Cost Behavior Analysis and Categorization

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A R T I C L E I N F O

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A B S T R A C T

To achieve company goals, company managers will implement a fairly reliable strategy. One of the strategies implemented is the cost efficiency required by the company. Every company has many types of costs or expenses. To get information about costs that match the actual situation, managers need to conduct cost behavior analysis. It is necessary to identify and classify costs. Under certain conditions, managers still have difficulty determining cost behavior. This paper was conducted to determine the classification of production costs in accordance with the analysis of cost behavior. Costs are classified into fixed costs, variable costs, or semi-fixed costs or semi-variable costs. Each cost category has a specific explanatory function. Accuracy in determining the cost group will determine the quality of financial reporting. In addition, it can provide valid considerations for management to make decisions.

INTRODUCTION

The increasingly advanced era of the world economy has an impact on the increasingly fierce economic competition that occurs. all companies will try to be the best company. The company will make every effort to become a winner. The company always has a goal to develop its company and become a leading company compared to competing companies.

To achieve the company's goals, it is necessary to plan and implement the right strategy. Each company has its own strategy and will always change according to the state of the world economy. Company management will pay attention to all factors that can be the basis for implementing the strategy to be used. To implement the strategy that will be used, the company's management will pay attention to the history of the company in the past period. From the previous period's report, the manager will know the condition of the company. The annual report will inform the state of the company's capital owned and the calculation of costs incurred by the company (Ertugrul *et al*., 2017).

Cost calculation is one of the determinants of company profits. The costs incurred by the company must have a positive impact on the company. Company managers need to implement efficient costs in order to get the desired profit. Knowing the cost calculations that occurred in the previous period will be taken into consideration by managers to make decisions. Especially with production costs being the dominant cost allocation. The production manager of a company must be able to process production costs well in order to get big profits. Basically, production costs are costs incurred by the company to obtain the factors of production used for the production of a product.

To process the company's production costs required cost behavior analysis. With the analysis of cost behavior, management will know the costs to be incurred and the possible income that will be received by the company. For this reason, it is necessary to identify costs, separate them, and group them into fixed costs and variable costs.

The identification, separation and grouping of costs into fixed and variable elements becomes a critical point in cost behavior analysis. If the three activities are carried out incorrectly, the resulting information will be inaccurate. If the information used by management is inaccurate, the resulting decisions will be inaccurate or even distorted. If this happens then the performance of management will be considered not good.

What is happening today is that company managers only reduce costs but do not do cost efficiency. Company managers do not pay attention to cost behavior that occurred in the past period. Company managers take the short cut by adding the value of the past period's cost percentages to estimates only. Company managers will add costs to the

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percentage of inflation or the possibility of an increase in factors of production (Shust & Weiss, 2014). Company managers only look at social issues such as government policies on labor wages or increases in raw materials to determine the percentage increase. Even though the increase in costs is still a plan. Of course this makes the plans used are threatened with failure. This study aims to determine the classification of production costs in accordance with cost behavior analysis.

RESEARCH METHOD

The design of this study is related to the literature review. The scope of this type of study is a critical study of the delivery of ideas and knowledge that is oriented towards scientific studies and provides theoretical contributions. This is also a form of descriptive narrative study to analyze ideas and knowledge that will provide a good explanation for the reader. The result to be achieved from this study is to provide an explanation of the categorization of cost behavior.

RESULT AND DISCUSSION

Cost

According to accounting there are two understanding of costs, namely expenses and costs. Expenses are costs that provide benefits but have been exhausted, while costs are economic sacrifices that are valued in units of money value. Cost is basically the amount of money paid to get a product (Calleja *et al*., 2006). Costs in accounting are actual costs, namely costs incurred in the previous period. The costs themselves consist of salary costs, equipment costs, equipment costs, and other costs. There is a classification of costs according to Abu-Serdaneh (2014) namely costs based on the object of expenditure, based on the main function, the relationship between costs and those being financed, time of benefit, based on the volume of costs.

