



Implementation of Calculating Cost of Goods Sold for MSMEs: Challenges and Solutions in Training Program

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Abstract. Micro, Small, and Medium Enterprises (MSMEs) play a pivotal role in the Indonesian economy. However, these enterprises frequently encounter challenges in financial management and accounting, which can impede their growth and development. Therefore, proficient business management and accounting skills are essential for MSMEs to effectively navigate economic conditions, optimize their business potential, and achieve strategic objectives. This need aligns with governmental efforts to enhance the scale of MSMEs in the global market. A notable challenge for MSMEs is the establishment of competitive and realistic selling prices. Accurate calculation of the Cost of Goods Sold (COGS) is crucial for MSMEs to determine actual production costs and improve profit margins. COGS is a fundamental component of financial statements, representing the direct costs associated with producing sold goods. Thus, understanding and calculating COGS is vital for MSMEs to maintain financial stability, enhance operational efficiency, and support business growth and sustainability. In response to these issues, the Accounting Lecturer at Respati Yogyakarta University conducted training on COGS calculation in accordance with the Statement of Financial Accounting Standards. The training was directed toward MSMEs supported by Rumah Kreatif Sleman (RKS), which includes a growing number of enterprises with significant local marketing potential, particularly in the culinary, crafts, and trade sectors. This financial training, with an emphasis on COGS calculation, aims to assist these enterprises in optimizing their marketing strategies and strengthening their competitive position in the global marketplace.

Keywords: MSMEs, Training, COGS, Accounting Standards.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a critical role in the Indonesian economy. These enterprises contribute over 61% to Indonesia's Gross Domestic Product (GDP), thereby significantly influencing national economic growth [1]. MSMEs are the primary sector for employment absorption, which aids in reducing unemployment rates, enhancing export activities, and promoting economic equity across various regions. Despite their substantial contribution, MSMEs encounter numerous challenges that impede their growth, including difficulties in accessing financing, navigating complex regulations, insufficient infrastructure, and a lack of skilled labor [2].

In response to these challenges, the government has implemented various policies and programs aimed at scaling up MSMEs. These initiatives focus on expanding market access, enhancing product quality, and developing managerial competencies among business owners. A major component of these efforts includes the provision of structured training and mentoring programs designed to support MSMEs in adopting digital technologies, improving marketing strategies, and boosting operational efficiency. The government aims to elevate approximately 760,000 MSMEs to higher levels of classification: Micro-level enterprises are targeted to advance to the small level, and small-level enterprises are expected to progress to the medium level [3]. The classification of MSMEs in Indonesia is detailed in **Table 1**.

TABLE 1. Type of MSMEs in Indonesia

Type of MSME	Total Capital	Yearly Revenue
Micro	IDR 0-1 billion	IDR <2 billion
Small	IDR 1-5 billion	IDR 2-15 billion
Medium	IDR 5-10 billion	IDR 15-50 billion

Source: Indonesia Law no. 7, 2021

Rumah Kreatif Sleman (RKS) is an initiative established by the Industry and Trade Office of Sleman Regency to support the development of Micro, Small, and Medium Enterprises (MSMEs) through government programs. RKS offers a range of facilities, including training programs, consultations, educational resources, and mentoring, to nurture MSMEs. Currently, RKS supports approximately 1,500 MSMEs, which are categorized into various sectors such as food, fashion, crafts, accessories, furniture, and services.



FIGURE 1. Discussion with RKS

According to the RKS Coordinator, the main challenge of MSMEs is the lack of ability to calculate the Cost of Goods Sold (COGS) in compliance with the Statement of Financial Accounting Standards. COGS refers to the expenses associated with goods that are purchased and subsequently sold during a given accounting period [4]. Accurate COGS calculation is crucial for determining the selling price and assessing the desired profit margins of a company [5]. By understanding COGS, MSMEs can establish competitive pricing strategies and optimize their profit margins. Furthermore, COGS is a fundamental component of financial reports, influencing the quality of these reports and supporting the overall financial health of the business.

