



## Activity Based Costing System For Determination Of Cost Of Goods Charged

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**Abstract:** Deciding cost of goods more accurate to use activity based costing system. The purpose of this research is describing and analyzing of deciding cost of manufactured goods based on activity based costing system. Object in this research is cost that focus in activity of small-medium enterprises batik at Griya Batik Mas Pekalongan to decide allocation basic material cost, labor cost, and overhead manufactured cost that charge to product. The research design was descriptive explorative research that aims to reveal and explain in depth about a particular variable. The result of this research is about deciding cost of goods manufactured based on activity based costing system at written batik amount IDR 162.144/unit difference IDR 1.581/unit undercost than conventional system. Stamp batik amount IDR 49.785/unit overcost than conventional system. Combinations batik (written and stamp) amount IDR 47.818/unit undercost than conventional system and candle printing batik amount IDR 40.275/unit overcost than conventional system. The conclusion in this research is implementation of activity based costing system to decide cost of goods manufactured batik already appropriate because distribution of cost that allocation based on stimulating cost and resource consumed by each product. Hoping for the next researcher is used other object research, and not only focus on manufacture company.

**Keywords:** Material Cost, Labor Cost and Overhead, Activity Based Costing System

### INTRODUCTION

Cost of goods produced has a very important role in the company's performance, especially in increasing the company's profit. If the present's performance is poor, the manager has the impetus to convert future profits into present profits. Conversely, if future performance is expected to be poor, then managers convert current profits into future profits. (Nuriana,2011). Company performance is a picture of the results or achievements that are influenced by operational activities in an effort to utilize the resources owned company during a certain period of time (Sugiyanto,2021). In this study, the company's performance measure used is stock returns. Some parties, both companies and management, expect high profit changes because the higher the change in profit, the more flexible the company is in carrying out the company's operational activities (Gustina, 2015). One of the business strategies in controlling the profit is by determining the correct and accurate cost of goods produced. The more precise the calculation of the cost of goods produced, the selling price of a product can avoid *overcost* (charging more costs than it should ) and also not *undercost* (charging costs less than it should be). Seeing from the increasingly fierce business



competition, so that producers are not only required to create good quality products but also competition for affordable prices among the public (Asih, 2012). The determination of the selling price of the product must be relevant should not be too high and should not be too low. If the selling price of the product is too high, consumers will prefer the product from competitors, but on the contrary, if the selling price is too low, the company will experience bankruptcy caused by the company's revenue not being able to cover its production costs, thus the company is able to produce quality products at reasonable selling prices and relatively low production costs, so that the products produced by the company can compete and be accepted by the market.

In fact, the determination of cost of goods produced by Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises still uses the traditional system, determining the cost of goods produced by collecting all expenses that have been incurred during the production process then dividing it by the number of products produced. (Qona'ah, 2012). In fact, the traditional system is very inaccurate if it is used to calculate the cost of goods produced whose products are more than one type.

Based on theory, the determination of cost of goods produced for companies that produce more than one type of product is using an *activity-based costing system*, but the facts in the field show that, the determination of the cost of goods produced by Griya Batik Mas Micro, Small and Medium Enterprises that produce more than one type of product still uses the traditional system. This condition shows that the gap between traditional theories and facts should not be used to determine the cost of goods produced by Menengah Griya Batik Mas Pekalongan Small Micro Business, because the products produced are more than one type of product, causing inaccuracy of the cost information obtained. This will result in decision-making in determining the selling price of the product, which has an impact on the company's profit.

The author's motivation in this study is that no research has been conducted on the application of an *activity-based costing system* as an alternative to determining the cost of goods produced in Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises. This research is expected to produce a more effective and efficient concept of determining the cost of goods produced, as an alternative to determining the cost of goods produced at Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises, which is based on an *activity-based costing system* to increase the company's competitiveness. In addition, this research is expected to be one of the applications of management science that has been studied regarding *activity-based costing systems*.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The cost of goods produced can be determined by several methods including the full costing system method and *variable costing*. The full costing system or often referred to as absorption or *conventional costing* according to Mulyadi (2010:122) is a method of determining the cost of goods produced that imposes all production costs, both fixed and variable behavior on the product. *Variable costing* is a method of determining the cost of goods produced that only charges variable production costs into the cost of goods produced. Both of these methods are often known as traditional systems. This system can be used in companies that produce saju types of products. This is because the overhead costs on each product are only charged to one *cost driver*, namely the number of production units, so that it will experience cost deviations if applied to companies that produce more than one type of product. Each product produced does not necessarily have the same activity, therefore a method of calculating the cost of goods produced is needed that provides information about activity activities and resources needed to carry out precise and accurate production activities, the method is the *activity-based costing system* method. In theory Slamet (2007: 103) revealed that the *Activity Based Costing System (ABC)* is a costing system by first tracing the cost of the activity and then to the product. This system uses more than one *cost driver* in allocating factory *overhead* costs to each product.

