by different efficiency time reality and efficiency time estimated report for each workstation in Biro Workshop. This is certainly detrimental both consumers and Biro Workshop itself.

The cost of production at Biro Workshop calculated using traditional method by totalizing of direct material, consumable, and man hour for a year and then dividing them by the number of tonase. Meanwhile there are some cost factors wich is not included into calculation process but it is necessary in determining productuction cost. For example the maintenance cost, utility cost, depreciation, energy consumption, tax and inventory. Biro Workshop also uses raw materials and consumables pricing data has not been updated. In addition, source of rent machine data is missing and can not justified. So that, the production cost determined by Biro Workshop is less accurate.

Based on the description, it is necessary to do estimation production cost using the activity based costing method with more updated data and adding cost factors such as maintenance cost, utility cost, depreciation, energy consumption to reduce distortions arised from the traditional costing by Biro Workshop. For tax and inventory cost not include in this research because the inventory cost holding by biro MRB and tax cost paid by PT Semen Padang. With more detailed costing calculation, Biro Workshop expected to provide accurate pricing standard and be accountable to costumers outside of PT Semen Padang to remain business competitively in future.



## **1.2 Problem Formulation**

The problem formulation of the research is how to estimate the production cost using the activity based costing method to eliminate distortions arising from the traditional costing and the cost reduction strategies by Biro Workshop?

## **1.3 Research Objectives**

The objective of the research are to:

1. Understanding of estimation of the production cost using Activity Based Costing (ABC) System Method at Biro Workshop.
2. Compare the calculation of the cost of production by Activity Based Costing (ABC) System with traditional methods that have been applied in Biro Workshop.
3. Understanding of cost reduction strategies by Biro Workshop.

## **1.4 Limitations and Assumptions**

The limitations and assumptions of the research are:

1. Object Research is Biro Workshop PT Semen Padang.
2. Processed data is the data in 2016.
3. Researched Products are Support cyclone, Trolley Rawmill area and Swing Out Mobil Bracket.
4. Work day assumed 20 days/month with work hour 8 hours/day.
5. Machine hour assumed 6 hours per day
6. Labor assumed have the equal skill.
7. Overtime salary being equal on each direct labor

## **1.5 Writing System Report**

The writing system of this report is divided into three chapters. The whole chapters will be described as follows :

### **CHAPTER I INTRODUCTION**

This chapter explains the background of research, problem formulation, research objectives, problem restrictions, and writing system report.

### **CHAPTER II LITERATURE REVIEW**

This chapter explain about the theories related to problem of this research. The theories are taken from the books, journals, and previous research.

### **CHAPTER III RESEARCH METHODOLOGY**

This chapters explain the steps to solve the problem of the final project research. The steps are shown with the flowchart.

### **CHAPTER IV RESULT**

This chapter provides the collected of data and explanation of its analysis. The data were processed by using method explained in the previous chapter.

### **CHAPTER V ANALYSIS**

This chapter explain the analysis carried out by the data processing has been done in previous chapter.

### **CHAPTER VI CONCLUSION**

This chapter consists consist of research conclusions that have been generated through the research that has been done and suggestions to further research.