On the other hand, universities in Indonesia hold the responsibility of fulfilling the Three Pillars of Higher Education, which consists of education, research, and community service. Academics are expected not only to teach but also to contribute to relevant research and engage in impactful community service, including support for micro, small, and medium enterprises (MSMEs). The integration between MSME development and the academic Three Pillars can create a synergy that fosters MSME growth while simultaneously enhancing the quality of education and research at higher education institutions.

Given the situation and challenges described for RKS, it is evident that RKS requires support from various stakeholders, including academics, to optimize business development for the MSMEs. Consequently, a community service initiative in the form

of training on “Calculating the Cost of Goods Sold for MSMEs” was organized to address these issues. This training is anticipated to assist MSMEs in financial management in alignment with Statement of Financial Accounting Standards, facilitate better decision-making, and ensure sustainable business growth.

The collaboration between RKS and academic institutions is essential for addressing these challenges effectively. By leveraging the expertise and resources available through higher education, the training aims to bridge the knowledge gap in COGS calculation and enhance MSMEs' financial acumen. This partnership not only supports MSMEs in meeting their accounting standards but also strengthens the role of universities in contributing to real-world economic development, thereby fulfilling their commitment to the Three Pillars of Higher Education.

METHODS

Participants in the Cost of Goods Sold (COGS) Calculation Training were Micro, Small, and Medium Enterprises (MSMEs) supported by Rumah Kreatif Sleman (RKS). A total of 41 MSMEs participated in the training, representing various sectors including culinary arts, fashion, handicrafts, entertainment services, laundry, and others. The training was conducted at the Sleman Regency Industry and Trade Office over six months, from April to September 2024.

The training program featured a Lecturer in Accounting from Respati Yogyakarta University as the primary resource person. This expert provided instruction on the concept of COGS, including methods for calculating COGS tailored to different types of MSME business activities. Additionally, direct assistance was offered to participants in calculating their COGS. The implementation of the program was further supported by Accounting students from Respati Yogyakarta University, who assisted in facilitating the training sessions.

The methodologies employed in this community service initiative included the following:

1. Preliminary Survey

A preliminary survey was conducted to gain an overview of participants' experiences in calculating the Cost of Goods Sold (COGS) in their respective businesses. The survey involved interviews with the leaders of Micro, Small, and Medium Enterprises (MSMEs) from Rumah Kreatif Sleman. The survey results indicated that most participants were familiar with the definition of COGS and understood the importance of accurate COGS calculations. However, some participants expressed uncertainty about the accuracy of their current COGS calculations, while others admitted not including all production costs in their COGS due to concerns about high selling prices, which could make their products less competitive compared to similar offerings.

2. Lecture

In this session, participants were provided with an overview of the COGS and its calculation according to the Statement of Financial Accounting Standards. This information was conveyed through a PowerPoint presentation. During this lecture, participants were introduced to the concept of COGS, its significance for MSMEs, and the classification of MSME businesses into manufacturing, trading, and service sectors. Additionally, the presentation covered various methods for calculating COGS specific to each MSME business activity.

For manufacturing businesses, MSMEs can first calculate the cost of production. In determining the cost of production, MSMEs can use either the Full Costing or Variable Costing method. Full costing is a method that includes all elements of

production costs in the cost of production, which consists of raw material costs, direct labor costs, and factory overhead costs, whether variable or fixed [6]. In contrast, variable costing is a method that only accounts for variable production costs [6]. MSMEs engaged in trading can calculate COGS by determining inventory levels through perpetual or periodic methods. Perpetual inventory recording refers to the ongoing recording of inventory whenever there is a change in inventory value, while periodic recording is done at the beginning and end of the period [7]. For MSMEs that provide services, COGS can be calculated using the time and material pricing method.

After explaining the various methods that can be used by MSME businesses, the community service team presented a quantitative example of COGS calculations, detailing the cost components required by MSMEs to determine the cost of production, profit margins, and selling price per unit. The example included an itemized breakdown of raw material costs, labor expenses, overheads, and other operational costs, followed by the application of these figures to calculate the final unit price and profit margin.