Micro, Small and Medium Enterprises or MSMEs have been appreciated as contributors to economic development and safety nets for economic growth in the world, especially



during this crisis for more than a decade (Ozigbo & Ezeaku in Purnomo, 2011). One of the MSMEs that still survives today is batik Micro, Small and Medium Enterprises (MSMEs). Griya Batik Mas Micro, Small and Medium Enterprise is one of the *home industries* of batik handicrafts located in Kampoeng Batik Kauman Gang 1 Number 46 Pekalongan. Micro, Small and Medium Enterprises Griya Batik Mas Pekalongan produces more than one type of batik product, including batik tulis, batik cap, batik combination (write and stamp) and batik print night (candle) with various shades and natural colors. The workforce at the Menengah Griya Batik Mas Pekalongan Small Micro Business is 200 batik craftsmen, with different levels of education. Starting from the elementary school level (SD) to high school (SMA). The education level of Batik Tulis craftsmen is mostly only at the elementary school (SD) level, which is 69.17 percent. (Widigdo, 2010).

The management system for Micro, Small and Medium Enterprises is still very simple, both from cost management, information and work management. A good Management Information System is able to help Micro, Small and Medium Enterprises in increasing company revenue, as revealed by Purnomo (2011) that Information System Management in MSMEs should not only consider the technological aspects that cause someone to choose to use it, but also the impact on performance when technology is used.

## METHODS

The type of data used in this study is qualitative and descriptive research design. This research is a study that provides an in-depth explanation of the application of an *activity-based costing system* in determining the cost of batik production in Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises.

The subject of this study is the Micro, Small and Medium Enterprises Griya Batik Mas Pekalongan which produces various types of batik including batik tulis, batik cap, batik combination, batik print night (wax). The location of the research conducted by the researcher is located in Kampoeng Batik Kauman Gang 1 Number 46 Pekalongan.

The object of this study is the costs that are the focus of the activity which includes determining the allocation of Raw Material Costs (BBB), Labor Costs (BTK), and Factory Overhead Costs (BOP) in determining the cost of batik production at Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises precisely and accurately charged to batik products. The variables of this study are all costs that become activities in making batik, including Raw Material Costs (BBB), Labor Costs (BTK), Factory Overhead Costs (BOP).

The data collection techniques in this study are documentation and interview techniques. Documentation techniques by collecting data on costs related to determining the cost of goods produced at Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises. The data obtained from the interview results are in the form of all costs and activities related to determining the cost of goods produced based on *the activity-based costing system*.

The data analysis method used in this study is an analytical method using an activity-based costing system to determine the cost of goods of products in Griya Mas Micro, Small and Medium Enterprises, according to Slamet (2007: 104) consisting of two stages, namely: Slamet (2007: 104) consists of two stages, namely: The first stage in the *activity-based costing system* basically consists of five steps that must be done: Identifying activities, What activities are carried out in the production process activities, each product has different activities because the manufacturing process is different between each product produced, so it has different activity costs. The activities carried out to produce written batik are: fabric cutting, pattern design, canting, coloring, nglorot (night release), drying, packaging, for combination batik, namely: fabric cutting, tasting, canting, coloring, nglorot, drying, packaging. The activities carried out in producing batik stamps are: fabric cutting, tasting, dyeing, nglorot, drying, and packaging while for night batik prints, namely fabric cutting, pattern design, blocking, washing, drying.

