

THE URGENCY OF DETERMINING ACCURATE COSTING METHODS IN THE COST OF GOODS MANUFACTURED

Frida Fanani Rohma ¹, Sholihah ²

^{1, 2} Accounting Department, Universitas Trunojoyo Madura, Bangkalan, Indonesia

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Corresponding Author:

Frida Fanani Rohma,
Accounting Departments,
Trunojoyo Madura University,
Bangkalan, Indonesia.

E-mail:

frida.frohma@trunojoyo.ac.id

ABSTRACT

The mechanism for determining product cost is a crucial factor because it can impact sales volume and profit. One of the control mechanisms in determining the cost of goods manufactured is to use the concept of accurate costing. Thus, this study aim to analysis the use of an accurate costing method to minimize errors in determining the cost of goods manufactured. This study uses a literature review with charting the field technique. The results show that each method of assigning costs has its accuracy according to the type of cost charged to the product. Direct costs are assigned to cost objects by direct tracing. Meanwhile, costs that require driving activities are charged using driver tracing. Meanwhile, costs that do not have a causal relationship to the cost object are charged with allocation. The result shows that Activity Based Costing (ABC) is rated as the most accurate method. However, it should be noted that the accuracy of ABC depends on the ability of resources to identify cost drivers. Failure to identify cost drivers can be a boomerang that makes ABC's effectiveness lower than conventional methods.

Keywords: accuracy, activity-based costing, cost of goods manufactured

1. INTRODUCTION

Every industry has an effort to achieve company goals, one of which is by using the costing method. Costs can be classified based on several activities, which include the object of expenditure, the primary function of the business, the relationship between costs and the cost object, and their relationship to changes in the volume of activities, and based on the period of benefit (Atkinson, 2012; Hansen and Mowen, 2009; Mulyadi, 2002). The manufacturing industry in product manufacturing has two groups that need to be considered: production costs and non-production costs (Slat, 2013). Cost accounting has a significant role in processing records, classifying summaries, presenting costs, and determining the cost of goods sold (Mulyadi, 2002).

Meanwhile, charging costs to control costs to meet the needs of parties within the company in decision making is one of the crucial functions in management accounting (Mulyadi, 2002; Slat, 2013). Therefore, the costing mechanism is a crucial part that management accountants need to pay attention. Hansen & Mowen (2009) explain that costs are charged to product prices through several assignment methods, namely direct tracing, driver tracing, and allocation methods. The cost accounting and management accounting literature show that using the costing method can show different results. The selling price reflects the effort to balance the desire to obtain the benefits of income based on the level of sales volume (Slat, 2013). However, it should be noted that setting the correct product price is not always the lowest price setting (Karlina, 2010).

Several research developments have examined the method of assigning costs. Binawati (2011) explains that public agencies use the allocation method because there is no causal relationship between costs and cost objects. On the other hand, with the same object, namely higher education non-profit organizations, Raimanu et al. (2019) showed that ABC was the most precise method. Suhardi (2013), Martusa and Mariam (2012), Hartati (2016), Putri et al. (2017), Murmitasari (2019), and Eriadi et al. (2020) found that the assignment of costs using the ABC (Activity Based Costing) method tends to show good results. Accurate for some costs.

Syahr et al. (2016) and Sulistiana (2019) explain that ABC and other methods produce insignificant differences. Pontoh and Budiarmo (2018) and Gayatri (2014) consider cost-plus pricing. Djumali et al. (2014) showed the effectiveness of the costing variable in determining the selling price. Meanwhile, Slat (2013) and Widiastutik et al. (2018) show the opposite finding that the complete costing method tends to be more precise in determining the selling price because it covers all costs incurred. Rahayu (2015) shows that the accuracy of cost assignment depends on the adjustment of the BOP allocation.

Overall, the research findings still show inconsistencies in the research results regarding the accuracy of the cost assignment method. Meanwhile, errors in assigning costs are often a problem that can potentially lead to product decisions and pricing. Product pricing that is not based on correct and accurate calculations can cause bankruptcy because income from product sales cannot cover all production costs (Septiano, 2018).

Therefore, this study further studies the accuracy of assigning costs to product prices. Analysis of the accuracy of this cost assignment can be used as a guide in determining the price of the company's products, which can impact sales volume and operating profit. This study uses a charting the field approach to analyze and map the concept of cost assignment. The contribution of this research includes several things. They first classified topics and concepts of costing based on consequences and situation analysis. Second, this study provides an overview for future researchers to evaluate and further analyze several gaps regarding cost assignment.

2. LITERATURE REVIEW

Cost is the cash or cash equivalent value sacrificed to obtain goods or services expected to provide current or future benefits to the organization (Hansen & Mowen, 2009). Mulyadi (2002) explains that costs can be classified based on three conditions. First, based on the traceability of costs to products, which are divided into two, namely direct costs and indirect costs. Second, based on cost behavior, which is grouped into three, namely fixed costs, variable costs, and mixed costs. Third, the primary cost function is categorized into production, marketing, and general and administrative costs. Meanwhile, the element of production costs is the central part of the most widely studied, including three classifications of costs, namely the cost of raw materials, direct labor costs, and factory overhead costs.