3. Direct Practice and Mentoring by the Community Service Team

In the third session, the participants engaged in hands-on practice to calculate the Cost of Goods Sold (COGS) for their respective businesses. This exercise involved applying the methodology introduced during the second session, with the community service team providing guidance and support. The mentoring approach facilitated participants in seeking clarification and discussing issues pertinent to COGS calculation. Participants were instructed to identify and compile all relevant costs, including raw material expenses, labor, and factory overheads. Upon determining the total production costs, participants could then compute their profits and establish the selling price for each product. Following the calculation of COGS, several participants were asked to present the results of their computations.

Based on the practices carried out, some MSMEs, such as those in the sticker and screen-printing sectors, were able to accurately calculate their total production costs. However, other MSMEs, such as those in the performing arts sector, still struggled to accurately determine transportation costs due to the significant variability depending on distance. To address this issue, we provided tailored solutions to meet the specific needs of each MSME.

4. Q&A and Discussion

During this session, participants posed various questions concerning sales tax expenses, transportation costs, shared resource usage, variable rental costs, and depreciation of equipment. This segment involved an interactive discussion between the participants and the community service team, addressing the presented material, challenges faced by MSME operators, and COGS determination based on the specific business types of MSMEs supported by RKS. The Q&A and discussion session was marked by high levels of engagement and enthusiasm from the participants, as evidenced by their active inquiries and discussions on the topics covered. Several questions were raised and subsequently addressed with solutions, including the following:

- a. Sales tax expenses. Participants inquired about who should bear the sales tax. The proposed solution was that sellers could pass on the sales tax to customers through precise calculations to avoid significantly increasing the selling price.
- b. Transportation costs. Questions were raised regarding transportation costs, which vary with each transaction. The solution provided was to exclude these costs from COGS calculations, eliminating the need to recalculate COGS for each transaction.

- c. Shared resource usage for business and personal purposes. The solution to this issue was to estimate the proportion of resource usage, such as gas, electricity, and water, if it is not possible to fully separate business and personal consumption.
- d. Variable rental costs across multiple stores used simultaneously. The suggested solution was to calculate the average rental cost to avoid discrepancies in the selling price of the same product (e.g., laundry services).
- e. Depreciation of equipment. Participants asked about which items are subject to depreciation and how the rates are calculated. The solution provided was that only business-related equipment is subject to depreciation, using the straight-line depreciation method.

RESULTS AND DISCUSSION

The initial material presented by the community service team to the Micro, Small, and Medium Enterprises (MSMEs) supported by Rumah Kreatif Sleman (RKS) focused on the significance of calculating the Cost of Goods Sold (COGS) by the Statement of Financial Accounting Standards. Accurate COGS calculations are fundamental for establishing competitive pricing and setting profit targets [5]. Inaccurate COGS assessments can lead to the setting of selling prices that are either insufficient to cover costs, resulting in financial losses, or excessively high, thereby diminishing market competitiveness. Furthermore, COGS calculations provide a comprehensive overview of all costs incurred during the production process and serve as a basis for evaluating performance. By determining COGS, MSMEs can assess operational efficiency, identify potential sources of waste, and make informed strategic decisions. This foundational understanding enables MSMEs to manage their financial resources better and optimize their pricing strategies. By applying these principles, businesses can enhance their ability to sustain operations and achieve long-term growth in a competitive marketplace.



FIGURE 2. Material delivered by the member of community service team

The subsequent material addresses the methodologies for calculating COGS based on the type of business activities undertaken by participants, specifically manufacturing, trading, and service enterprises. Manufacturing businesses are involved in transforming raw materials into finished goods, which are subsequently sold [8]. Examples of manufacturing enterprises include food and beverage companies, textile manufacturers, and similar industries. In contrast, trading businesses focus on the purchase and sale of goods to generate profit, without engaging in the production process. Such businesses primarily concentrate on trading activities, supermarkets and retail outlets serving as

typical examples [9]. Service businesses, on the other hand, provide services to customers or other entities [9].