Imposes cost to activity, cost that Issued deep process production Effort Micro Small Intermediate Griya Batik Mas Pekalongan atara other: cost material reciprocally Form fabrics, cost material helper, cost power work immediately and cost power work not



immediately cost electricity, cost telephone and the internet, cost material burn, cost promotion, cost Maintenance and other-other. Group activity Similar to Form cluster Similar, Grouping activity that each other Associated to Form cluster that Similar (Homogeneous) so that Facilitate deep classification activity. Summing cost activity that Grouped to Define group cost Similar, count all cost activity that already grouped so that will get cost By activity that Similar (*homogeneous cost pool*). Count group fare *Overhead*.

$$\text{Pool Rate} = \frac{\text{BOP of Specific Activities}}{\text{Drivers Cost}}$$

In the second stage, the costs of each group of overheads are traced to the product, using the calculated group rate. The *overhead* charge of each cost group of each product is calculated by the following formula:

$$\text{Overhead charged} = \text{Group Rate} \times \text{Driver Units consumed}$$

Furthermore, the cost of goods produced can be calculated by summing up the entire cost used, consisting of raw material costs, labor costs, and factory *overhead* costs divided per unit of products produced by the enterprise.

## RESULT AND DISCUSSION

The determination of the cost of goods produced at Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises currently still uses a full costing and *variable costing* system or what we know as the traditional system. This system only charges production costs on the product, which means calculating all costs incurred in the production process of batik tulis then dividing it into the batik products produced.

Determination of cost of goods produced can be done using an *activity based costing system*. The calculation of the cost of batik production at the Micro, Small and Medium Enterprises Griya Batik Mas Pekalongan is divided into four cost *pools*, namely batik tulis, batik cap, batik combination and batik print malam (wax). The activities that occur in batik making are grouped into six *cost drivers*, namely cutting, pattern making, dyeing, lorot (night release), drying, packaging. Before knowing the type of expenditure on each *cost driver*, the costs incurred by Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises in March 2016 must be known first.

The cost calculation process begins with a simple grouping of all costs in two groups, namely *manufacturing* costs and *commercial costs*. The cost of goods produced is divided according to three main cost elements, namely Raw Material Costs (BBB), Labor Costs (BTK) and Factory *Overhead* Costs (BOP), for commercial costs, namely marketing *expenses*. The main element of the first cost is the cost of raw materials, raw materials used in making batik during March 2016 at Griya Batik Mas Pekalongan Micro, Small and Medium

## CONCLUSIONS

Based on research and discussion on research conducted on Micro, Small and Medium Enterprises Griya Batik Mas Pekalongan, it can be concluded: The determination of the cost of goods produced by written batik using an *activity-based costing* system is more accurate when compared to the traditional system. This is because it is calculated based on the overhead costs of each product. The calculation in determining the cost of goods produced using the *activity-based costing* system of Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises for written batik is IDR 32,222,740 and the cost of goods per unit is obtained IDR 162,144, while based on the traditional system it is obtained IDR 32,112,530 and the cost of goods produced per unit is IDR 160,563 the difference between the cost of goods produced is IDR 110,210 and the cost of goods produced per unit is IDR 1,581 less (*undercost*) compared to an *activity-based costing system*.





The calculation of the basic cost of batik cap production based on the activity-based costing system was obtained at IDR 199,139,247 and the cost of goods per unit was obtained at IDR 49,785, while based on the traditional system it was obtained at IDR 207,126,720 and the cost of goods produced per unit at IDR 51,749 the difference in cost of goods produced was 7,987,473 and the cost of goods produced per unit was IDR 1,964 greater (*overcost*) compared to *the activity-based costing system*. The calculation of the basic cost of batik production combination (write and stamp) based on *the activity-based costing system* was obtained at IDR 95,636,996 and the cost of goods produced per unit was IDR 47,818, while based on the traditional system was obtained IDR 85,412,878 and the cost of goods produced per unit IDR 42,706 the difference in cost of goods produced IDR 10,224,118 and cost of goods produced per unit IDR 5,112 is smaller (*undercost*) compared to *activity based costing system*.