A cost object is a place or place where a cost or activity is measured. The collection of costs incurred is referred to as accumulated costs (He *et al*., 2010). The costing system will calculate costs through the stages of accumulation and assignment. Costing includes tracing the accumulated costs that have a direct relationship with the cost object, and allocating the accumulated costs that have an indirect relationship with the cost object.

When viewed from the tracking of costs and allocation of costs, costs are classified into two, namely direct costs and indirect costs. Direct costs are costs that can be traced directly to a cost object. For example: the direct cost of a food product is the cost of its packaging. These costs can be easily traced or identified to the food.

Indirect costs relate to costs incurred but cannot be traced to the cost object, an example is supervisory costs. A supervisor does not work directly on the production process. He only supervises the implementation of production, so the costs incurred for this supervisor cannot be traced directly to the products produced.

Cost Behavior

Cost behavior is closely related to total costs and changing unit costs are related to changes in the output (level) of activity drivers. The study of cost behavior has several benefits, including: making it easier to make cost planning, making it easier to control costs, and making it easier to make decisions. When viewed from the behavior of costs, costs can be classified into: variable costs, fixed costs, and semi-variable costs (Horngren *et al*., 2012).

Some types of fixed costs may be avoided in the sense that the company does not have to bear them. The company can still stay in business even though it does not incur these costs, for example the cost of advertising one of its products. Meanwhile, other components of fixed costs are unavoidable and must be borne. An example is the interest expense for long-term loans obtained from commercial banks.

According to Banker *et al*. (2018), fixed costs will always occur in every production carried out by the company. However, there are some fixed costs that only apply to certain times or activities. For example, discretionary fixed costs or programmed fixed costs. Fixed costs of this type are costs incurred due to the policies of the company's management. In addition, there are also committed fixed costs, namely costs incurred for a certain period with a predetermined long period of time at the end of the period. Examples of fixed costs include rental fees, insurance costs, depreciation costs, and property tax charges.

Some types of fixed costs may be avoided in the sense that the company does not have to bear them. Companies can still stay in business even if they don't incur these costs. For example, the company manufacturer spends for advertise, this is a fixed cost. However, these costs can be avoided because manufacturers can stop advertising and stay in business (even though sales volumes may decrease). Other components of fixed costs are unavoidable and must be borne. An example is interest costs for long-term loans obtained from commercial banks.

Variable costs are total costs that will change if production activities produce different amounts of product. Variable costs will increase if there is an increase in the amount of production and vice versa if production activity decreases, variable costs will also decrease. Variable costs will be influenced by cost drivers. Which includes variable costs such as direct material costs, direct labor, indirect labor costs, costs of some equipment, as well as labor costs for unit repairs.

Variable costs can be classified into two categories, namely technical variable costs (Novák & Popesko, 2014). This cost is a type of variable cost that has a relationship between input and output if the output increases it will increase the input and vice versa. Next is discretionary variable cost. These costs are costs that have a close relationship between inputs and outputs but are not real. If the output increases it will increase the input but if the input increases it does not make the output always increase.

Semi-variable costs are costs whose changes are not proportional to the output of the activity driver. This cost is a group of costs where in one cost item, the total cost is partly an element of a fixed cost component and partly an element of a variable cost component. Examples of semi-variable costs are electricity costs, water costs, telephone costs, income taxes, life insurance, entertainment costs.

Cost Behavior Analysis

The accuracy of identifying and classifying the types of costs will affect the level of efficiency of cost expenditures (Anderson *et al*., 2007). This will affect the profit of the company. Management will have no difficulty in analyzing cost behavior if there is only one cost trait. Management will only determine these costs to be fixed costs or variable costs. However, the form of analysis will be different if the costs have the characteristics of fixed costs, variable costs, and semi-variable costs.