A cost object is an element that receives a costing method (Hansen & Mowen, 2009). Cost objects can be product prices, departments, activities, and customers (Hansen & Mowen, 2009). Conventional management accounting concepts do not consider activities as cost objects. Meanwhile, contemporary management accounting concepts assess that activity is a cost object that focuses on attention. This is because the activity describes an action of the company's management (Etkinso et al., 2012). Cost objects can be used for cost measurement depending on the ability to trace costs. Tracing costs to cost objects is carried out to distinguish between direct costs and indirect costs in determining how objective these costs are reliable and how meaningful the size of the resulting costs is (Paris, 2014). Product price is one of the cost objects that requires a good analysis because product pricing can indirectly impact sales volume and profit.

3. RESEARCH METHOD

The method used in this research is the charting the field method developed by Hesford et al. (2007). The approach of Hesford et al. (2007) in this study selected several research results regarding the assignment of related costs or similar. The search results for costing are mapped in the area (charting the field), covering topics and related proxies. Articles that fall into the theme of costing are then tabulated and classified for review and further study.

4. RESULTS AND ANALYSIS

Determining the price of a product or service adjusts to the company's objectives that market the product. Machfoedz (2005) explains that pricing aims to achieve company targets, earn profits, increase and develop products, and expand marketing targets. Many factors influence product pricing policies. Saragih (2015) explains that the main factors influencing price determination include demand, cost data, *revenue and profit objectives*, competitor actions, government regulations, type of market/competition, economic situation, and product's public image. Of these several factors, the production cost factor is the only factor that can be controlled by company management in determining the cost of production (Saragih, 2015).

Production costs need to be calculated correctly and accurately because these costs will be charged to the product price. There are three types of methods for calculating the elements of production costs into the cost of production, namely variable costing, full costing, and activity-based costing system. The variable costing method determines the cost of production that only considers the cost of production with erratic behavior into the cost of production, consisting of raw materials, direct labor costs, and variable factory overhead costs (Atkinson et al. 2012). Meanwhile, the full costing method determines the cost of production

that considers all production costs into production costs, which consist of raw material costs, direct labor costs, and factory overhead costs, both variable and fixed (Atkinson et al. 2012). While the ABC is a cost calculation approach system that is carried out based on existing activities in the company (Atkinson, 2012)

Along with the development of the industry, Brewer et al. (2019) explained that conventional methods (variable costing and full costing) were considered incompatible with diversification or high product diversity. Conventional cost accounting systems tend to cause cost distortions (Brewer et al., 2019). Putri (2017) explained that distortions arise due to inaccuracies in the assignment of costs, resulting in errors in determining costs, thus having an impact on the decision-making process. The weakness of the conventional cost accounting system is considered to be overcome by the application of ABC. ABC can accurately measure the costs of each activity carried out (Brewer et al., 2019). ABC can calculate costs based on activities carried out within the organization (Shahr et al., 2016). This activity-based cost calculation uses a cost driver for resource consumption which assigns resource costs to activities so that the cost of the resulting product will be more accurate.

In the principle of cost assignment, three main concepts need to be considered, namely costs, cost objects, and cost assignment methods. The basis for assigning costs to cost objects is based on cost traceability, including direct and indirect costs. Hansen and Mowen (2009) explain that allocating costs to cost objects using the ABC method is carried out by several tracing methods, including direct tracing, driver tracking, and allocation. The direct tracing method is the most accurate tracing method because this method relies on a physically observable cause-and-effect relationship (Hansen and Mowen, 2009). At the same time, the Allocation search method is a search method with the lowest level of accuracy.

The findings of Binawati's research (2011) show that the assignment of allocation costs to the ABC method is considered more accurate than using conventional accounting methods. In addition, Suhardi (2013) shows that the costs of raw materials directly charged to products tend to be charged using the direct tracing method. Meanwhile, labor costs that do not have a causal relationship with the cost object are charged with the allocation method (Suhardi, 2013). As for costs related to cause and effect but have activities as the basis for calculation, the driver tracing method is used.

This study indicates that conceptually and empirically, ABC tends to be better at determining prices than a process costing and job order costing. However, the accuracy of ABC in determining the price adjusts the resource's ability to identify cost drivers. The more detailed the cost driver, the more accurate the cost assignment with ABC. However, failure to determine the cost driver can be a problem reducing the ABC method's ability to determine selling prices. Even the ABC method can potentially produce worse estimates than process costing and job order costing due to errors in determining drivers.

5. CONCLUSION

The development of the cost assignment method assesses that Activity Based Costing tends to have far better capabilities than a process costing and job order costing. There are several methods of assigning costs to cost objects, including direct tracing, driver tracing, and allocation. In its application, the three methods provide different levels of accuracy according to the type of costs incurred. Direct costs are assigned to cost objects by direct tracing. Costs that require driving activity are then charged using driver tracing.

Meanwhile, indirect costs that have no causal relationship to the cost object are charged with Allocation. ABC accuracy in pricing, adjusting capabilities with the cost driver identification window. Failure to identify cost drivers can cause ABC's ability in pricing to be worse than a process costing and job order costing.

This study has several limitations. First, this study only examines costs without considering the industrial sector. Different industrial sectors can have different impacts on the cost driver determination process. Second, this study only pays attention to costs without considering the industry level. Large-scale industries may have sufficient resources so that the ability to identify cost drivers more accurately than micro-scale industries. Thus, further research can analyze by reviewing it partially by considering the type of industrial sector and the scale of the industrial level. This may have different implications for the selling price-fixing mechanism.

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