The calculation of the cost of production of batik print malam (wax) based on *an activity-based costing system* was obtained at IDR 80,549,997 and the cost of goods produced per unit was IDR 40,275, while based on the traditional system it was obtained at IDR 99,620,780 and the cost of goods production per unit of IDR 49,810 the difference in cost of goods produced of IDR 19,070,783 and cost of goods produced per unit of IDR 9,535 is *greater (overcost)* compared to the activity-based costing system. Based on the conclusion of the results of the research above, it was given to the owner of the Griya Batik Mas Pekalongan Micro, Small and Medium Enterprises that the results of the study determined the cost of goods produced based on the *activity-based costing system* can be used as an alternative in determining the cost of goods produced by Micro, Small and Medium Enterprises Griya Batik Mas Pekalongan uses cost formulations on each product (batik tulis, batik combination, batik cap and batik print malam).

*Activity based costing system* used to determine a more accurate production cost budget by considering other external factors such as competitor prices and consumer purchasing power so that there are no more distortions or errors in determining the cost of goods produced that will affect actual profits. For researchers who will conduct similar research, it is hoped that they can use other methods of calculating the cost of goods produced and choose different research subjects not focused on manufacturing companies. For the next researcher who will choose Micro, Small and Medium Enterprises as research subjects, they are expected to choose Micro, Small and Medium Enterprises that are larger and have a diversity of products produced.

## REFERENCE

- Arikunto, Suharsimi. 2006. *Research Procedures of a Practical Approach*. Jakarta: Rineka Cipta.
- Arikunto Suharsimi. 2003. *Research Management*. Jakarta: Rineka Cipta. Asih, Anisa Lisa. 2012. *Analysis of Cost of Goods Produced Based on Activity Based Costing System (ABC) at the "Sam Jaya" Purwodadi bakery factory*. In *Management Analysis Journal*. Volume 1 No. 2. Semarang: Semarang State University.
- Astuti, Lala Dwi. 2015. *Determination of Cost of Goods Produced Based on Activity Based Costing System at Furniture Company Pt. Wood*. In *Management Analysis Journal*. Volume 4 No. 3. Semarang: Semarang State University
- Badriyah, Hurriyah. 2015. *Cost Accounting Smart Books for Laymen*. Jakarta: HB Publishers. Blocher, Edward J. David E. Stout, and Gary Cokins. 2011. *Strategic Emphasis Cost Management*. Jakarta: Salemba Empat.
- Duh. Rong-Rue., Thomas W. Lin, Wen-Ying Wang, and Chao-Hsin Huang. 2009. *The Design and Implementation Of Activity*
- Surname A, Surname B and Surname C year Journal Name **vol** page Canakci A, Erdemir F, Varol T and Ozkaya S 2013 *Powder Technology* **247 24**
- Simamora, Henry. 1999. *Management Accounting*. Jakarta: Salemba Empat.
- Wahyudin, Agus. 2015. *Enelitian Methods of Business and Educational Research*. 1st ed. Semarang: Unnes Pres.

- Widigyo, Idie. 2010. Work Ethic of Women Craftsmen Batik Tulis. In *Journal of Management Dynamics* Volume 1 No. 2. Semarang: Semarang State University.
- Wijayanto and Dhany. 2015. Analysis of financial ratios in predicting changes in profits. In *Management Analysis Journal* Volume 4 No 2. Semarang: State University Semarang.
- Sugiyanto, Sugiyanto, Fitri Dwi Febrianti, and Suropto Suropto. "Good Corporate Governance And Tax Avoidance To Cost Of Debt With Growth Opportunityas Moderating (Empirical Study On Manufacturing Company And Finance Service Listed In Idx 2015-2019)." *The Accounting Journal Of Binaniaga* 5.2 (2020): 123-140.
- Sugiyanto, S., Febrianti, F. D., & Suropto, S. (2020). Good Corporate Governance And Tax Avoidance To Cost Of Debt With Growth Opportunityas Moderating (Empirical Study On Manufacturing Company And Finance Service Listed In Idx 2015-2019). *The Accounting Journal Of Binaniaga*, 5(2), 123-140.
- Sugiyanto, S; Febrianti, Fitri Dwi; Suropto, S. Good Corporate Governance And Tax Avoidance To Cost Of Debt With Growth Opportunityas Moderating (Empirical Study On Manufacturing Company And Finance Service Listed In Idx 2015-2019). *The Accounting Journal Of Binaniaga*, 2020, 5.2: 123-140.