If the costs to be analyzed for their behavior have various cost characteristics, then several actions are needed to analyze their cost behavior. The steps that must be taken are 1) determine the cost environment. Costs will be determined whether these costs include product costs, non-manufacturing costs, or operating costs; 2) Determine the cost elements that exist in the costs to be analyzed; 3) identify and categorize these costs based on the factors that shape their behavior; 4) identify semi-fixed costs or semi-variable costs into fixed costs and variable costs; 5) formulate cost behavior so that management is able to predict the costs incurred.

The cost elements used in the cost behavior analysis depend on the purpose of using the cost for management. Management will use product costs to analyze related costs as consideration in decision making. Management will use non-manufacturing costs to measure other costs that occur in parts outside of production. Then operational costs are used for organizational planning.

For management, accuracy in identifying and determining the category of costs incurred by the company is a critical point in the implementation of company activities. Mistakes in identifying and grouping cultures will result in cost planning errors. If this happens, the prediction or estimate of the costs to be incurred by the company will be wrong, which will result in wrong decisions taken by management.

According to Cooper and Kaplan (1992) the classification and estimation of costs incurred by companies can use the following calculation methods: 1) High - low method; 2) Scat-tergraph method; 3) The least squares method. This method is used not only to estimate the fixed and variable components of semi-variable costs but also to determine whether a cost is entirely fixed or completely variable within the relevant range of activities (Noreen, 1991). The use of the calculation method usually results in a cost behavior analysis that is more reliable than the use of management judgment given that the results obtained depend on historical data. Fixed and variable cost estimates based on historical data should be adjusted to reflect what is expected to occur during the forecast period (Holzhacker *et al*., 2015). If historical data include observations from several different years, the analysis must consider the potential impact of inflation. If the inflation rate is substantial over a given period, estimates of fixed and variable costs are likely to be unreliable. One way to solve this problem is to recompute the cost of each sample period in current money values and then perform an inflation-adjusted cost analysis.

In fact, it will be difficult to identify and determine the category of cost elements, especially in manufacturing companies (Garcia *et al*., 2007). To conduct cost behavior analysis requires high accuracy and ability in the context of each cost (Dierynck *et al*., 2012). Managers need to understand the nature of costs and their relationship to the company's activities to determine the behavior of these costs.

Cost behavior has two approaches, namely the volume-based approach and the activity-based approach. Cost behavior based on volume has the behavior of total costs and unit costs are only associated with unit drivers (Bank-er *et al*., 1995). Unit drivers are drivers that are triggered by units produced and there are five types of units, namely: machine hours, direct labor hours, direct material costs, direct labor costs, and production units. The disadvantage of this cost behavior is that the information can be misleading in decision making.

Meanwhile, activity-based cost behavior is a cost behavior that is not only related to driver units, but also to non-driver units. Unit drivers are drivers used for unit-level activities, namely activities carried out for each unit of product produced, such as using raw materials, assembling products and so on. Non-Unit Driver is a driver used for group level activities (batch-level activities) and product-level activities. There are also two types of activity-based cost behavior approach, namely unit-based variable costs and non-unit-based variable costs.

CONCLUSION

Cost behavior analysis is needed by every company. Corporate finance managers need to implement a cost efficient strategy. For this reason, it is necessary to classify the costs incurred. Based on its behavior, costs are divided into fixed costs, variable costs, semi-fixed costs and semi-variable costs. The differences in the constituent elements of cost behavior that have been described make production managers and financial managers careful and observant in classifying the form of costs.

Basically, the identification and grouping of costs based on their behavior is a fairly complex activity, must take into account certain characteristics depending on the nature and activities of the company. The last analysis of the cost behavior depends on the final result of the assessment from the management concerned. Based on the explanation described by the researcher's suggestions, it is expected that company managers use cost behavior analysis to become the basis for decision making. Determining operational costs in the future no longer uses the conventional method, namely estimating costs and adding costs with a certain percentage. The use of cost behavior analysis does require a high level of foresight and skill. With the accuracy of conducting cost behavior analysis, the cost calculations and desired profit planning can be calculated properly. For this reason, company managers need training and experience to be able to identify and classify the costs incurred by the company.

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