For manufacturing businesses, MSMEs should first calculate the cost of production, which encompasses all costs incurred to acquire goods sold or the acquisition cost of goods sold [5]. To determine the cost of production, MSMEs can employ either the Full Costing method or the Variable Costing method. Full costing involves accounting for all elements of production costs, including raw material costs, direct labor costs, and both variable and fixed factory overheads [6]. Conversely, variable costing considers only the variable production costs in determining the cost of production [6].

MSMEs engaged in trading activities can calculate COGS by employing either perpetual or periodic inventory methods. The perpetual inventory system involves continuous recording of inventory levels and updates whenever there are changes in inventory values, whereas the periodic system records inventory only at the beginning and end of each accounting period [7]. For MSMEs operating within the service sector, COGS can be calculated using the time and materials pricing method.



FIGURE 3 & 4. Participants engaged in practical exercises to compute COGS

Following the instruction on the purpose of COGS calculation as per the Statement of Financial Accounting Standards, the categorization of MSMEs based on business types, and the various COGS calculation methods, the subsequent session involved hands-on practice in COGS calculation. Participants engaged in calculating COGS relevant to their specific business types with guidance from the community service team. Additionally, participants were provided the opportunity to ask questions and seek consultations with the community service team concerning COGS calculations and challenges encountered in their business operations.

The training activity was conducted smoothly, with participants displaying considerable enthusiasm as they inquired about sales tax expenses, transportation costs, shared resource usage, variable rental costs, and depreciation of equipment. The training sessions, held from the 9th to the 12th, comprised 60 minutes dedicated to material presentation, 30 minutes allocated to practical exercises in COGS calculation, and 30 minutes for participants to present their COGS calculation results and receive feedback. The remaining time was reserved for a question-and-answer session and discussion.

The integration of COGS calculation methods with the specific needs of different business types allowed participants to gain practical insights tailored to their operations. By addressing each business model (manufacturing, trading, and service) the training ensured that MSMEs could apply appropriate COGS calculation techniques to their

unique contexts. This approach not only enhanced participants' understanding of how to accurately determine their costs but also empowered them to implement strategies for cost control and pricing that could lead to improved financial health and competitive advantage. The hands-on practice and interactive Q&A sessions further reinforced their learning, fostering a collaborative environment where participants could exchange experiences and solutions. Overall, the training session effectively bridged theoretical knowledge with practical application, equipping MSMEs with valuable skills for better financial management and business growth.

The most significant feedback from the participants was the increased knowledge and understanding of the difference between variable costs and fixed costs as components of COGS (Cost of Goods Sold). Participants also reported increased confidence in determining selling prices after gaining a better understanding of how to accurately calculate COGS. Furthermore, they understood the importance of separating personal and business financial management, in line with the entity concept. This separation is beneficial for calculating profits and maintaining capital. Participants need to consistently apply COGS calculations using appropriate methods to effectively manage their capital for the sustainability of their businesses.



FIGURE 5. Community service team and all the participants

CONCLUSIONS

Training on the calculation of Cost of Goods Sold (COGS) was provided to Micro, Small, and Medium Enterprises (MSMEs) supported by Rumah Kreatif Sleman (RKS) and was held at the Sleman Regency Industry and Trade Office. The training included 41 MSMEs from diverse sectors, including culinary arts, fashion, handicrafts, entertainment services, laundry, and other industries. The community service team presented various topics, including the purpose of calculating COGS as outlined by the Statement of

Financial Accounting Standards, methods for calculating COGS tailored to different types of MSME businesses, the components included in COGS, and inventory assessment.

Following the material presentation, participants engaged in hands-on practice by calculating COGS relevant to their specific business types and subsequently presented their calculation results. Throughout the training, participants had the opportunity to ask questions and seek consultation from the community service team regarding COGS calculations and challenges faced in their business operations.

Accurate COGS calculation is crucial for MSMEs as it enables them to understand all costs involved in the production process, determine profit margins, and set competitive selling prices. Overall, this training provides MSMEs with a robust foundation for enhanced financial management, informed decision-making, and the achievement of sustainable business growth and success.

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